UNIVERSITÉ DU LUXEMBOURG

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

PhD-FHSE-2024-029
The Faculty of Humanities, Education and Social Sciences

Faculty of Education

DISSERTATION

Defence held on 16/07/2024 in Luxembourg, Esch-sur-Alzette

to obtain the degree of

DOCTEUR DE L'UNIVERSITÉ DU LUXEMBOURG EN SCIENCES DE L'ÉDUCATION AND DOKTOR DER PHILOSOPHIE

by

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CHILDREN'S EARLY LITERACY MEANING-MAKING IN MULTILINGUAL EARLY CHILDHOOD EDUCATION

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I dedicate this thesis to all those who, against all odds, continue to strive for learning.
My fellow PhD students are the most dedicated friends, partners, and parents.
You continue to work hard through setbacks, fatigue, and illness.
You are my heroes.

Acknowledgements

Let me start by thanking the members of my defence committee for reading and engaging with my thesis. As my colleague Maria recently said to me: while it might be scary, it is important to acknowledge the privilege it is for an emergent researcher to have experienced scholars to discuss one's work with. I especially thank the members of my CET for having accompanied and guided me throughout the past four years. Sascha, for always pointing out the crux of things in such eloquent ways and Gabi, for always reminding me to stay creative and human. You have been an inspiration to me since the master studies.

I am particularly grateful to have been supervised by two amazing women. Drorit, thank you for always making me feel at home in Hamburg and for enriching my work through your sensitive and striking feedback. Claudine, this work would never have been accomplished if it weren't for you. You have trusted me and believed in me from the beginning. As a supervisor, you have always been exceptionally devoted and hard-working. Countless times you have supported me academically, but also emotionally. I deeply appreciate having had the opportunity to learn from both of you.

I would also like to thank the FNR, the Uni.lu, the MENJE and the SNJ for funding the project COMPARE and for making this research possible. Especially to Simone and Pit from the SNJ for our collaborative endeavours and for providing me with great professional opportunities. And to Andrea and Laura from the Uni.lu, for all the administrative support.

This dissertation would not have been possible without the participation of the parents, educators, and of course the children in this study. Thank you, for welcoming me and for giving me the chance to learn from you. I also thank Džoen and Laura for being great colleagues and for often sparking new ideas and reflections. And, of course, thanks to Mandy, Emie, Ernique, Kelly, Julie, Nicole, Angela and Elisa for helping with the transcriptions and to Amanda for proofreading.

Writing a doctoral thesis can be an isolating experience. But I didn't have to go through it on my own. I thank all the members of the MLing institute and the "Migration und Bildung" Colloquium, for their feedback and support throughout the past years. I was lucky enough to work in a welcoming and supporting environment and to be surrounded by highly engaged peers, who always surpassed expectations in sharing the common burden of being a PhD student. My special gratitude goes to the Tuesday-writing crew and the organisers and members

of the Writing Cafés, as well as to Anouk and Aybike, for our online writing and emotional support groups. And of course to Potheini, the best office-mate, who has always cheered for me. I would not have survived without all of them.

I thank my friends, who I can always count on for being my emotional safe haven. Maïte, I am eternally grateful that our shared PhD adventure has made us rediscover and strengthen our friendship. Doriana, I cannot even begin to express how much our friendship means to me. You have been an invaluable and like-minded support and I am deeply thankful to you.

Finally, I would like to thank my family. My parents, for inspiring the joy of reading and writing in me and for having called me ‘Doctor’ since the first day of my contract. My sisters, Laurence and Fanny, for never doubting that I could do it.

And last, but definitely not least, to Gilles. I know that I can always find comfort in your arms. Thank you for constantly reminding me that I am more than my PhD and for getting me through all the doubts and crises on the way. And to Oscar, who deserves all the love in the world.

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List of Acronyms

COMPARE	Collaboration with Parents and Multiliteracies in Early Childhood Education in Luxembourg
ECEC	Early Childhood Education and Care
EEF	Education Endowment Foundation
ESC	Enseignement Secondaire Classique
ESG	Enseignement Secondaire Général
FNR	Fond National de la Recherche
LTPES	Lycée Technique pour Professions Éducatives et Sociales
LUCET	Luxembourg Centre for Educational Testing
MENJE	Ministère de l'Éducation National, de la Jeunesse et le l'Enfance
MKO	More Knowledgeable Other
MuLiPEC	Developing Multilingual Pedagogies in Early Childhood
MultiLearn	Master in Learning and Communication in Multilingual and Multicultural Contexts
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
ONQS	Observatoire National de la Qualité Scolaire
RQ	Research Question
SCRIPT	Service de Coordination de la Recherche et de l´Innovation Pédagogiques et Technologiques
SDA	Sociocultural Discourse Analysis
SCT	Sociocultural Theory
SEA	Service d'Éducation et d'Accueil
SES	Socio-Economic Status
SNJ	Service National de la Jeunesse
STATEC	Institut National de la Statistique et des Études Économiques
UNICEF	United Nations Children's Fund
UNI.lu	University of Luxembourg
ZPD	Zone of Proximal Development

Transcription key

In the text

“text”	Speech in original language (*)
‘text’	Titles of books or songs
(text)	Translation of original speech or title into English
text	My emphasise or word/concepts used in the original language

In excerpts

(text) on the left	Description of non-verbal communication or intonation
text on the left	Speech in main language (*) of the crèche
<u>text</u> on the left	Speech in other (family) language (*)
text on the right	Translation from speech in the main language of the crèche to English
<u>text</u> on the right	Translation from speech in other (family) language to English
text	Sounds or onomatopoeia
?	Rising intonation indicating a question
!	Exclamatory intonation

(*) the respective languages will be contextualised in the text

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Chapter 1: Introduction

1.1 Introduction

This is a picture I drew in preschool, when I was about five years old. In the drawing, I depicted a mouse, dressed and carrying (possibly) a school bag. The mouse seems to be outside, walking towards a door. The clock indicates the relevance of a specific moment in time. My teacher, Ms Agnès, talked to me about the picture and took note of what I said. She wrote "Auer" (clock) and "Mausi geet heem" (Mausi goes home). In the bottom of the picture, she wrote my name.

Figure 1: My drawing of Mausi

What does this drawing reveal about my understanding of literacy as a five-year-old? I seemed to have related my drawing to *Mausi*, the main character of a collection of picture books by Lucy Cousins, which was popular in Luxembourg in the nineties. Whether I depicted a specific Mausi story or created a new one remains unknown. Either way, I seemed to know that pictures carry meaning, which I expressed by talking to my teacher, who, in turn, transformed my speech into writing. Through this interaction, I possibly learned that language can be written down in the form of letters and words. Fortunately, my preschool teacher preserved the drawing – as

well as other early literacy productions – in a folder, which my parents received at the end of the school year and kept until today.

The teacher and my parents seemed to be aware of the value of early literacy. In fact, children's educational success can be enhanced by early literacy experiences (Klein & Kogan, 2013), as they promote language development (Dickinson et al., 2012; Sénéchal & LeFevre, 2014) and emergent literacy skills (Farver et al., 2013; Kennedy & McLoughlin, 2022). As a teacher and emergent researcher, I am aware of the educational value of literacy. Additionally, my personal fascination for (audio)books, writing, and language learning, has led me to carry out the present study.

This thesis is about nine young children – as well as their peers and educators – and the ways in which they learn about literacy in three early childhood education settings in Luxembourg. I address two main research interests: (1) the early literacy experiences of two-to-four-year old emergent multilingual children in early education settings in Luxembourg; and (2) the ways in which children make meaning of these experiences in their respective social contexts.

Today, children's experiences in early childhood in Luxembourg are different from mine in the nineties. While I spent most of my childhood at home and only went to *formal* preschool at the age of nearly five, most children today visit *non-formal* Early Childhood Education and Care (ECEC) arrangements from a young age on. Furthermore, the proportion of residents who have nationalities other than Luxembourgish, has increased from about 30% in 1990 to almost 50% in 2018 (STATEC, 2023a). While the Luxembourgish population has always been multilingual and multicultural, linguistic diversity and the percentage of residents who do not speak any of the official languages; Luxembourgish, French or German; is increasing (STATEC, 2023b). Institutionalized ECEC for all children, regardless of their family and socio-economic background has only been promoted in Luxembourg since the early 2000s (Schumacher et al., 2021). These changes have led to policy developments, with the introduction of structural guidelines for ECEC facilities in 2007, the *Chèques Service Accueil* (childcare vouchers) in 2009, and the national framework for non-formal education in 2017. The evolution of the ECEC sector in Luxembourg can be related to the recommendations of the European Council in Lisbon (2000) and Barcelona (2002) to promote mothers' employment, as well as children's educational perspectives. In fact, ECEC attendance is considered to have a positive effect on children's learning and development, as well as later schooling (Burger, 2010; Skibbe et al., 2011). Given the linguistic diversity of young children in Luxembourg (SNJ, 2023) and the repeatedly emphasised correlation between educational inequalities and children's language backgrounds (ONQS, 2022), a framework for multilingual education in early childhood called

éducation plurilingue was introduced (MENJE & SNJ, 2017, 2021). This framework responds to the United Nations Convention of Children's rights (1990), which emphasises children's rights to be free, respected, and protected from discrimination.

The Luxembourgish non-formal ECEC context sets the stage for the present exploration of children's early literacy meaning-making. In my dissertation, I argue for a holistic approach to literacy-related learning in early childhood. Literacy has been defined mostly as a set of discrete skills or as a social practice (see Chapter 3). Some scholars have aimed to bridge these seemingly opposing perspectives, by conceptualizing literacy according to several continua (Kirsch & Hornberger, 2024). My study takes a sociocultural perspective on literacy as a situated practice (Gee, 2000) and examines children's meaning-making during literacy events with a focus on literacy-related concepts, skills, and practices. The concept of meaning-making describes learning and understanding as a co-constructive process where language (Wells, 2009) and social interactions (Mercer, 1995) play a crucial role. While some cognitive developmental psychologists accord young children with limited meaning-making capacities (Piaget, 1964; Kegan, 2009), I illustrate that young children actively and creatively make meaning of literacy from an early age on. They learn about literacy-related concepts, skills and practices when engaging in a range of literacy-related activities alone or with peers and when they are supported through high-quality interactions with adults.

In this first chapter, I will declare my personal position and motivation in relation to the topic of early literacy meaning-making. Furthermore, I will present the research project COMPARE, in which this PhD study is embedded. I will define the two key-concepts; literacy and meaning-making; and outline their relevance. Finally, I will state my research questions, the aims of my PhD study and the structure of this dissertation.

1.2 Personal background and motivation

In Winter 2023, I took a course about knowledge production through writing at the University of Luxembourg. One of the teachers, Prof. Sari Pietikäinen, said that there is almost no problem in life that cannot be solved through *reading.* For some reason, this statement stuck with me and I think that I could not agree more. Reading has enriched my life in many ways. As a child, I have always enjoyed being read to by my parents or grandparents and I spent many hours listening to audio books. Until today, reading a novel helps me to calm myself and forget about my worries whenever I feel anxious. Books allow me to feel transported into other worlds and spark my creativity. When I am faced with a practical problem or a question, I consult the internet to read about solutions and answers, and when I got stuck in writing my dissertation, I

read academic texts, which always helped me to get back into the flow of writing. These examples show, firstly, that reading and *writing* cannot be strictly separated from each other, secondly, that they involve different types of *texts*, and, thirdly, that making meaning of print requires active engagement. Finally, they show that literacy is an integral part of many peoples' lives.

For me, literacy has always been a *passion*, especially, if I look at my past experiences with a broader perspective on literacy. As a teenager, I joined the school's theatre group and television channel and participated in the production of several musicals and video reports. These activities involved singing, interpreting texts, communicating through words or images, and creating stories. They illustrate that literacy is a way of *expressing meaning*. Later, at university, I studied to become a primary school teacher. Here, I gained a new perspective on literacy in relation to children's *alphabetisation* and the role of literacy for educational success. In Luxembourg, where about half of the student population does not have the Luxembourgish nationality, and even more speak languages other than Luxembourgish at home (MENJE & SCRIPT, 2022; SNJ 2023), it has repeatedly been shown that these students – as well as students from lower socio-economic status (SES) – are disadvantaged by the educational system (OECD, 2018; ONQS, 2022). Being the daughter of Luxembourgish parents with high educational backgrounds, I never truly struggled throughout my schooling. During my BA studies, I became aware of my privileged position and realised that the reality of many children was different from my experiences. For the first time, I associated literacy and language learning with school failure, evaluation and educational inequalities. This made me become interested in the topic of *multilingualism*, which I continued to explore in the MultiLearn Master's programme. Being part of a cohort of students from different educational and cultural backgrounds has broadened my horizon and made me become more aware of the importance of *culture* when considering languages and literacies. In my master thesis, I explored the home literacy practices of a multilingual family in Luxembourg and their two preschool children (Kemp, 2020). Through this work, I have developed an understanding of literacy as an academic subject and entered the areas of early childhood and home-based practices. Furthermore, I met Prof. Kirsch, who recruited me as a PhD student in the COMPARE project, which I will briefly present in the following section.

1.3 The research project COMPARE

My doctoral study is part of a research project called COMPARE, which stands for *Collaboration with parents and multiliteracies in early childhood education*. The project was

led by my first supervisor, Prof. Claudine Kirsch and co-funded by the Uni.lu, the FNR, the MENJE, and the SNJ. The team around Prof. Kirsch, which included Dr Gabrijela Aleksić, Dr Džoen Bebić-Crestany, Laura Colucci and myself, set out to explore partnership building between educators and parents, as well as multiliteracy activities in *crèches*[1]. The aims of the project were to understand, firstly, the ways in which educators, parents and children engaged in collaborative and multiliteracy practices (Kirsch & Bergeron-Morin, 2023; Kirsch & Hornberger, 2024; Kirsch & Kemp, 2024), and secondly, the influence of collaborative and multiliteracy practices on the adults' attitudes, as well as on educators', parents, and children's engagement in literacy activities (Aleksić et al., 2024; Aleksić & Kirsch, 2024). Thirdly, we wished to contribute to the development of partnerships between educators and parents as well as multiliteracy practices in crèches.

The project employed a mixed-method approach, with an initial phase of online questionnaires for educators and parents, group interviews with specialised educators, and professional development courses, during which participants for a subsequent qualitative fieldwork were recruited. We conducted fieldwork in three crèches across Luxembourg, observing the practices of about twenty-five practitioners, twenty parents and sixty children over the school year 2020/21. This dissertation is based on the qualitative fieldwork of COMPARE and on my observations of nine focus children, who were between two and four years old at the time of the data collection. While the focus on literacy and the child-perspective were predefined by the aims of COMPARE, I choose to explore the concept of meaning-making in my PhD study. I was interested to uncover the meaning of literacy in early childhood and the ways in which young emergent multilingual children learn and make sense of their diverse experiences in ECEC.

1.4 Literacy and meaning-making in the early years

Literacy is generally understood as the human capacity of using – productively or receptively – meaningful signs, such as written language. As I have pointed out in the introduction of this chapter, there are different perspectives on literacy. Cognitive approaches focus on the development of emergent literacy skills, such as letter knowledge, phonological awareness or vocabulary (e.g. Whitehurst & Lonigan, 1998). By contrast, sociocultural understandings conceptualise literacy as a social and cultural practice (e.g. Gee, 2000). I acknowledge the value

[1] In my dissertation, I use the French term 'crèche', for lack of a direct corresponding translation. It designates one of the most common ECEC arrangements in the Luxembourgish context (see chapter 5 for further explanations).

of both perspectives and argue for a holistic understanding of literacy. While the two views have often been regarded as opposites by some, I see the use of a sociocultural theoretical framework (see Chapter 2) as a way of taking a broader perspective on literacy and literacy development in *context,* thus including both skills and practices. This perspective acknowledges that contexts determine "purposes, functions, values and behaviour" (Kelly, 2010, p. 14), thereby shaping the ways in which people use meaningful signs. Barton and Hamilton (2000) have defined literacy as "a set of social practices; these are observable in events which are mediated by written texts" (p. 9). Regarding the early years, there is a need to expand on the notion of 'text', as young children are not *reading* or *writing* in the same way as one would expect from school children or adults. Pegorraro Schull and colleagues (2023) explain:

> "Early literacy includes reading, writing and language development. Writing includes any early writing attempts and pre-writing behaviours just as reading includes any early reading attempts and recognition of symbols and sounds. Language also includes listening and speaking (oral language and the use of gestures and signs to communicate."
>
> (p. 2)

Therefore, literacy experiences in the early years may include activities around the use of decontextualized language, such as singing, rhyming, or storytelling, as well as activities revolving around written text or other signs, such as shared picture book reading or other encounters with print. Furthermore, it may involve mark-leaving activities, such as drawing. These examples show, that literacy in early childhood may involve receptive or productive activities. Many studies have found that early literacy experiences have positive effects on children language development (Dickinson et al., 2012; Sénéchal & LeFevre, 2014), emergent literacy skills (Farver et al., 2013; Kennedy & McLoughlin, 2022) and their later performances in reading (Piasta, 2016) and writing (Puranik et al., 2018). Furthermore, early literacy experiences potentially increase children's motivation to become literate (Neuman, Hood & Ford, 2012). Shared reading, as a prominent early literacy practice is associated with positive relationships (Jimenez et al., 2019), socio-emotional development (Martucci, 2014), and causal reasoning (van der Wilt et al., 2022).

The importance of literacy in early childhood education settings, is especially important for children who do not benefit from rich home literacy environments, or children who speak non-dominant languages at home (C. S. Brown, 2014). Early childhood education can, in these cases, serve as an additional support for children to acquire skills, knowledge, attitudes, and understandings, that they will need on their later educational paths.

The term ‘meaning-making’ has been used in the sense of ‘expressing meaning in communication’ (Kress, 2015) or as a synonym for ‘understanding’ or ‘appropriating’ knowledge about the world (e.g Ignelzi, 2000). My study focusses on the second dimension of meaning-making. In relation to learning, meaning-making can be understood according to three different levels: the semantic, pragmatic, and existential level (Zittoun & Brinkman, 2012). The semantic level entails learning about the meaning of words and concepts (e.g. Hedges, 2012) whereas the pragmatic level refers to the appropriation of social practices through socialization processes (e.g. Burdelski, 2022). The existential level, which has been studied in relation to dealing with life-changing events or self-reflection of adults (e.g. Rogers et al., 2012) is less relevant in the context of my study.

Sociocultural scholars see meaning-making as a co-constructive process and emphasise the role of language (Bruner, 1986; Wells, 2009) and social interactions (Mercer, 1995) in children’s learning. Other researchers highlight the importance of taking into account young children’s multimodal ways of making meaning in the early years (Flewitt, 2005). Therefore, in the context of my study, I understand early literacy meaning-making as a co-constructive and multimodal process, through which young children come to understand and appropriate literacy-related concepts and practices. While cognitive developmentalists may disagree (see Mezirow, 2003 or Kegan, 2009), I argue that the children in this study, who were between two and four years old, made meaning of literacy in various literacy events alone, as well as together with peers or adults.

1.5 Research questions and argument

This thesis aims to expand knowledge and understanding of young children’s early literacy experiences in non-formal early education settings and explore the ways in which they learn and make meaning of literacy. It centres around the following three research questions:

In three crèches in Luxembourg…

1) Which early literacy events are two- to four-year old children engaging in and what practices underlie these events?

2) In which ways are two- to four-year old children making meaning of literacy on their own and together with others?

3) In which ways are two- to four-year old children interacting with peers and adults when making meaning in reading and writing situations?

The first question addresses the level of literacy events and practices of children in the three participating crèches. With the second question, I move the focus to situations of meaning-making and explore different social constellations. The third question represents the most in-depth level, as it focusses on children's interactions with others in specific literacy-related situations.

I have outlined the importance of literacy in the early years in the previous section. Furthermore, my study is relevant because it can inform the understanding of early literacy meaning-making in theory and practice. Previous research on literacy has predominantly focussed on school children. By contrast, I argue that young children actively and creatively make meaning of literacy from an early age on. Young children learn about literacy-related concepts, skills and practices when they engage in a range of literacy-related activities alone or with peers and when they are supported through high-quality interactions with adults. However, practitioners seem to feel insecure and inexperienced about the ways in which they can support children's meaning-making or carry out literacy activities, especially in multilingual contexts (Bergeron-Morin et al., 2023). Furthermore, the importance of elucidating children's perspectives in research studies has been emphasised (Serafini & Layne, 2013).

1.6 Structure of the thesis

This thesis is structured into twelve chapters. In this first chapter, I have introduced the topic of early literacy meaning-making and presented my personal position towards the subject. Furthermore, I have briefly situated my study in the context of COMPARE and stated my research questions.

In Chapter 2, I will present my theoretical framework, which centres around the work of Lev Vygotsky and other sociocultural scholars. I will clarify to what extent the sociocultural framework has shaped my understanding of learning and language in the early years. Furthermore, I will outline theoretical and pedagogical underpinnings of early childhood education.

Chapters 3 and 4 present the literature review of my dissertations. They focus on the key concepts of (early) literacy and meaning-making respectively. In these chapters, I will present previous theoretical and empirical knowledge of early literacy meaning-making.

In Chapter 5, I will introduce the research context of Luxembourg, a small but highly multilingual and multicultural country in the heart of Europe. I will present the sector of ECEC in Luxembourg and give an overview of the national policy framework. Furthermore, I will provide more details on the methodology and findings of the COMPARE project.

Chapter 6 outlines the methodology of my study. I will present the qualitative research design as well as the ethnographically inspired methods that I employed to collect data in the three crèches. Furthermore, I clarify my analytical approach and the ethical considerations of this study.

The findings of my study will be presented in Chapters 7 to 10. In Chapter 7, I present different contextual factors, which have shaped the literacy practices in the three crèches. Chapter 8 identifies several conditions, which facilitate early literacy meaning-making. In Chapter 9, I conceptualise early literacy meaning-making as involving three different levels of meaning: print awareness, (print) concepts, and literacy practices. In the final findings chapter, I explore the role of 'connections', which was a prominent aspect of children's early literacy meaning-making.

Chapter 11, will provide answers to my research questions and discuss overarching themes of this study in relation to multilingualism, multimodality, play, literacy, and pedagogy in early childhood education.

Chapter 12 concludes this dissertation, with an evaluation of my study, an outline of my theoretical, methodological and empirical contributions, as well as implications for policy-makers and early childhood practitioners. Finally, I will declare the limitations of my study and suggest directions for future research.

Chapter 2: Theoretical Framework

2.1 Introduction

For a long time, children's learning and development were exclusively studied from a cognitive and psychological perspective. Research focussed on individual aspects of learners, without much consideration of social or cultural dimensions. This study, however, explores the ways in which children come to understand meanings in relation to early literacy and to what extent this process is shaped by the social and cultural contexts in which it takes place. Hence, cognitive perspectives are not appropriate, as they do not acknowledge the diversity of children's experiences. Instead, I employ a socio-cultural framework of learning and development. Several reasons justify the use of sociocultural theory (SCT) in this study. First, SCT considers learning to be situated in a broader sociocultural and historical context. This shapes people's views, attitudes, practices and, therefore, also their interactions. Consequently, I analysed different contexts of early literacy meaning-making in Luxembourgish ECEC. In this case *context* refers to the different situations in which children engaged with literacy on their own, or together with peers and adults. Furthermore, children's experiences with literacy were shaped by the three different ECEC settings in this study. I will present different factors that influenced these contexts in Chapter 7.

Moreover, in SCT learning is seen as a participatory process in which learners are actively involved. As I will describe in Chapter 8, children's early literacy meaning-making was supported by children's active engagement and high-quality adult-child interactions. In fact, the sociocultural framework emphasises the dialogic nature of learning and that meaning in learning situations is co-constructed between learners and others. In my study, I have considered early literacy meaning-making as a social process, which takes place in interactions with people, environments, and texts. In Chapter 10, I will explore a specific aspect of high-quality interactions, namely *connections*.

In this chapter, I will introduce the theoretical foundations of my study. I will give an overview of various theoretical perspectives of ECEC, which are important to understand the children's daily experiences in this study. Furthermore, I will outline the SCT according to the four levels described by Vygtosky (1978) and I will present the sociocultural approach to learning.

2.2 Perspectives on Early Childhood Education

The beginning of a child's life is referred to as the early childhood, or the early years. Depending on the discipline or context, the precise ages considered to be early childhood can differ. While some researchers advocate for the consideration of the prenatal phase, others consider the early years to begin with the child's birth. Likewise, some fields consider early childhood to end by the age of six, while others include children up to twelve years of age (Farrell et al., 2015). In education, early childhood is often used as a synonym for the preschool age, which of course ends when the child enters primary school. This study, takes place in Luxembourg, where formal schooling is mandatory for children from the age of four. Therefore, I will use the term 'early childhood', or 'the early years' to designate the time period of children's lives up until they turn four and go to school.

While there is debate regarding what age range early childhood covers, stakeholders agree that the early years are crucial for the individual child, as well as for society. International organisations such as the OECD (2001, 2006, 2012) and UNICEF (2008, 2014) confirm the importance of researching early childhood in order to inform and shape political and societal development. Consequently, early childhood is of growing interest to researchers of different fields, such as education, sociology, psychology, or health sciences. As an interdisciplinary research field, early childhood combines studies that have been conducted in different areas of children's lives, such as the family, community, and educational institutions. Furthermore, studies on early childhood employ a range of methodologies. Early childhood research is, therefore, diverse and produces relevant insights for individuals, communities, and policy-makers (Farrell et al., 2015).

Studies in the field of education, such as the present thesis, often explore contexts of Early Childhood Education and Care (ECEC). In political and societal discourse, ECEC institutions are portrayed as a way of counteracting inequalities, which have been gaining attention since the 1970s (Schäfer, 2014). Indeed, studies continue to find positive effects of ECEC on children's cognitive (Burger, 2010), language, and literacy development (Sim et al., 2018). The Early Intervention Foundation (EIF), in collaboration with RAND Europe, has produced a report which reviews teaching practices and their effectiveness in ECEC settings. Over one hundred papers covering eighty three programmes (most of which are from the United States) are included in the report. While the report included intervention studies about different domains, such as numeracy skills, socio-emotional development and physical outcomes, it concludes that the most researched areas are language and literacy. ECEC programmes focussing on these areas have been found to have positive effects on the development of

children's reading and writing skills, as well as their vocabulary (ibid.) However, it remains unclear how long-lasting and sustainable these effects are.

In another systematic review of publications, covering twenty three early childhood education and intervention programmes from Europe, Asia, North America and Canada (Burger, 2010), it was found that children of different backgrounds can benefit from ECEC. Overall, children's cognitive development was enhanced by their experiences in ECEC contexts, which had positive effects on their later schooling. Furthermore, taking part in ECEC programmes seemed to facilitate the transition from home to school, as it gave children the opportunity to experience an educational institution. As such, ECEC has the potential to counteract educational inequalities by preparing children for later schooling and, thereby, increasing educational outcomes. Hence, many ECEC institutions have introduced curricula and pedagogical activities that familiarise children with elementary subject areas like, mathematics or languages. This process has been described as the *schoolification* (Doherty, 2007) of ECEC. The fulfilment of educational demands may lead to more adult-centred and formalised pedagogical approaches. It has been criticised for supressing fundamental principles of early childhood education, such as the prioritisation of individual children's needs, or equal partnerships between practitioners and parents (Murray, 2015).

The contexts in which children learn about literacy in ECEC settings are shaped by many aspects, one of which is the practitioners' understanding of education and their pedagogical practice. These understandings and practices are grounded in theory. The three crèches in this study applied three different pedagogical approaches. In order to better comprehend and interpret the practitioners' practices, it is necessary to outline the main theoretical underpinnings of early childhood education.

2.2.1 Philosophical underpinnings

In so-called 'Western' early education, three main ideologies prevail, introduced by three prominent theorists. First, is the philosopher Jean-Jacques Rousseau, who was one of the key figures of the Enlightenment in the 18th century; second, the work of Friedrich Froebel, who is said to have introduced the idea of *Bildung*[2] into early childhood education in 19th century Germany (Schäfer, 2014); and third, the Swiss Johann Heinrich Pestalozzi, who is considered to be one of the founders of the New Education Movement (or in German *Reformpädagogik)*

[2] In German, one can distinguish between the concepts of *Bildung* and *Erziehung.* The former emphasises learning from within the individual, whereas the latter refers to the influence of the outside world on the individual's learning and development (Schäfer, 2014). Both terms would be translated to *education* in English.

in the early 20th century. Many pedagogical approaches or programmes that continue to shape early childhood education today are rooted in the works of these three men. They are similar in their view of children's learning as a participatory and playful process, and they all acknowledge the relevance of children's family contexts (Murray, 2015). However, they differ in regard to their conceptualisation of the role of the adult in children's learning.

In Rousseau's view of early education, the child's development is compared to the growth of a plant. Just like a plant, a child needs favourable conditions in order to grow. Children should be enabled to develop and learn, both naturally and independently. The adults' role is to provide the right environment and to protect the child from potentially harmful experiences and influences (Rousseau, 1762). Froebel's work, emphasised the role of the mother (or main caregiver) in children's learning (Froebel, 1826). Children are seen as naturally curious and intrinsically motivated to learn. Adults can support them by guiding them, by challenging them, and by structuring their activities (Schäfer, 2014). Finally, Pestalozzi saw early childhood education as the foundation for later learning and development (Pestalozzi, 1801). His aim was to strengthen parents, so that the education of the child could begin from an early age. Parents, or other adults, should provide a programme of learning and teaching, which would enable the child to become an independent learner and a fully-fledged member of society (Murray, 2015).

2.2.2 Learning theories and pedagogical approaches

The philosophical underpinnings that I have just described are the foundation of educational theory. In early childhood education, two learning theories in particular dominate the discourse: the constructivist theory of Swiss developmental psychologist Jean Piaget, and the socio-constructivist theory, based on the work of Lev Vygotsky (Murray, 2015). While both Piaget's and Vygotsky's understandings of learning can be considered 'constructivist' the former emphasises the cognitive aspects, while the latter focusses on the social aspects (Mcleod, 2023). Piaget's theory of child development maintains that there are four consecutive developmental stages (Piaget, 1964). All children, regardless of their environment, would follow similar developmental steps within a predetermined timeframe. Furthermore, Piaget claims that individuals have existing cognitive schemata that define their way of knowing. When confronted with new information or experiences, learners either integrate new knowledge into their existing schemata (assimilation) or adapt their current understanding accordingly (accommodation). This understanding of learning foregrounds the role of the individual learner and their cognitive processes (Carey et al., 2015). By contrast, Vygotsky emphasised the role of co-construction and social interactions in learning. Although theorists have attempted to find

similarities between the learning theories of Piaget and Vygotsky (DeVries, 2000), Vygotsky's disagreement with aspects of Piaget's work was pivotal for the elaboration of his own views. While Piaget claimed that cognitive development needs to precede learning, Vygotsky questioned this view and saw learning as the driving force for development. He disagreed with Piaget's developmental stages and their applicability in consideration of children's diverse realities. Vygotsky emphasised the impact of different sociocultural contexts on children's experiences and interactions, and to what extent they shape (language) development and learning (see sub-chapter 2.3.2). The learning theories of Piaget are the foundation of many pedagogical approaches in ECEC. Piaget's cognitive constructivist view has informed child-centred pedagogies, such as the Montessori method or Freinet pedagogy. On the other hand, Vygotsky's socio-contructivist learning theory has influenced the Reggio Emilia pedagogy (Murray, 2015). While there are many other pedagogical traditions, I will now only refer to those, that seemed to be underlying the practices of the participants in this study.

Watkins and Mortimore (1999) define pedagogy as: "any conscious activity by one person designed to enhance learning in another" (p.17). According to this definition, pedagogical activities have to be conscious and have to have the intention of supporting learning. Samuelsson and Carlsson (2008) have studied children's learning in ECEC in the context of play and early years curricula. They concluded, that most ECEC programmes see the child as an *active* learner. However, programmes differ according to the ways in which educators enable or support children's activity. In ECEC programmes falling into the so-called 'high-scope' category, educators structure learning activities in a way that is adapted to children's development and, hence, enables them to be active (Samuelsson & Carlsson, 2008). In their review of pedagogy in ECEC institutions, Siraj-Blatchford and colleagues (2002) found a similar category, which they called 'teacher-directed'. In this approach, the teacher, or educator plans a programme which structures children's learning.

Another type of ECEC programmes, is referred to as 'dialogic' (Samuelsson & Carlsson, 2008) or 'open' (Siraj-Blatchford et al., 2002). Here, the activities are not only adapted to the children's development, but also developed in interaction with their environment. As the term 'dialogic' suggests, the focus of pedagogical activities is on the interactions between children, adults, and their physical surroundings. One example of this type of pedagogical practice is the Reggio-Emilia pedagogy. Here, children are thought to possess "a hundred languages", by means of which they explore the world around them (Reggio Children, 2011, p. 36). These *languages*, such as acting, imagining, feeling, or thinking, enable children to interact with their surroundings and, thereby, develop knowledge and understanding of themselves. The Reggio

Emilia pedagogy is dialogic, because it sees learning as being embedded in interactions between the child and his/her physical and social environment (Schäfer, 2014). This connects to Vygotsky's concept of the 'more knowledgeable other', as children learn in interaction with an adult, a peer, or their environment (Murray, 2015).

Finally, the third type of ECEC programme is called the 'child-centred' approach (Samuelsson & Carlsson, 2008; Siraj-Blatchford et al., 2002). However, the term 'child-centred' does not suggest that the other two previously described pedagogies are not oriented towards the needs of the child. In the 'child-centred' approach, children are seen as the main drivers of their own learning and the adults' role is to create a stimulating and flexible learning environment for learning and play. One example of this is the Montessori pedagogy, which is deeply rooted in Froebel's understanding of early childhood (Samuelsson & Carlsson, 2008). Based on her observations of children, Montessori developed learning materials, to be used independently by children, which would support their learning and knowledge development. While Montessori's view of the child was a holistic one, her positivist empirical work led to the dismantling of children's learning into separated areas of activities. This can be seen as an underlying theoretical contradiction in the Montessori pedagogy (Schäfer, 2014).

As I have shown, certain philosophical tenets have informed educational theories which, in turn, have shaped pedagogical approaches. The following table summarises the pedagogical approaches and their theoretical underpinnings. I will come back to this table in section 5.5.4 to contextualise the pedagogical approaches of the three participating crèches in this study.

Table 1: Summary of pedagogical approaches and theoretical underpinnings in ECEC

	High-scope or Teacher-guided	**Open or dialogic**	**Child-centred**
View of the child's learning	Learn through repetition and application	Learn in interaction with others and the environment	Learn through independent exploration
View of the educator's role	Adapt learning activities to child's development	Foster and support interactions	Create a rich and engaging environment
Related theories and pedagogies	Rousseau, Piaget	Pestalozzi, Vygotsky, Reggio Emilia	Froebel, Montessori

2.2.3 Participation and engagement

In extension to the previously described theoretical perspectives, there are two main concepts of early childhood education that are relevant for my argument. I claim that early literacy meaning-making requires children's engagement and participation. I will now give an overview of these concepts.

Participation is a complex concept, which is grounded in sociological , legal, and educational discourses (Correia et al., 2021). Therefore, it is connected to other important concepts, such as democracy, empowerment, or agency (see Figure 2).

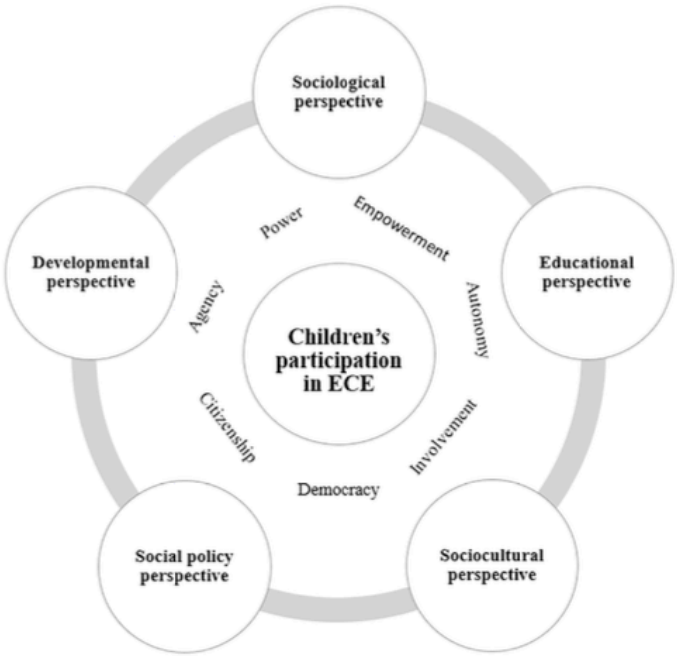

Figure 2: Theoretical overview of children's participation in ECEC (Correia et al., 2021, p. 327)

Participation can be viewed on different levels in ECEC practices. For example, participation can refer to the ways in which children are involved in decision-making processes in early childhood education institutions. Correia and colleagues (2019) reviewed thirty-six studies on the topic of participation in ECEC and found that most of them have explored educators' attitudes towards children's participation, which they understood as a democratic process aiming to include children in decision-making.

Furthermore, participation relates to children's ways of taking part in pedagogical activities, for example by contributing to discussions, respecting classroom rules, or following the educators' lead. This dimension has also been described as 'behavioural engagement' (Shafer & Wanless, 2023). Hence, the concepts of participation and engagement are connected to each other. While

participation can be seen as the expression of children's fundamental rights in ECEC, the concept of engagement is linked more explicitly to learning. Children's engagement has proved to be one of the main predictors of learning outcomes. In a longitudinal quantitative analysis of almost four hundred children in the US, researchers assessed the continuity of children's engagement between the ages of five and thirteen (Ladd & Dinella, 2009). The study showed that continued engagement predicted children's academic progress and long-term school success. While there is a consensus on the positive effect of engagement on educational outcomes, the definition and operationalisation of engagement have been debated. Shafer and Wanless (2023) explored these two dimensions in a review of twenty-one papers about children's engagement in early childhood education. They found that children's engagement can be subdivided into emotional, behavioural, and cognitive engagement. Emotional engagement refers to the ways in which children express emotions during learning activities. Both positive (e.g. enjoyment) and negative (e.g. frustration) emotions can show children's emotional engagement in learning. Behavioural engagement – which I mentioned earlier – refers to children's active participation in learning activities. Finally, cognitive engagement can be observed in children's ways of handling challenging tasks. It is expressed through children's persistence and strategic approach to problem solving. While all three aspects of engagement have been studied by means of self- or teacher-reports, most reviewed studies have applied observational methods to study children's engagement (Shafer & Wanless, 2023).

2.3 Sociocultural Theory

The framework of sociocultural theory (SCT) is based on the revolutionary work of Soviet psychologist Lev Vygotsky (1896 – 1934) and his colleagues. By bridging knowledge from anthropology and psychology, Vygotsky developed a new framework that continues to be relevant in various research fields and practices today. Vygotsky's sociocultural theory claims that all learning and thinking has historical, cultural, and social origins. Indeed, as Wertsch and colleagues (1995) state: "the goal of a sociocultural approach is to explicate the relationships between human mental functioning, on the one hand, and the cultural, institutional, and historical situations in which this functioning occurs, on the other" (p. 3). Vygotsky's research career was short as he died of tuberculosis at the young age of thirty-eight. He knew that his time was limited and, therefore, he aimed to pursue and develop more than one line of thought. He wanted to open up new possibilities for both his colleagues and future researchers (L.

Vygotsky, 1978). Many of his ideas have been further developed by his research associates, including A. Luria (1902 - 1977) and A. Leontiev (1903 - 1979), and published posthumously. Vygotksy's original texts were written in Russian and have since been translated into many languages. In fact, reading about Vygotsky in different languages, may influence our way of understanding his theory. For example, he described children's process of unifying thought and language in earyl childhood by internalizing linguistic meaning. The unified meaning of the word was called *znachenie slova* in the original texts. However, for Vygotsky this process consisted in a transformation of meaning, rather than a mere unification of external (i.e word) and internal (i.e thought) meaning. As Mahn (2012) further explains:

> "Vygotsky's analysis of *znachenie slova* as the internal structure of the speaking/thinking system is lost when it is translated into English as "word meaning." The Russian *znachenie* translates to "meaning" and *slova* to "word," but *slova* represents language as a whole, as reflected in the sentence "In the beginning was the word". More accurate, expanded renditions of *znachenie slova* are "meaning through language use" or "meaning through the use of the sign operation.""
>
> (p. 105)

This shows the complexity of Vygotsky's ideas and the challenge of understanding his work, based on translations. Furthermore, when considering texts in different languages, some of Vygotsky's concepts have been translated differently. One of his most-cited concepts – the zone of proximal development (ZPD) – has been translated to "Zone der nächsten Entwicklung" (*zone of <u>next</u> development)* in German. While the difference between 'proximal' and 'next' may be subtle, it influences the way we understand and apply the concept, as the German translations implies an outsider's perspective of consecutive developmental zones, whereas the English translation seems to be more oriented to the learner's perspective. My research has mostly been influenced by English translations of Vygotsky's work, such as "Mind and Society", translated by Cole and Scribner (1978) or "Thought and Language", translated by Kozulin (1934).

Bodrova and Leong (2007) described four main themes in Vygotsky's sociocultural theory. Firstly, learners are seen as active participants in the learning process, who co-construct knowledge in collaboration with others (parents, teachers, peers, siblings etc.). Secondly, Vygotsky was one of the first who recognised the importance of culture for learning and development. He saw development as inextricably connected to the social and cultural contexts in which it takes place. The third theme is Vygotsky's view on the relationship between learning and development, which was fundamentally different to that of contemporary theories. While

other researchers, such as J. Piaget, saw the attainment of certain developmental stages as a condition for learning, Vygotsky maintained that learning could lead to development. Finally, a major theme in Vygotsky's work is the central role of language in learning and development. Contrary to his contemporaries, Vygotsky studied speech and language as an integral part and a driving force of learning and development. Language is seen as a fundamentally human quality and a crucial feature of human thought. Furthermore, it is connected to the second theme of the social and cultural context, and serves as a way of making sense of one's experience.

2.3.1 The four levels of SCT

The sociocultural approach helps us to conceptualise human development and learning in a more holistic way. Vygotsky considered four levels of human development: (1) the phylogenesis; (2) the socio-historical; (3) the ontogenesis; and (4) the microgenesis (1934, 1978). Figure 3 shows a representation of the four levels and how they encompass each other. The levels differ in terms of their timespan and the people, communities, or individuals they refer to. From the outer level of the model to the inner one, the timeframe and contexts become smaller and more specific.

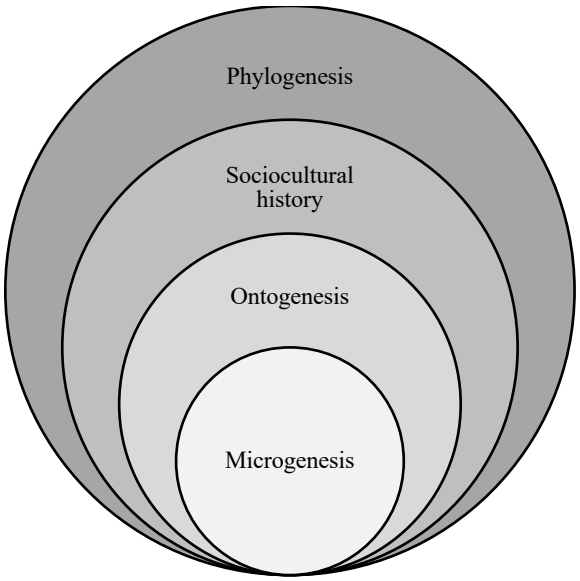

Figure 3: The four levels of human development in Vygotsky's theory

The first level of the theory, phylogenesis, refers to the human species as a whole and its development compared to other species. The second level describes the social and historical development of cultures. The third level, ontogenesis, refers to the development of a person

across their life. Finally, the fourth level, microgenesis, refers to experiences or interactions of individuals which contribute to learning and development. As shown in the above figure, the levels encompass and mutually influence each other. Microgenesis can only be fully understood in consideration of ontogenesis, which in turn reflects aspects of the sociohistorical development, and so on. Following Vygotsky's approach means acknowledging the impact of each of the four layers on learning, social interactions and practices. In the following section, I will describe these four levels and their respective relevance for my research.

Phylogenesis

The first and broadest level of human development is what Vygotsky called phylogenesis (from Greek: *phylon,* "tribe" + *genesis,* "origin"). This term, which is assigned to the natural sciences, designates the evolutionary development and diversification of a species or group. In Vygotsky's work, this refers to the evolution of the human species and its specificities compared to other living beings. It considers the longest timespan of development, from the origin of the human species up until today. While previous social theories have looked at the biological and the cultural development of humans as two separate aspects, Vygotsky sees them as inseparable. Culture is conceptualised as the essential driver of human evolution.

The starting point for this claim is the role of tool use in human evolution. Human development has, crucially, been shaped by our capacity to purposefully use tools and, vice versa, human evolution has changed the ways in which we use tools. Vygotsky distinguishes between two types of tools: concrete (i.e., objects) and symbolic (i.e., sign systems) tools (1997). Through the use of concrete tools, humans can transform their physical and material environment. Symbolic tools are different, as they mediate between a person's mind and their environment. Oral and written language can be considered symbolic tools. Therefore, understanding the role of symbolic tools is essential in literacy-related research.

With the development of the brain and the vocal tract, the second big leap of human evolution became possible. About half a million years ago, humans began to develop speech and language. Language, as the first symbolic tool humans were able to use, enabled us to express more complex relations and narratives in a decontextualised way. At the same time, the use of language led to the further development of human cognition, in the sense that it allowed us to connect past and present experiences in a comprehensive and coherent way. Humans developed the capacity to reflect, to narrate and to reason – or, in Wells' words (2009), humans developed "narrative meaning making" (p. 242). More information about narration as a way of making meaning will follow in sub-chapter 4.4.2. From a historical perspective, humans began to use

oral language as a tool to make sense of their experiences and to explain phenomena that they could not grasp rationally. Myths, stories and other narrations became an integral part of the human culture. The first symbolic depictions of oral language can be traced back until about 4000 years ago. Aesthetic representations of myths and stories were followed by functional and pragmatic tools to facilitate trade of material goods. Later on, more complex hieroglyphic writing systems were developed, which would represent words. Finally, alphabetic writing systems based on the sounds of spoken language were developed (Olson, 1994). The different forms of written language, therefore, evolved to become more complex and more abstract. The use of written language, again, shaped the human mind. It enabled us to think in abstract and theoretical terms and to pass on information over time and space.

To summarise, human evolution is inseparably linked to our way of using concrete, and later on symbolic tools to represent reality, knowledge and meanings. We can see that human phylogenesis followed two major patterns. Firstly, the changes that occurred were not subtractive, but cumulative. No human capacity is lost or forgotten in development; it is rather transformed and adapted to new requirements of the environment. This means that, in every developmental milestone, the characteristics of the previous developmental phase remain tangible. Human phylogenesis, therefore, results in human beings "with a variety of modes of functioning at their disposal" (Wells, 2009, p. 243). Secondly, there is reciprocity between the cognitive changes that occur over time and cultural development. Like interlocking gears, one propels the other and vice versa. The use of language was made possible by the development of the brain; this, in turn, promoted further cognitive growth. Similarly, the emergence of written language arose from increased cognitive capacities, which enabled more complex reflective processes. Like the chicken-and-egg metaphor, it is difficult to say which development preceded the other. Vygotsky, therefore, distinguished between the development of biologically determined functions and the development of higher mental functions. The first is the result of human evolution, following adaptation and natural selection. Vygotsky stated that humans are born with four biological functions: sensation, perception, attention, and memory (1997). These biological functions develop independently of social interactions and culture. On the other hand, higher mental functions are the product of socially and culturally evolving mediation (Damianova & Sullivan, 2011). The development of higher mental functions, such as problem solving, reasoning, or self-reflection, is influenced by the sociocultural context and the use of symbolic tools, such as language (Bodrova & Leong, 2007). I will further describe the development of higher mental function through mediation in the following section.

Sociocultural history

The second level of Vygotsky's sociocultural theory is sociocultural history. This level describes how the development of societies and cultures shapes human thinking. While the first level, phylogenesis, focusses on the human species as a whole, the second level acknowledges a distinction between different cultural and social groups. Vygotsky was one of the first psychologists of his time to emphasise the importance of culture in learning and development (Kozulin, 2003). He stated that all human behaviour and interaction is mediated through the use of concrete or symbolic tools. As each cultural group uses their own array of tools, human mediated action becomes culture-specific.

Daniels (2015) defines mediation as "the process through which the social and the individual mutually shape each other" (p. 34). The original notion of mediation relates to a person's use of psychological tools. The focus is on the use of semiotic means of mediation, such as oral or written language. By replacing direct action with the use of such psychological tools, the individual indirectly acts upon his/her environment. Cole (1996) illustrates the possibilities of interaction between an individual (subject) and his/her environment (object) using the triangular representation below (see Figure 4).

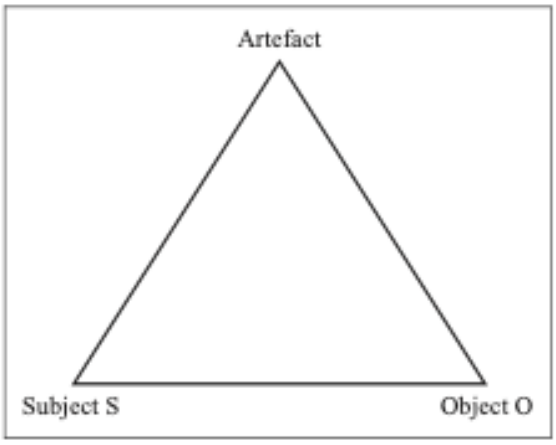

Figure 4: Illustration of the relationship between subject, artefact and object (Cole, 1996)

The subject can either directly (S – O) or indirectly (S – A – O) interact with a given object. Mediation is, therefore, an *active* process, which highlights the subject's role as an active agent in development (Wertsch et al., 1995). The interleaved use of an artefact is what constitutes the mediation between the subject and the object. In this model, Cole uses 'artefact' as an

overarching term that encompasses the more specific term of 'tool'. An artefact becomes a tool as it is used by humans and, hence, it is attributed meaning in (inter-)action (Cole, 1996).

Wertsch (2007) defined two types of mediation: explicit and implicit mediation. While the former describes the purposeful use of tools to improve or support cognitive performances, the latter refers to signs used in human communication. Explicit and implicit mediation, therefore, differ more in terms of the role of the tool than in the type of tool that is used. A well-known example of explicit mediation is to use external mnemonic devices, such as a knot in a handkerchief or a pen mark on one's hand. Hence, both concrete tools (e.g. knot in a handkerchief) or symbolic tools (e.g. pen mark on the hand) may be used as means of explicit mediation. In the case of the handkerchief or the pen mark, the explicit mediation consists in the link between a person's memory and their immediate environment. By using the consciously constructed tool, the person attempts to foster their capacity to remember specific information. Implicit mediation is different and more complex, as it relates only to the use of symbolic tools (e.g. signs or language) in communication. In implicit mediation, symbolic tools are employed to mediate between a person's mind and the minds of others. Here, it is important to note that Vygotsky saw symbolic tools, especially language, both as a means of communication and a mediational tool. Language and speech have a dual function, as they can act as mediating signs and as mediated functions simultaneously (Damianova & Sullivan, 2011).

Language takes on a pivotal role in sociocultural theory, as it represents the connection between individual thought and common understanding. Language is a tool for sharing our ways of thinking, expressing our ideas and negotiating meaning. In turn, the ways in which we use cultural tools, such as language, influences how we think. For example, the experiments of Vygotsky's colleague Luria demonstrate to what extent a person's mastery of literacy shapes their perception. In his longitudinal psycholinguistic study he investigated differences between literate and illiterate people, by studying inhabitants of remote, rural areas as well as larger cities in the Soviet Union. For example, he asked them: "In the North all bears are white. Novaja Semlja is high up in the North. What is the colour of bears in Novaja Semlja?" (Portmann, 1998, p. 26, translated by me). While the literate participants could answer the question with ease, the illiterate ones replied that they could not know the answer, as they had never been there (see Luria, 1976). This example illustrates, to what extent cultural tools, such as literacy shape a persons way of thinking.

Ontogenesis

The third level of development in Vygotsky's theory is ontogenesis (from Greek: *on,* "individual being" + *genesis,* "origin"). In biology, ontogenesis describes an organism's growth, from fertilisation to maturity. For Vygotsky, ontogenesis means the changes and developments that an individual person goes through over the course of their life. The ontogenesis of an individual is influenced by many factors, for example, birthplace and main living location, social environment of family and close friends, or educational trajectory. All these factors shape the personal development of the individual. Moreover, the relationship between the individual characteristics of a person and their ontogenesis is reciprocal. While a person's individual characteristics and abilities are shaped by their individual trajectory, personal traits likewise influence their ontogenesis. Taking ontogenesis into account in educational research, means considering all the individual resources of a learner. It requires us to view the learner from a holistic perspective and acknowledge other aspects of their lives, such as their family and linguistic background. While the present study takes place in crèches and, therefore, only focusses on one aspect of the children's daily lives, the parents and educators provided additional information that was taken into account, in order to foster a more holistic understanding (see Chapter 6).

Microgenesis

The last level of development in Vygotsky's theory is microgenesis. It is the most local and the shortest. Microgenesis refers to individuals' interactions or activities that give rise to the development of knowledge and competencies. It enables us to describe the processes through which cultural knowledge is expressed and appropriated. Or, in other words, the microgenesis allows us to describe the processes through which culture finds its way into the mind (Cole, 1996). Microgenesis is particularly relevant for educational research, as it allows us to address learning and development processes in more detail.

In Vygotsky's theory, learning and development on the microgenetic level are always conceptualised as being interactive, participatory, and transformative. This means that individual learning does not exist without some kind of interaction between the learner and other peers, adults, or tools. An important premise of Vygotsky's understanding of learning is that all learning happens twice, first on the social plane and then on the individual plane (L. Vygotsky, 1978). Before developing new competencies or knowledge, learners first experience them in interactions with others during interpersonal activities. Eventually, experiences enter

the intrapersonal level of the learner's mind. This process is called the internalization[3] of higher mental functions.

Internalization is the internal reconstruction of an external operation (Damianova & Sullivan, 2011). Vygotsky (1994, 1997) suggested that there are four stages of internalization: (1) internalization on the primitive level; (2) internalization on the naïve level; (3) internalization through external cultural mediation; and (4) internalization of the mediational link. The first stage consists of the individual and natural performance of operations without any assistance from others and without the use of auxiliary aids. The second stage happens in interaction with another person and consists of their introduction to a mediational tool. The learner, however, does not yet recognise or understand the function of said tool. This change occurs during the third stage. Here, the learner realises the helpful role of the tool and can henceforth use it during a particular activity. Finally, the learner internalizes the mediated link and is able to conduct the mediated activity internally. Passing from one stage to the next is more than a mere move from the external to the internal plane. Rather, qualitative changes occur at each stage. The development of higher mental function is, therefore, a transformatory process.

Damianova and Sullivan (2011) describe three different types of internalization: seam-type, holistic-type, and structure-type internalization. These types of internalization differ, according to both the processes through which mediated actions are internalized and the resulting higher mental functions. Vygotsky primarily described the types of internalization in relation to mathematical thinking and learning. The first type of internalization, the seam-type (p. 347), links concrete biological processes with a cultural mediator. This mediator is, at first, used externally, before being gradually internalized. Explicit mediation, as described above, is one example of seam-type internalization. For example, a person may use verbal signifiers to count. At first, the person has to pronounce the names of numbers when counting. After a while, this becomes unnecessary as the person has internalized the activity and is able to count internally. To the outside observer it may seem that the person's counting functions in a direct way, whereas in reality, it is mediated. The second type of internalization is the holistic-type (p. 347). Here, an external operation is internalized as a whole. To use another mathematical example, children who are learning how to count may first do this by using their fingers. In the case of seam-type internalization, the internalized number-word still appears on a mental plane; however, this is not the case for finger-counting. As children's mathematical learning progresses, they internalize finger-counting, until they eventually no longer need to rely on this

[3] While the British spelling would be 'Internalisation', I employ the American spelling, which is more commonly used in English translations of Vygotsky's work.

strategy to count. Finally, the third type of internalization is the structure-type internalization (p. 347). It is the most complex and developed type of internalization. As the name indicates, this type of internalization entails a restructuring of the internalized functions. For example, as children learn how to add or substract numbers, their way of counting mentally is reshaped. Internalization, hence, progressively transforms mental functions and is an integral part of children's learning processes.

2.3.2 The sociocultural approach to learning

Vygotsky's sociocultural theory is applied in educational sciences to describe children's learning processes. While Vygotsky himself was not an educational researcher, he developed useful concepts and ideas that allow us to explain learning processes from a sociocultural perspective. In the following section, I will elaborate on some aspects of Vygotsky's work that relate to socio-constructivist learning theory. Furthermore, I will describe other neo-Vygotskian researchers' contributions. I will start by presenting the concepts of the ZPD and scaffolding. These concepts highlight the importance of children's interactions with others in learning, which will be further explored in the second section of this part. Furthermore, I already mentioned that language has a crucial role in learning, from a Vygotskian perspective and I will elaborate on this hereafter. Finally, more specifically in relation to learning in early childhood, Vygotsky emphasised the importance of play, which unites the aspects of the ZPD, (peer) interactions, and language.

ZPD and scaffolding

A frequently cited concept of Vygotsky's work is the ZPD, which 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" (L. Vygotsky, 1978, p. 86). Vygotsky distinguished between the *actual development level* and the ZPD*:* "The actual development level characterises mental development retrospectively, while the ZPD characterises mental development prospectively" (pp. 86 - 87). While previous psychological research had studied learning as the result of an achieved development that could be measured, for example through tests, Vygotsky established new methodological approaches. In his view, psychological research would produce more valuable and useful insights by focussing on learning *processes* and how to support *future* learning. Therefore, he did not only study children on their own, but also in

interaction with adults or older peers. He concluded that the most interesting measurement was not children's independent performance, but what they could accomplish collaboratively. In dialogic reading (see sub-chapter 4.3), for example, children co-construct stories together in exchange with an adult and other peers. Engaging in a dialogue, as well as listening and referring to others' ideas supports their (language) learning and understanding in a way, that would not be possible individually.

Researchers following Vygotsky's ideas have further developed the concept of 'adult guidance', which is necessary for children to act in their ZPD. Bruner and his colleagues (1976) defined 'scaffolding' as a "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (Wood et al., p. 90). In other words, scaffolding is the type of support that adults, teachers, more advanced peers, or learning materials can offer so that children learn and act in their ZPD (see Figure 5).

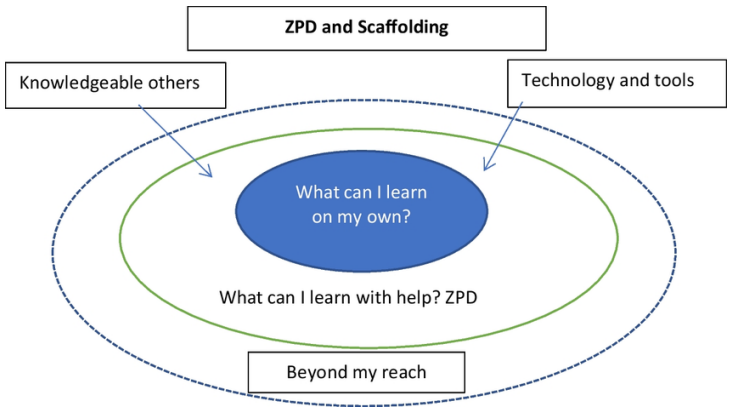

Figure 5: ZPD and scaffolding as illustrated by Ong and Annamalai (2023)

Previously, learning in interaction was often seen as a modelling or imitation process, in which children or learners follow the lead of the adult or teacher. As I have shown, Vygotsky's view is fundamentally different from other traditional learning theories. Compared to his contemporaries, Vygotsky had a more positive view of the child learner's role. He acknowledged that children were more than 'underdeveloped' adults and that they play an active part in their learning processes. At the heart of SCT is the idea, that learning happens in interaction with others. It is not an individual endeavour, but rather an ever ongoing and co-constructive process. Learning – regardless of the age of the learner, the topic or the context – never occurs in isolation. There is always some kind of interaction with other people, material or symbolic tools. This entails a certain understanding of the learners' and teachers' roles in the learning process. Both learner and teacher are seen as active participants in the process, and

both can learn together and/or from each other. Here, children's learning in interaction is not only considered in relation to other persons, but also to the physical environment, which can act as a MKO.

Learning in a social context

From a sociocultural perspective, learning and development are seen as dialogic and dynamic processes, in which the child or learner is enabled to connect old and new knowledge through interactions with others. These 'others' can be teachers, parents, older siblings or peers. In sociocultural theory, interactions are studied in consideration of their social, cultural and material contexts. Thus, a child is brought up in a sociocultural milieu and becomes socialised according to the community's values, practices, and norms. Rogoff (1990) describes this process as an 'apprenticeship' in thinking. The child's interactions within their sociocultural environments support and shape the child's learning. Knowledge is not merely transferred, but acquired through 'guided participation' (Rogoff, 1990). Understandings are seen as dynamic and co-constructed by all participants in interaction. Rogoff and colleagues (2001) build on this idea by using the phrase 'communities of learners' (p. 7).

This way of understanding educational contexts emphasises that both teachers and students learn together and from each other. Other researchers have also used the term 'communities' to describe development and learning from a sociocultural perspective. For Lave and Wenger (1991), learning is a social process that happens within a 'community of practice' and does not only refer to acquiring knowledge and skills, but also to understanding of social practices. Like in Rogoff's work, learning occurs through participation that is, at first, 'legitimate' and 'peripheral' and gradually increases in engagement and complexity (Lave & Wenger, 1991). Lave and Wenger, as well as Rogoff, see learning as situated in a sociocultural context. Furthermore, the aim of learning is to fully participate in and, thus, co-shape the social practices of a given community. While Vygotsky focussed on academic learning in the context of schools, Rogoff expanded her view to research less dominant discourses on learning. Her concept of 'guided participation' (Rogoff, 1990) includes alternative educational discourse and learning in non-institutional contexts. In guided participation, children are seen as active learners. They learn through observation and participation in social activities. These activities do not necessarily have to promote a didactical or educational aim. Learning, from this perspective, can happen anywhere and in various everyday activities. Children's participation, either central or peripheral, is acknowledged and valued from the very start. Their role in learning is not merely to *internalize* adult knowledge and skills, but to *appropriate.* Through participation,

they are able to continuously build their own understanding of social activities. Hence, learning and development are characterised as an ongoing process.

Learning through language

As language has a special place in Vygotsky's theory, the internalization of language has been described more specifically. Language, and more precisely speech, is seen as a primary mediator. Distinct, yet interrelated forms of speech appear in the process of internalization. Speech first appears in its external form, as 'social' speech in communication with others. When alone, children may use self-directed speech to accompany their personal activities. While Piaget called this type of speech 'egocentric', Vygotsky used the term 'private'. While Piaget saw this type of speech as a premature stage of language development that dissolved in the maturation process, Vygotksy claimed that language is internalized and turns into 'inner' speech. This intimate and interpersonal form of speech transforms children's thoughts into language (Damianova & Sullivan, 2011). Hence, the internalization of speech does not only consist of a transformation from external to internal, but also from collective (social) to individual (psychological). In Vygotsky's view, language and speech are what distinguish humans from other animals. Hence, speech (as well as the use of other tools) is not an expression or result of cognitive development; rather it has an organisational and structural power in development. This is why Vygotsky was especially interested in the period of childhood during which speech develops, namely early childhood. Before children learn how to control their environment through their own behaviour, they learn how to control it through speech or other signs (e.g. gaze, gestures). In his experiments, Vygotsky put children in problem solving situations and observed how they employed speech and for what purpose. He concluded that speech does not merely accompany children's actions (as suggested for example by Piaget) but also plays a specific role in solving problems. Children used speech to either address others when asking for help (social speech) or to guide their own behaviour (private speech). If deprived of the opportunity to ask others for help, children's speech turned inwards, and its function shifted from communicative to organisational. Children employed self-directed speech to plan and think about actions that would solve the problem at hand.

These observations led Vygotsky to several conclusions. Firstly, the use of language divides human action into two separate phases: the planning and the realisation of an activity. Speech, whether self-directed or used to communicate with others, is essential for the first phase of planning and thinking about the problem at hand. It makes human action less immediate and spontaneous and allows us to engage with a challenge on a cognitive level and to plan, before

taking actions. Furthermore, the use of language – whether self-directed or used to communicate with others – creates possibilities for humans to achieve their goals or complete increasingly complicated tasks. Finally, speech can be seen as a controlling mechanism. Through speech, we can address others, for example to ask for help and, in doing so, control our environment. An interesting context for children to exercise control over their environment throug speech is play.

The role of play for learning

Vygotsky emphasised the importance of play activities in early childhood, claiming that these emerged as part of children's strategies to fulfil certain needs. The younger a child, the more immediate the need for fulfilment usually is. When an infant cries, adults tend to respond immediately to its needs. During the first months of a child's life, such needs might include food, comfort, hygiene, or attention. As children grow, their desires become more complex and, at times, impossible to be realised immediately. Children's desires might be focussed on actions that surpass their current abilities: for example, they may want to cook or ride a bike on their own. Other desires might be related to unrealistic wishes, such as being able to fly or owning a dragon. The frustration children experience when being faced with unrealisable desires is what lies at the origin of play activities, according to Vygotsky (1978): "To resolve this tension, the preschool child enters an imaginary, illusory world in which the unrealisable desires can be realised, and this world is what we call play" (p. 93). In this understanding, the defining characteristic of play becomes imagination. Or, in other words, in play, young children put their imagination to action.

Play is recognised as an important context for young children to express themselves, learn about the world, and interact with others (Samuelsson & Carlsson, 2008). Play can generally be seen as an opportunity for children to control or lead an activity, alone or together with peers (Samuelsson & Carlsson, 2008; Corsaro, 1992). This emphasises the agentive potential of play situations, as children define the course of their actions without adult direction or restriction. Smith and Pellegrini (2008) define play in comparison to exploration and games. The exploration of new environments or objects is a result of children's curiosity and fulfils the aim of discovering something new. Play may be a result of exploration, but it does not serve a specific purpose, rather, the process of playing itself is at the children's primary interest. Games, on the other hand, are organised activities that are typically competitive. In comparison to games, play is less structured and organised (Smith & Pellegrini, 2008). Indeed, the role of

imagination is only one of several other characteristics of play that have been described in existing literature.

Wells Rowe (1998) outlined six essential characteristics of play. According to her: (1) play is nonliteral; (2) in play means are more important than ends; (3) play is marked by positive affect; (4) play is voluntary; (5) play is flexible; and (6) play involves internal control by the players (p. 13). The first characteristic of play relates to the role of imagination in play. Utterances and actions in play are not *real* but they are a representation of an (invented) play reality. For example, when a child makes a promise to another child in a play situation, this promise is only valid in the play situation and loses its meaning once the play situation is over. This is what Wells Rowe characterised as *non-literal.* Secondly, children do not focus on aims to pursue through their actions in play. Rather, they act in play situations for the sake of the action itself. Another characteristic of play is that play is inherently positive. Conflicts or quarrels might arise out of play situations, but generally play should be an enjoyable activity for children. This complements the fourth characteristic of play, namely, that play is voluntary. Children cannot be forced to play, and it is the children who decide, which activities qualify as play for them, and which do not. In Wells Rowe's view, play is flexible. This characteristic emphasises that play is dynamic and that children might change the terms and structure of the play situation as they go on.

Researchers use different terms to describe children's play activities. The existing terms emphasise different aspects of play. For example, Bateman (2018) uses the term 'pretend play' and defines it as: "an activity where children learn to assimilate life experiences through acting them out in playful ways" (p. 69). This notion emphasises the aspect of pretence, through which children act out activities that are untypical or imagined. Another frequently used term is 'role play', emphasising how children assume different roles in play. Here, the focus lies on the different 'characters' each participating child is playing and on the functions these characters fulfil in the interaction. Children's role play develops with age. Whereas children aged two to three years do not yet take on roles, children aged four and five years engage in more complex interactions that are less rooted in the concrete surroundings (Andresen, 2011).

Play has frequently been associated with language learning (Bengochea et al., 2018; Samuelsson & Carlsson, 2008), socialization[4] (Streelasky, 2019; Corsaro & Nelson. 2003; Corsaro, 1992), and symbolism (Worthington & van Oers, 2017; Vygotsky, 1978). All of these aspects are relevant for children's literacy development in early childhood. As play is often a collaborative activity between several children, it encourages them to communicate, interpret

[4] Again, I use the American spelling, as it has been used in most of the literature I consulted.

and negotiate with others. Children have to explicitly state the rules of the game or verbalise their intentions and interpretations. Furthermore, they have to imagine what behaviour best corresponds to the roles they take on, or what information others need have in order to participate in the play scenario. This type of meta-communication with others, therefore, helps children to develop intersubjectivity (Samuelsson & Carlsson, 2008) and oral language. This is especially relevant in multilingual contexts, where children who play together might not necessarily use the same languages. For example, Bengochea and colleagues (2018) investigated the ways in which a four-year-old emergent bilingual boy communicated during play. They found that the boy used a wide range of expressive modes, which he adapted according to the play situations, his aims in play, and the other participating children or adults. The play context offered him the opportunity to experiment with and use his entire semiotic repertoire in ways that would not have been possible outside of play. The researchers, therefore, concluded that opportunities to play and to use different material support during play can enrich children's language development.

Furthermore, children's play is an important means of socialization, as it supports children in making sense of social practices and experimenting with social norms or relations (Streelasky, 2019). Children's play mostly centres around topics or experiences that are intriguing and interesting to them. W. Corsaro has extensively studied the role of children's play in their peer cultures. Throughout his years of ethnographic research in the US and in Italy, he was able to identify commonalities in children's play and develop the concept of 'interpretive reproduction' (Corsaro, 1992). This concept designates one way in which children make meaning of adult practices. Children incorporate elements from everyday life in their play, not merely by copying, but by transforming, interpreting, and appropriating what adults do in a creative way. The concept of 'interpretive reproduction' can be related to the concept of 'mimesis', which refers to children's mimicking of others' behaviour (Sting, 2013). Young children's contact with their physical and social surroundings predominantly takes place through movements and senses. Children may react to their perceptions by reproducing others' behaviour. However, mimesis is more than mere copying. Rather, it is seen as a social action through which children react to their environments and interact with others (ibid.). By exaggerating certain features of adult culture for example, children give meaning to what they encounter in their everyday lives. Play therefore has an important function in children's socialization process, especially at times of transition, such as starting formal education (Corsaro & Nelson, 2003). The ways in which children act in play situations allows us to draw conclusions about the children's understanding and conceptualisations of the world. For example, when children play *school*, their behaviour

shows us what they believe teachers and children should be like. Paradoxically, children sometimes take on roles in play that they also hold in real life. Vygotsky (1978) gives the example of two sisters, who play *being sisters.* During their play they act in a different way than in real life and emphasise doing everything together and in the same way. For them, *sameness* seemed to be a unique characteristic of the relationship between sisters.

Children's play is also relevant for early literacy meaning-making as it is associated with the emergence of symbolism. In play, children's understandings of complex concepts are directly expressed and become guiding rules of the play interaction. The same is true for the use of objects in play. While some researchers have classified imagined use of objects as a first step towards the use of signs and symbols (Worthington & van Oers, 2017), Vygotsky (1978) does not see play as a symbolic action as such: "I believe that play is not symbolic action in the proper sense of the term" (p. 94). To him, the use of objects in play does not represent a *symbolic* action, but an *imagined* one. The main difference here is the distance between original meaning and chosen representation. In *imagined* action, the object chosen to represent a certain meaning is not arbitrary or abstract but has specific characteristics. For example, when children play cowboy, they might use a stick to represent a horse. The stick is not chosen randomly, but because it allows them to ride the horse and move around with it. They would not choose any other object, such as a blanket or a ball to represent the horse. I would even add that not just any stick is suited to become a horse in play situations, as the stick needs to have a certain shape and size. On the other hand, *symbolic* action entails a more abstract relation between meaning and representation. Here, *any* object can represent *any* real meaning. For Vygotsky, an example of symbolic action is the use of written language. Here, objects (e.g. letters or words) represent abstract or real meanings, with no logical link between the sign and the signifier. Even if Vygotsky would not see play as a symbolic action, it can be seen as a precursor of such. An important developmental leap is taken in play that will eventually help children to act symbolically. As discussed above, play situations can be seen as condensed and intensified engagement with meaning. Meaning of roles, objects, or situations are what guides the children's behaviour in play, as opposed to mere perception. While younger children tend to act directly upon what they perceive, preschool children who engage in play learn to act, not upon what they *see* but upon what the *meaning* of what they see is. "Action in an imaginary situation teaches the child to guide her behaviour not only by immediate perception of objects or by the situation immediately affecting her but also by the meaning of this situation" (L. Vygotsky, 1978, p. 97). This gradual distance between perception and meaning eventually leads to the ability of using signs and symbols, for example in the case of reading and writing. Hence, play

can generally be acknowledged as a key activity for children's development in general and, more specifically, for children's meaning-making in regard to the use of signs.

2.4 Summary

In this section, I provided an overview of theoretical perspectives of ECEC. I outlined philosophical underpinnings and learning theories, which influence pedagogy in ECEC. There seem to be a range of pedagogical approaches, ranging from more adult-centred, to more child-centred approaches. It has become clear that these approaches depend on the adults' understanding of their own role in learning and on their views of children. Furthermore, I introduced the theoretical framework of this study: sociocultural theory, based on the work of Vygotsky and others. I described several themes that are relevant in this study, namely the concept of the ZPD, the idea that learning occurs through interactions in a social context, as well as the crucial roles of language and play in early childhood. It has become clear that SCT understands learning and meaning-making as *social* processes, shaped by the use of concrete (e.g. learning material) and symbolic tools (e.g. oral and written language). While the active and creative role of the (child) learner is emphasized, SCT also highlights the relevance of interactions with MKOs: parents, educators, peers, the environment. Furthermore, learning is a transformative process, which entails not only internalization, but *appropriation* of knowledge, skills, and practices.

Chapter 3: Literature Review about Literacy

3.1 Introduction

Literacy is a widely researched concept in educational studies and beyond. While the terms *literacy* or *literate* can generally refer to a variety of skill sets and communicative activities (e.g. digital literacy), I only focus on so-called *print* literacy, which is related to language-based sign systems. Literacy[5] can be understood from different theoretical perspectives (i.e. the cognitive narrow view and the broad sociocultural view) and with different foci (i.e. focus on skills and focus on practices). In the following, I will first give an overview of the different theoretical understandings of the concept of literacy. I will then focus on the sociocultural perspective on literacy. Secondly, I will introduce existing concepts of literacy in the early years. I will outline the differences between pre-literacy, emergent literacy, and early literacy. Furthermore, I will describe the most relevant aspects of learning about literacy in the early years in this study, namely: literacy socialization, oral language development, and emergent literacy skills. The chapter concludes with an overview of literacy practices in ECEC contexts.

3.2 Defining Literacy

In education, sometimes *literacy* is considered in opposition to *oracy.* This dichotomy emphasizes the modes in which language is expressed; *literacy* is seen in relation to written language, whereas *oracy* refers to oral language. The evaluation of language competences in formal schools often represents this view, as pupils' abilities of *speaking, listening, reading* and *writing* a given language are assessed. However, the distinction between oracy and literacy does not sufficiently account for the complexity of language and literacy practices. Therefore, some researchers have disentangled literacy and described several other important dimensions (Koch & Oesterreicher, 1985; Hornberger & Kirsch, 2024). This more nuanced perspective allows to consider literacy in relation to *contexts, medium, content,* and *development.* In the following, I will give a brief overview of these dimensions to illustrate the complex concept of literacy.

From an educational perspective, the *contexts* of literacy describe the learning environments in which children encounter literacy. According to Kirsch and Hornberger (2024), this dimension

[5] For reasons of readability, I will simply use the term *literacy*, to refer to print or language-based literacy.

encompasses several aspects. Learning environments are shaped by the micro- and macro contexts (e.g. educational and institutional policies) and by the language and literacy practices of educational settings. For example, literacy may involve the use of one or multiple languages. Furthermore, Koch and Oesterreicher (1985) mention the aspect of time and place. Communicative language and literacy practices can occur simultaneously or delayed in time. For example, a written correspondance through letters or e-mails, is a dialogue which stretches over a certain period of time. Likewise, producers and recipients of language can communicate in the same place (e.g. in-person conversation) or across places (e.g. phone call). These elements of context are important when conceptualizing literacy.

In regard to the *content* of literacy, Koch and Oesterreicher (1985) describe qualitative differences in terms of the form of language. This relates to questions of language repertoires and styles. More precisely, language use can range from more colloquial to literary forms of expression. For example, in oral communication, abbreviations such as 'gonna', 'don't', or 'wanna', can be used, where this is not the standard for literary forms of communication. Kirsch and Hornberger (2024) add to this, that the content of literacy can range from the use of contextualised to decontextualised texts and activities. Furthermore, researchers describe the dimension of different *media* of literacy. This refers to the ways in which literacy is represented and expressed. This comprises language structures and scripts (Kirsch & Hornberger, 2024), as well as oral or written ways of representing language. Koch and Oesterreicher (1985) have illustrated the dimensions of content and media in a visualisation of different communicative situations. While they represent the dimension of *medium* of literacy as either phonic (oral) or graphic (written), the *content* of communication is ranged on a continuum from 'spoken'-like to 'written'-like language. For example, they situate a conversation with a close friend as a communicative situation that makes use of oral language both in terms of medium and content. By contrast, a legal document is a purely written type of communication. On the other hand, a printed interview combines a written (or graphic) form or media, but spoken-like content. Figure 6 shows a translated version of the illustration and the examples of communicative situations described by Koch and Oesterreicher (1985).

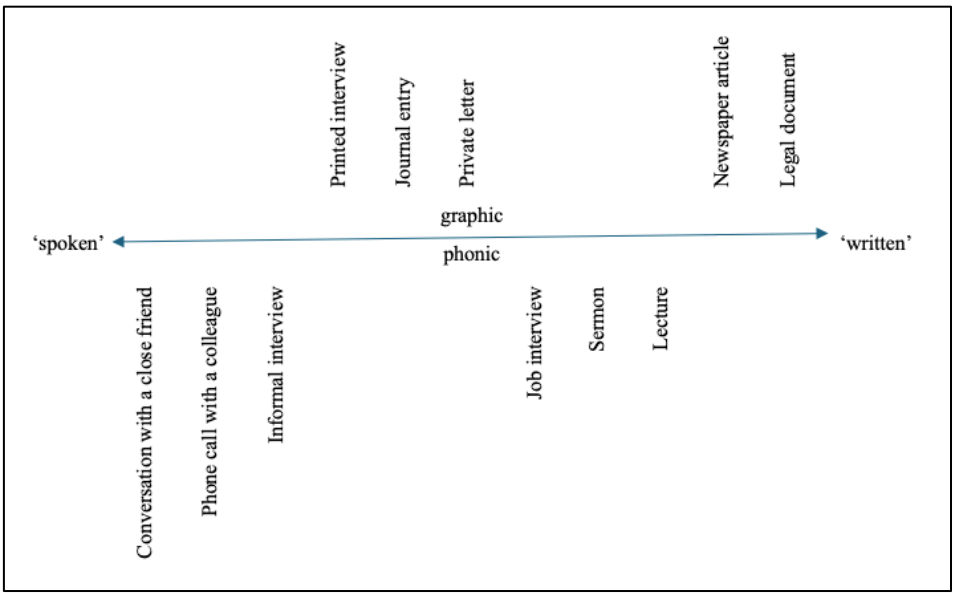

Figure 6: Visualisation of the spectrum of content and media (Koch & Oesterreicher, 1985, p. 18)

Finally, literacy involves the dimension of development or learning. In this regard, Kirsch and Hornberger (2024) refer to receptive-productive or oral-written language skills, as well as children's diverse language repertoires (e.g. first language, second language etc.).

Indisputably, the concept of literacy encompasses the *activities* of writing and reading. Again, a clearer differentiation of these terms and their meanings is needed. Firstly, it is important to distinguish between the *activities* of decoding and composing written language, and the *practices* of reading and writing. The former are included in the latter, but only represent one aspect of reading and writing practices. While decoding and composing refer to the technical skills and knowledge involved in using written language reading and writing refer to the human act of communicating through written language. Hence, reading and writing happen in any situation in which a reader and a writer are making sense through written language (Wells Rowe, 2018). Gerde and colleagues (2012) define writing as "the activity of expressing ideas, opinions and views in print" (p. 351). The purpose of writing can be to communicate (e.g. letters and e-mails) or to compose texts for a specific aesthetic (e.g. literature) or functional (e.g. manual) purpose. Hence, writing entails the activity of composing written language. Moreover, this activity is not isolated from the sociocultural context in which it is embedded and requires the writer to reflect on the function of the text, their own experiences, and the perspectives of their potential readers. Reading, on the other hand, is a transformative action that starts with the act of decoding a text. The reader, however, does not simply assimilate the language he or she decoded but makes sense of the text within their own frame of reference (Kress, 1997).

To sum up, the concept of literacy can generally be defined as interpretations and interactions around written language (Kirsch & Hornberger, 2024). It is a complex and dynamic concept, which requires the inclusion of different perspectives on the context, content, media, and development of children's learning. Furthermore, regarding everyday life practices, literacy relates to activities and behaviour around written language. While I have focussed on the theoretical and conceptual underpinnings of literacy in this part, I will now provide further information on different discourses in relation to literacy.

3.2.1 Different perspectives of literacy

Many different ways of understanding literacy, representing different foci in relation to written language, exist. While I acknowledge the validity of all these views, some perspectives are more relevant than others in the context of my research. Furthermore, some views correspond more to my theoretical framework, sociocultural theory, than others. In the following section, I will give an overview of the main existing theoretical perspectives on literacy. My aim is not to evaluate or hierarchise the different theoretical understandings, but to differentiate and clarify.

The different theoretical approaches to literacy have developed in line with different societal and historical circumstances. From an educational perspective, literacy is often understood in relation to learners' abilities and skills. Measurements of *literate* or *illiterate* students have defined what qualifies as literacy and what does not. For example, the ability to sign one's own name, to recite religious texts fluently, or to have attended formal schooling for a defined period of time, have been used as indicators of literacy in the past (Rintaningrum, 2009). In this sense, literacy can be defined as "the ability to understand and use those written language forms required by society and valued by the individual" (Mullis et al., 2006, p. 3). International assessments, such as PISA, have emphasised the economic value of literacy as they link pupils' literacy-related *performance* to their perspectives on the job market (OECD, 2003).

According to Gee (2004), the traditional focus on written and academic language is not arbitrary, but related to societal and cultural values. He explains, how the high relevance of literacy, viewed in this sense, does not at all show a 'superiority' as compared to other forms of communication. Literacy, in the traditional sense, is simply *one* of many other *literacies* that are relevant different contexts and entail different social practices. This idea has further been developed by Barton and Hamilton (2000), who defined literacy *events* and *practices,* which I will elaborate on in the next section.

Gee (2004) illustrates, through a comparison between academic and everyday language, that both forms of expressions come with their advantages and disadvantages and are more or less

relevant, depending on the context (p. 281). The reason why traditional aspects of literacy, such as written or academic language, have received more attention by educational researchers in particular is that they are simply more valued by most educational and economical systems, as the PISA studies show. Literacy skills and knowledge represent the currency through which individuals may gain academic, and consequently economic success. As this understanding of literacy highly depends on the given socio-cultural and historical context, researchers have suggested to talk about *literacies* in the plural form of the term. This view focuses on the literacy-related practices of individuals, groups, or communities, in their respective contexts (Kelly, 2010). While it emphasises the contextual factors and the societal value of specific literacy-related practices, the theoretical concept of *new literacies,* aims to shift the focus on the perspective of the individual learner. The new literacies concepts is based on the work of M.M. Bakthin (1895-1975) and acknowledges two main sources of meaning in literacy: the sociohistorical background of a text (or other meaningful sign) and the individual identity of each person (p. 298). Additionally, the concept of new literacies is characterised by considering the reading and writing process as a whole, an emphasis of the individual learner and their active role in the creation of meaning, and the embedding of reading and writing processes in a given social context or community (Purcell Gates et al., 2004, p. 70).

More recently, the term *multiliteracies* has gained popularity in the academic discourse. The prefix multi-, in this case, refers not only to the multiple modes of representation (e.g. print, visual, digital etc.), but also to the increasingly important role of multilingualism in the globalized world. The term was first introduced in the 1990s by the so-called New London Group, a collaborative group of researchers from different researchers. Their aim was to describe and disentangle the influence of technological and societal changes on the field of literacy learning (Kalantzis & Cope, 2000). The multiliteracy perspective extends the focus on written language to include also other visual, oral, gestural, and spatial meanings in the understanding of literacy (Corsaro & Nelson, 2003). This detachment of written language as being at the core of literacy led to the consideration of other forms of signs. Narey (2009) for example, defines literacy as: “a person’s ability to make / interpret meaningful signs in a particular representational modality” (p. 2). As examples for such representational modalities, she mentions print, images, and film. The approach of the New London Group was an educational one and in addition to conceptual aspects, formulated didactical and pedagogical ones.

Apart from the conceptual discussions in relation to modalities and forms of expression that should be included or excluded from our understanding of literacy, there are two main ways in

which literacy has been used in the academic context. Educational research on literacy can be divided into two categories: cognitive and sociocultural research. These relate back to the two main learning theories in ECEC, which I have described in Chapter 2. While the 'narrow' view is in line with Piaget's cognitive constructivist learning theory, the 'broad' perspective on literacy reflects a sociocultural view, in line with Vygotsky. In the narrow view of literacy, researchers focus on reading and writing skills. The broad perspective on the other hand, does not only focus on skills, but is also interested in the pragmatic and functional aspects of literacy. Both approaches allow to address different questions and issues. The cognitive view often requires a more quantitative research approach, that allows to measure literacy skills or quantify effects of external factors on the development of such skills. The sociocultural view, on the other hand, tends to be anchored in qualitative research designs, that explore people's practices, understandings, or interactions regarding literacy. In the following section, I will elaborate on the sociocultural perspecitve of literacy and explain the terms of literacy *events* and *practices.*

3.2.2 The sociocultural perspective of literacy

The sociocultural perspective of literacy focusses on people's use of literacy in a given sociocultural context. In other words, researchers following a sociocultural framework are interested in the questions of *what*, *how,* and *why? What* are people doing when they use literacy in their daily lives? *How* are they using literacy? And *why* are they using literacy in that way? To address these questions, one must distinguish between two dimensions, that Barton and Hamilton called literacy *events* and literacy *practices* (2000). Literacy events are observable actions, behaviours, or activities of people in contact with literacy. More precisely, all occasions in which people read or write, or talk about reading or writing (Kelly, 2010).

Sénéchal and LeFevre (2014) have made a distinction between formal and informal literacy activities and identified their different effects on learning. While the former category relates to literacy events, in which written language is at the centre of attention (e.g. teaching spelling), the latter refers to situations in which literacy is used as a communicative or learning tool (e.g. writing a shopping list). Formal literacy practices have been found to support children's development of emergent literacy skills – such as letter recognition or spelling – wheras informal practices can promote growth in receptive language (ibid). Engaging children in these formal or informal practices also reveal adults' values and views in relation to literacy. While a focus on formal literacy shows that adults see literacy in relation to developing skills and knowledge, focussing on informal practices foregrounds the communicative function of literacy.

Hence, literacy events are, metaphorically speaking, the tip of the iceberg (Mannion et al., 2007). They are what we can observe and what is shown on the surface. Literacy practices, on the other hand, are what lies beneath the surface. Social and cultural beliefs, norms, expectations, routines, and values are what shape literacy events and what we call literacy practices (Kelly, 2010). These practices determine the ways in which people of a given community use and value literacy and what knowledge they pass on to the next generations. Literacy practices, hence, are actions with a history (Norris, 2013). To understand practices one, therefore, needs to take into account the time, places, and situations in which actions take place.

3.3 Pre-literacy, emergent literacy and early literacy

The field of research on literacy in early childhood, similarly to the field of literacy in general, has produced several different theoretical perspectives and foci. Some developmental researchers use the term *pre-literacy* to describe children's literacy-related learning in early childhood. This term implies a clear distinction between children who are literate, and children who are not. Hancock (2002) has described the pre-literacy skills that children need to acquire before they can become literate. Firstly, children must develop knowledge about language in general. They need to understand that words have meanings, and that one must use the 'right' word to communicate the 'right' meaning. Furthermore, words must be used in a particular way to be understood by others. Secondly, children must develop metaphonological awareness. This entails making connections between sounds and words, and between sounds and symbols. This last point seems to be a contradiction to the premise of David and Goouch (2001), who described children's pre-literacy behaviour only in relation to oral language development and not in relation to print. The concept of pre-literacy is linked to the *readiness* approach, which claims that children need to attain a certain level of development before they can learn about literacy. This perspective relates to maturalistic understandings of learning and development (Gesell, 1940). While the skills evoked by Hancock are undoubtfully necessary in children's literacy development, the pre-literacy perspective is not well suited to address meaning-making of literacy. Furthermore, the separation between pre-literate and literate children inferred by the concept of pre-literacy, disregards young children's reality. As symbols and literate family members are highly present in children's surroundings from an early age on, it is impossible to clearly separate pre-literate and literate learning.

These shortcomings of pre-literacy have led to the development of the concept of *emergent literacy.* Sulzby (1996) defines emergent literacy as "the reading and writing behaviour and

concepts of young children that precede and develop into conventional literacy" (p. 26). Emergent literacy is seen as the foundation on which children build to develop conventional literacy. This involves oral language development, knowledge of letters and print, and phonological awareness (see sub-chapter 3.4.3).

While the emergent literacy perspective tends to foreground individual children's development of literacy skills, the concept of *early literacy* takes a more practice-based approach. It is rooted in pedagogical practice in ECEC and refers to children's literacy experiences, practices, and learning in early childhood (De Witt & Lessing, 2017) This perspective does not only focus on the development of skills, but also on the development of awareness and understanding of the function of literacy. This discourse also highlights the child's active role in the learning process and the co-construction of meaning (David & Goouch, 2001). Furthermore, the early literacy perspective foregrounds the relation between literacy and language development. Raban and Scull (2013) have defined early literacy as children's: "coming to understand the range of semiotics used to create and communicate meaning, with particular attention to the linguistically-based symbol system which supports their developing language, vocabulary and text awareness" (p. 102). This definition acknowledges the special role of written language and also allows to include other forms of meaningful signs.

As this study is based on the exploration of early literacy practices in ECEC contexts, with a focus on children's meaning-making, I chose to predominantly use the term *early* literacy to describe the participants' practices. However, I adopt a holistic approach to literacy, which encompasses both practices and skills. Therefore, I also employ the term emergent literacy skills, whenever appropriate.

3.4 Learning about literacy in the early years

Even though I do not study the literacy development of the participating children, it is important for a deeper and holistic understanding of literacy to review the state of research in this area. The children in this study were between two and four years old, which is a considerable age gap, regarding literacy development. They were also all growing up with multiple languages at home and in the crèches. It is my responsibility as a researcher to be informed about the typical development of a child, to be able to interpret their actions and behaviour fairly. As a key aspect of Vygotsky's theory in terms of education is that teaching needs to be adapted to the children's development, in order for them to learn and act in their ZPD, it is necessary to outline the course of this development. A deeper understanding of children's literacy development, therefore, is

not only required to apply the sociocultural framework appropriately, but also for me as a researcher to be able to analyse and interpret my data in a more nuanced way. Finally, the description of children's literacy development will highlight to what extent, the age group of my participating children is relevant for the study of early literacy meaning-making.

Literacy development can be defined as:

> "(…) the acquisition, improvement, elaboration, and extension of the abilities and strategies necessary to comprehend and produce written language for communicative purposes within sociocultural contexts. This includes understanding the social meanings of literate activity and mastering the pragmatics and semiotics of literacy activity."
>
> (Purcell Gates et al., 2004, p. 26)

Research has shown that language and literacy development are closely interrelated. This is especially relevant for children who experience literacy in ECEC in another language than at home. Espinosa (2008) found that non-English-speaking children benefit from having a strong foundation in their family language(s)[6], as the children's oral language skills in their family language(s) supported their literacy development in English. This finding has been confirmed by Hancock (2002) with children who were read books in Spanish at home. These children scored significantly higher on emergent literacy skills tests in English as their Spanish-speaking classmates who were read books in English at home. However, other researchers came to different results. Farver and colleagues (2013) tested children's oral language skills as well as emergent literacy skills in English and Spanish. While children's Spanish home literacy environments supported their development of oral language and literacy skills in Spanish, it had a negative effect on their English skills. These studies illustrate the interconnection between language and literacy development and the importance of viewing children's literacy experiences from a holistic perspective.

In line with the sociocultural perspective of learning, which highlights the importance of the sociocultural context and the role of language in learning, I conceptualise literacy development as being composed of three areas: oral language development, the development of emergent literacy skills, and literacy socialization (see Figure 7). This conceptualisation allows me to address children's literacy development from a holistic perspective.

[6] While many researchers use the term 'home language' (e.g. Michel & Kuiken, 2014), I prefer to use 'family language' as this term relates to the social and emotional, instead of physical contexts of language use.

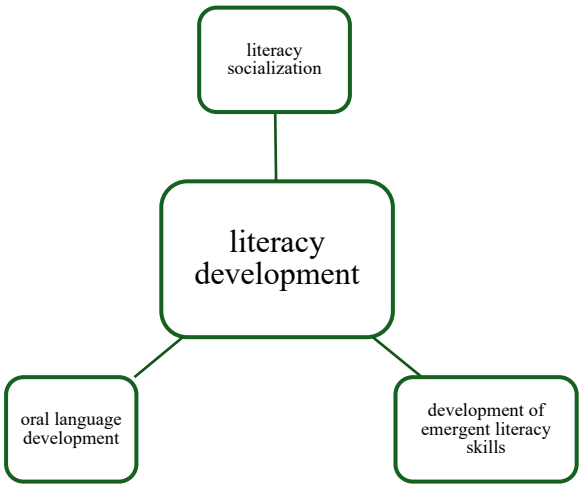

Figure 7: My conceptualisation of literacy development

In the following sections, I will describe each of the three areas of literacy development and give an overview of relevant previous research.

3.4.1 Literacy socialization

From a sociocultural perspective, an important aspect of children's literacy development is the socialization into the literacy practices of their social environments. As described earlier, literacy practices are the social and cultural beliefs, norms, expectations, routines, and values that shape literacy events (Kelly, 2010). Children learn about literacy practices through early encounters and experiences with literacy in their families or early childhood education settings. By witnessing other people's use of literacy, noticing print in their environment or using literacy tools themselves, children develop and show interest and are initiated into literacy practices. This relates to my argument, which is that children's early literacy meaning-making can be supported through active engagement.

This process is what Sterponi (2012) called *literacy socialization.* Combining ideas of neo-Vygotskian researchers and Bourdieu, she defines literacy socialization as an "apprenticeship in a literacy habitus, namely a set of organizing principles that regulates individuals' engagement with texts at the sensorimotor and the intellectual and emotional levels" (p. 242). In other words, through literacy socialization children learn how other members of their community use, reflect, and feel about texts and literacy tools.

A well-known study of literacy socialization within different communities was conducted by Heath in the early eighties. She explored and compared the language and literacy practices of families from different social and cultural backgrounds in the US and identified that adults had

different assumptions about and expectations of young children (Heath, 1983). These fundamentally changed children's early experiences with literacy. For example, children growing up in different communities were encouraged to engage differently with books at different ages. Most importantly, Heath's study showed, that the children's early literacy experiences at home often mismatched the educational system. These children struggled with teachers' literacy practices and expectations at their entry into primary school. Only children growing-up in 'mainstream' families could leverage their previous experiences and bridge their literacy socialization at home and in school. From an educational perspective, this study demonstrates the need to be aware of children's diverse home-environments and to build upon their previous knowledge to foster learning. The quantitative study of Sénéchal and LeFevre (2014) has confirmed the positive effect of continuity between home and preschool literacy practices on children's literacy development.

Another ethnographic work of Gregory and colleagues (2004) explored children's experiences with literacy in different cultural communities. Through case studies conducted in the United States and the United Kingdom, the researchers describe how children live and practice literacy in their everyday lives. While the diversities in literacy traditions is acknowledged in the study, the researchers illuminate how children connect their different experiences and use their cultural and linguistic resources to make sense of new knowledge. They conclude by drawing practitioners' attention to children's capacities and knowledge, although these might not necessarily correspond to conventional and dominant ideas of literacy (Gregory et al., 2004).

As young children learn through observation and participation, the importance of rich and diverse literacy environments at home or in early childhood settings has been stressed (Ashton, 2005; M. M. Neumann et al., 2011; Sénéchal & LeFevre, 2014). The literacy environment comprises the presence of written language, literacy tools, or books in the child's physical surroundings. Furthermore, adults' literacy practices and positive attitudes towards literacy can be beneficial for children's literacy development (Collins & Svensson, 2008). At home, for example, children may observe adults who read newspapers, write shopping lists, or enjoy books, they develop an interest in such activities. Talking to children about one's own literacy activities and explaining the functionalities of written language, may further increase children's motivation to use literacy themselves.

Studies have shown that adults' different demographic characteristics, such as profession, age, or gender, influence their values and preferences in relation to literacy (Esposito et al., 2014). Parents from middle-class families often use literacy at home to entertain their children, whereas parents from lower socio-economic backgrounds deliberately teach literacy skills, like

letter knowledge, at home. While both approaches reflect positive intensions, children who have experienced literacy as a source of entertainment tend to have better literacy skills later in school, independently of their socio-economic backgrounds (Baker et al., 1994).

3.4.2 Oral language development

There are different theories about language development. For example, behaviourism (e.g. Skinner, 1957) sees language development as the result of imitation, repetition and reinforcement of desired behaviour. The theory of innateness claims that children's brains dispose of a language-acquisition-device, allowing them to develop languages naturally (e.g. Chomsky, 1968). By contrast, sociocultural perspectives emphasize the role of interactions for language learning.

From the first days of their lives on, children experience the world around them through all their senses. They see, hear, feel, taste and smell what is happening around them and begin to realise that they can influence their surroundings through their own actions. They interact with their parents, siblings or other family members through gestures, mimics, and sounds (List, 2010). Their communication mostly aims to make their environment respond to their needs, such as loneliness, hunger, or any other discomfort. As children grow up, this non-verbal communication alone does not suffice anymore to express more specific and complex meanings. By the age of twenty-two months, children have developed the capacity to represent objects mentally and, henceforward, their communication is not only limited to their immediate visible surroundings anymore, but might also be focussed on absent objects (Ganea et al., 2007). Through interactions with others, they develop understanding of words and learn to apply an increasingly specific vocabulary. As Mercer (1995) explains, children do not learn new words from dictionaries, but from other people. These people use words in a contextualised way, that allows children to understand new meanings and to transfer new meanings into their own frames of reference.

Oral language development is an important aspect of literacy development. Firstly, oral language provides children with the vocabulary and knowledge about language needed to develop literacy. Regarding reading and writing, oral language can be seen as the link between mere decoding or composing and the reception or production of meaning. Without knowledge about words and sentences, children cannot communicate through or understand literacy (C. S. Brown, 2014). Secondly, acquiring meanings of spoken words can be linked to children's ability to think about language in a more abstract and decontextualised way. As Luria, one of Vygotsky's contemporaries explained (1969), children's oral language development proceeds

in two phases. In the first, ‘synpractic’ phase, children use language in a contextualised way that is directly linked to their actions. In a second ‘synsemantic’ phase, word-meanings are decontextualised and used to represent reality, independently of the child’s actions. This second phase of oral language development represents the child’s entry into symbolism. The idea of decontextualisation goes back to the language psychologist K. Bühler (1879 – 1963) and emphasises that language is a tool for communication. Bühler described that language and words are not mere representations of reality, but gain meaning in their respective context (Lengyel, 2009). The use of decontextualised language, hence, entails a more cognitively demanding use of language, during which meanings can be expressed independently of the context to which they refer. As literacy represents the use of a system of dual symbolization, the ‘synsemantic‘ phase of oral development can be seen as the link between oral language development and literacy development (Füssenich, 2011). For my study I, therefore, consider oral language to be an important aspect of children’s literacy development. Exploring how children come to describe and know the world around them through spoken language helps to understand how they build upon this knowledge to develop literacy.

Between the ages of one and five, children learn an estimate of 3.5 new words per day (Dickinson et al., 2012) and from the age of two on, they start to combine words into short sentences that become more complex over time. By the age of three, most children know enough words and have developed sufficient language to understand that communication is not just based on the meanings of words, but that other elements such as intonation or sentence structure can be equally important (List, 2010).

As children develop oral language, they are enabled to engage in more complex dialogues and interactions with others. Increasingly, they might find themselves in situations of misunderstanding or miscommunication (Füssenich, 2011). This requires them to clarify meanings, to adapt their oral language to different interlocutors and contexts, and to correct themselves if necessary. Consequently, children start to think about and reflect on language on a more abstract level, which is another necessary step in their literacy development.

Researchers have described the differences in oral language development between monolingual and multilingual children. In a systematic review of existing cognitive and psychological studies, Hammer and colleagues (2014) summarise the most important differences. Contrary to potential assumptions or concerns of multilingual parents, children who grow up with more than one language can distinguish between the different languages in their surroundings just as well as children who grow up monolingually. While multilingual infants do not develop oral language in their individual languages to the same level as monolingual children, they usually

catch up to the monolinguals' oral language levels during preschool. The same is true for vocabulary development. For both monolingual and multilingual, the amount of language input and the quality of interactions are defining for the development of oral language (Hammer et al., 2014).

3.4.3 Emergent literacy skills

Emergent literacy skills are cognitive and pragmatic skills that enable children to learn how to read and write (Whitehurst & Lonigan, 1998). The process of developing emergent literacy skills is complex one, that is composed of many different subskills and knowledge. While my research takes a sociocultural stance to learning and literacy, I do not deny that the development of skills and knowledge about literacy is an important aspect of literacy development. Therefore, I will briefly present the most frequently described emergent literacy skills; print awareness, print concepts, phonological awareness, and emergent decoding and coding; in the following section.

Print awareness

Print is a materialised form of letters, numbers, or symbols. Brown (2014) defines print awareness as „understanding that print can be read and tells a story" (p. 38). This entails, first, recognising print as a specific form of meaningful signs and, second, understanding that oral language can be represented in print. Print awareness also includes the understanding of the function of books and stories, as well as the use of pictures or text to gain or convey meaning (Corsaro & Nelson, 2003). Ganea and colleagues (2008) have experimented with infants' use of different types of picture books to investigate the emergence of print awareness. While nine-months-old infants were shown to manually explore pictures in the same way as real-life objects, eighteen-months-old children demonstrated understanding of the symbolic nature of pictures by pointing at or labelling depicted objects. They had started to treat pictures as objects of contemplation, rather than action. This study showed, that children's capacity to distinguish between real-life objects and visual representations of objects develops between the ages of nine and eighteen months. Developing print awareness further enables children to develop so-called *print concepts.*

Print concepts

As children come to an understanding of symbolization in general, they also need to understand the conceptual differences between images and print. I will now briefly provide some examples of print concepts that children may come to learn as they develop literacy. Firstly, children may realise the difference between images and written print. While images represent the world in a more direct way, written print is a double symbolization: it symbolizes language, which in turn symbolizes reality (Gregory, 2017). Secondly, the use of print follows a specific set of rules, such as directionality, orientation, or punctuation (C. S. Brown, 2014). While objects maintain their meaning, regardless of their orientation,written signs, such as letters, change their meaning, depending on their orientation (e.g. b and d). The development of print concepts can, hence, can be seen as the development of understanding the form of written language (Scull et al., 2012). Thirdly, children may realise the conceptual differences between *letters* and *words.* Visual aspects of words do not necessarily correspond to visual features of their represented meanings (Füssenich, 2011). For example, when children first encounter written words, they might think that long words represent bigger objects and short words represent small objects. Furthermore, while written words represent objects, single letters represent *sounds* of spoken language. Children may develop this understanding through phonological awareness.

Phonological awareness

Phonological awareness is the "ability to recognise that words contain a variety of sound units" (Brown, 2014, p. 40). A subset of phonological awareness is *phonemic* awareness, which means the "ability to recognise, identify and manipulate phonemes in spoken words" (p. 40). Both are rooted in children's oral language skills and have been recognised to have substantial influence on their later development of decoding and composing skills. Phonological awareness can be supported through oral word games, including rhyming games and syllable clapping. Regarding multilingual children, research has shown that phonological awareness transfers between languages and that children are able to apply their abilities acquired in one language to another one. Factors such as vocabulary, language proficiency, exposure and phonological characteristics of the children's languages might, however, impact this transfer (Hammer et al., 2014). Anthony and colleagues (2002) have tested the phonological awareness of children between two and six years old, using rhyming and word blending activities of different complexities. They found that younger children tended to demonstrate phonological awareness on the level of words and syllables, whereas older children could grasp smaller units of sounds, such as phonemes. Furthermore, they conclude that different aspects of phonological awareness

(e.g. phonemic awareness, rhyming, identifying onsets) are interrelated and should not be taught seperately.

Emergent coding and decoding

Reading and writing entails learning how to use writing systems[7] in order to code (i.e. produce) or decode (i.e. read) written meaning. Coding and decoding skills are highly connected and influence each other mutually (Sulzby & Teale, 1985). Furthermore, they depend on the above-mentioned aspects: letter knowledge and phonological awareness. Dyson (1990) sees all forms of children's symbolic actions, including gestures, as starting points of the writing development. Children creatively engage with writing by experimenting, for example, with directionality or orientation of their letters or texts (Füssenich, 2011). Writing is, therefore, a creative process during which children may combine different modes and media and use various strategies to convey meaning (Clay, 1975). Children as young as eighteen months old have been found to leave marks intentionally to communicate meaning (Sulzby & Teale, 1985). Furthermore, children must learn about conventional ways of using print and the meanings of written signs in interaction with others. Children's early coding and decoding attempts represent children's ideas about the functions and meanings of written signs. In contact with others, these hypotheses are tested and developed further, to create common understanding (Wells Rowe, 2018). Children search for reliable explanations or strategies to identify letters or words correctly and know which meanings they express (Dyson, 1990). Hence, researchers suggest that adults respond to children's early writing activities in a benevolent and open way. Parents and practitioners should encourage children to write from an early age on, assist them if necessary, and encourage children to talk about what they have written together with others (Wells Rowe et al., 2021). While in early childhood in Luxembourg, the aim should not be to teach children how to read and write or to evaluate children's early reading and writing, researchers have identified some promising behaviour in children. These include, for example, the recognition or even composing of one's own name, the identification of known letters, or the composing of single letters (Collins & Svensson, 2008).

[7] A writing system visually represents spoken language, using a set of characters or graphs. Different writing systems that follow different sets of rules exist, such as alphabets, logographies, or syllabaries. (Wikipedia)

3.5 Literacy practices in ECEC

In this study, literacy revolves around the receptive and productive use of written language or other meaningful signs, as well as decontextualised language. As such, literacy practices in ECEC may include activities around the use of decontextualized language, such as singing, rhyming, or storytelling, as well as activities revolving around written text or other meaningful signs, such as picture books or environmental print. Furthermore, children's mark-leaving activities, such as drawing, can be considered early literacy practices.

Researchers emphasise the importance of taking into account the aspect of space and material when studying early literacy in ECEC (Nichols & Nixon, 2013; Daniels, 2016). Spaces of early childhood can be considered mirrors of pedagogical values. For example, design features, placement of furniture, or the distribution of different areas across the rooms reflect the adults' ways of understanding children's physical, social and cognitive development (Nichols & Nixon, 2013). Daniels (2016) calls this "enacted pedagogy (p. 29) and states that adults' ways of conceptualizing early literacy spaces may hinder or enable children's early literacy meaning-making. For example, educators can support children's early literacy meaning-making by providing a print-rich environment, which is flexible and allows children to move around freely. Researchers have analysed the ways in which physical space and material influence pedagogical practice, interactions, and children learning. For example, Streelasky (2019) focusses on five-to-six-year-old children in a forest-based learning environment. Her analysis of the children's early text productions revealed that the themes of the forest came up frequently. Furthermore, the forest-based approach fostered children's collaboration and engagement in a meaningful and creative way. This study, therefore shows, that the educational contexts cannot only influence the content of children's early literacy productions, but also the underlying practices. In relation to early literacy meaning-making, I found that activities related to shared reading and writing to be particularly relevant. Therefore, I will focus on these two types of activities in the following sections.

3.5.1 Shared reading in ECEC

Shared reading helps children to discover from an early age on that literacy is a special form of communication that conveys meaning (Füssenich, 2011). Reading books together offers adults the opportunity to engage children in meaningful conversations about concepts, stories, and the world (Dickinson et al., 2012). Additionally, books offer the opportunity to use richer and more complex language input than everyday conversations (Melzi et al., 2022), which is important for the development of children's oral language and use of decontextualised language.

Researchers agree that it is never too early to introduce children to books. Niklas and colleagues (2016) confirm the principle "the sooner the better" (p. 1) and Elkin (2014) adds that "babies need books" (p. 40). The first months and years of a child's live are seen as a critical period for children's later language and literacy development. Fostering reading from the beginning can support children's language abilities (Klein & Kogan, 2013), and the development of their literacy skills (Bus et al., 1995). While all children are born with the same potentials, their early experiences with language and literacy substantially shape their future competencies (Elkin, 2014). The importance of reading to children persists through early childhood.

Researchers agree that the way in which adults read and engage with children while reading has a crucial impact on the effects of reading (Häggström, 2020). More precisely, the amount and quality of interactions during read alouds matter (Collins & Svensson, 2008). Engaging children in dialogic reading by asking them age-appropriate questions or by actively making them participate in the storytelling has been identified as a successful strategy. Firstly, this dialogic approach to reading has a positive influence on children's receptive vocabulary and, secondly, it can increase children's engagement and interest in literacy (Kotaman, 2020). This is especially relevant as increased motivation, in turn, has a positive impact on children's further literacy learning (Collins & Svensson, 2008). Unfortunately, not all practitioners seem to be aware of the importance of qualitative interactions during read alouds. In an exploratory study about literacy practices in ECEC Özdemir and colleagues (2019) found that teachers only seldomly encouraged children's participation while they were reading books. Instead, the interactions were limited to comprehension questions at the end of the book. Furthermore, teachers often choose to read informative books to children, made little eye contact, and did not adapt their voice to the text, which resulted in low engagement of the children (ibid.).

Hoffman (2011) studied shared reading situations in a formal early education classroom over a period of one year to identify teachers‘ strategies in supporting children's meaning-making. She identified two common patterns of interaction. The initiation-response-evaluation (IRE) pattern in which educators gave input and feedback on children's (typically short) responses was less suited for supporting meaning-making. By contrast, co-construction and collective reflections, were identified as successful strategies. In another study, Cline and colleagues (2012) have emphasised the importance of eliciting children's playfulness and positive relationships during shared reading. In their exploration of the case of an Italian preschool and children's regular visits of the library, the researchers show how educators engaged children in dialogue and encouraged creativity during shared reading.

3.5.1 Writing in ECEC

Another literacy practice in the context of early childhood and care settings that has been of interest to researchers is writing. Gerde and colleagues (2012) have reviewed literature on writing materials and practices in early childhood institutions. They conclude that writing materials, such as pencils, markers, crayons, or chalk and writing supports such as paper, stencils, or letter-shaped stickers can be found in most early childhood contexts. In the US, the so-called 'writing center', a space in the classroom that is specifically intended for writing is a common practice. While teachers seemed to be aware of the importance of providing children with the opportunity to use writing materials themselves, they seldomly included writing into their pedagogical activities. Writing is seen, by most early childhood practitioners as an adult activity that serves a functional purpose (e.g. labelling, writing down names, organising) or as something that children may try and experiment with. Learning about writing seems to be associated with penmanship or handwriting, hence, formal school, and not with early childhood. Therfore, Gerde and colleagues (2012) formulate several practical recommendations to meaningfully include writing into the daily practice of early childhood practitioners. For example, children's writing attempts should be encouraged and scaffolded, commonly used or theme-related words should be made visible and writing should be used to communicate with families.

Moreover, children's drawings can be seen as emergent writing, as they are symbolic representations of children's thoughts (Füssenich, 2011). At first, children do not consciously convey meaning through their drawings, but merely draw for the purpose of drawing (Dyson, 1990). Slowly they start to integrate shapes and symbols into their drawings – so-called scribbles – that resemble written language. In her analysis of preschool children's drawings about a familiar story, Soundy (2015) found that children made use of a wide range of symbolic resources (e.g. colours, shapes, symbols, speech) to represent their ideas. Children seemed to be aware of the meaning-making potentials of their diverse repertoires and selected representational means purposefully. Furthermore, they relied on known symbols, past experiences, and imagination in their drawings.

3.6 Summary

In this section, I presented the complex concept of literacy, with a focus on the sociocultural perspective. Furthermore, I described the importance of literacy in the early years and the ways in which children are socialized into literacy practices. I described how children develop oral language and emergent literacy skills. It has become clear that literacy, more specifically *early*

literacy, is a multifaceted research area with great relevance for children's further learning and development. While literacy and language development are a key interest in early childhood education studies, researchers have emphasised the need for further research on literacy socialization (Sterponi, 2012) and the role of multimodality in children's learning (Norris, 2013). Finally, children's early literacy experiences seem to have been predominantly researched in monolingual contexts and researchers suggest to conduct more studies with multilingual children (e.g. Hammer et al., 2014). In this sense, my study foregrounds the perspectives of emergent multilingual children and the ways in which they make meaning of literacy by using their entire semiotic repertoires. In a review of the current understandings of successful ways in which educators can support children's emergent literacy, Piasta (2016) provides a summary of recommendations related to curriculum, best practices and professional development. The review concludes by relativising recommendations, as they have to be adapted to the individual contexts and children. Furthermore, Piasta notes that previous research has mainly focussed on strategies which support emergent (de-)coding skills and neglected the "meaning-focussed skills" (p. 237). As such, my study responds to these needs by adopting a sociocultural perspective on literacy, which includes taking account of the context of literacy practices, as well as foregrounding meaning-making in relation to literacy. In the following chapter, theoretical and empirical perspectives of meaning-making will be discussed.

Chapter 4: Literature Review about Meaning-Making

4.1 Introduction

In the previous chapter, I conceptualised one of the two central concepts of my study: literacy in the early years. The second key concept – meaning-making – is used in various research fields and in different contexts. The scientific search engine google.scholar, for example, shows over one million articles that contain the term meaning-making in the title (June 2024). Results include publications from educational, psychological, and anthropological studies. Meaning-making is researched in the contexts of classrooms (e.g. science and arts education), psychotherapy (e.g. coping with stress and traumatic life events) or identity development (e.g. religious or ethnical).

To understand the process of meaning-making, one must first explain what *meaning* is. Generally, researchers seem to agree that meaning is something internal to a person, rather than an external or universal truth (Ignelzi, 2000). People internally attribute meanings to words, objects and experiences, which they externalize and validate through interactions and communication with others (Kitchenham, 2008). From this point of view, meaning is not solid or permanent, but constantly renegotiated and reconstructed in the process of life (Mahn, 2012). Krauss (2005) conceptualises meaning as the most fundamental aspect of a human social setting. Meanings are not merely descriptive categories but entail an interpretative dimension. They make up a person's view of reality and provide guidance for experiences and behaviour (ibid.).

In this chapter, I will first outline the different existing conceptualisations of meaning-making. I will then focus more specifically on the sociocultural prespective on meaning-making, by exploring meaning-making in social interactions and through language.

4.2 Defining meaning-making

Sometimes meaning-making is used as a synonym for understanding within learning processes and, at other times, it describes the process of expressing ideas and thoughts. In visual communication and multimodal analysis (e.g. webpages, books, advertisement) the concept is used to describe how certain material or modes can transmit meaning. This second dimension has been researched, for example, within the field of social semiotics (e.g Bezemer & Kress,

2008 or Budach , 2013). While this perspective has shaped my initial understanding of meaning-making, it has revealed to be less relevant for this study. Therefore, in the following section, I will only focus on the perspective of meaning-making as related to learning and understanding.

4.2.1 Different perspectives on meaning-making

In the context of learning, Zittoun and Brinkman (2012) describe three levels of meaning: the semantic, the pragmatic, and the existential meaning. *Semantic* meaning relates to languages, signs, and symbols. When children develop languages, they must learn that words are related to concrete or abstract concepts. Semantic meaning-making, or linguistic meaning – as called elsewhere (Ruthrof, 2012) – has also been described by Vygotsky in his theory on concept-formation (see sub-chapter 4.4.1). Children come to understand the meaning of words in social interactions with others. They realise how words are being used, in which contexts and for what purpose. "On a semantic level, learning as meaning making involves being socialised into cultural discursive systems of meaning" (Zittoun & Brinkmann, 2012). Hence, semantic meaning-making of words is situated and culture-specific *Pragmatic* meaning is related to culture and the social practices that comprise it. To participate appropriately in cultural and social practices, learners must know about their pragmatic meaning. However, social practices and their meaning are constantly changing and being reconstructed by participants. Finding pragmatic meaning in a social practice can have a motivational effect on learning and through this process of meaning-making and identity construction, learners become more and more involved in their social group. Some anthropological and cultural studies have provided useful analytical frameworks in relation pragmatic meaning. As mentioned earlier, Lave and Wenger (1991) have studied how pragmatic meaning is made through situated learning in a community of practice (see sub-chapter 2.3.2). Rogoff (1990) has applied cultural approaches to apprenticeship in thinking and suggested that developing identity in a given community of practice is part of any complex learning. Finally, *existential* meaning is part of a person's learning throughout their life trajectory. It refers to a person's changing perspective on the meaning of life and fundamental values. Often studied from a psychological perspective, it relates to people's processing of traumatic or rupturing situations. The existential aspect of meaning has mostly been studied in adults. J. Mezirow for example developed his theory of transformative learning, to analyse how adult learners make meaning of their experiences and how social structures influence this process (Mezirow, 2003).

Considering these three levels of meaning; the semantic, the pragmatic, and the existential; only the first two are relevant for this study. Firstly, they correspond to the sociocultural perspective

on learning and literacy, which emphasises the role of language and socialization. Secondly, existential meaning-making has mostly been studied in adolescents or adults (e.g Park, 2010 or Mezirow, 2003). Only a few studies have explored this aspect of meaning-making in young children. For example, Provenzi and colleagues (2020) have studied the ways in which children made sense of their experiences in the context of the COVID-19 pandemic. They described children's existential meaning-making as an intuitive and naïve process that was heavily influenced by the opinions of adults in their social environments. Compared to adults' meaning-making, children relied on pre-logic, or creative thinking, rather than rational reasoning (ibid.). This view is very different from the perspective on meaning-making in this study. In relation to early literacy, I found that children actively engaged and participated to *appropriate* meaning of literacy concepts, skills, and practices. While they are supported through high-quality interactions with others, I argue that children as young as two years old were able to make complex meanings in an active and creative way.

To sum up, the concept of meaning-making is difficult to theorize and we cannot assume a universal definition. In the context of my research, I consider meaning to be the result of a collaborative, continuous, and complex process. Meaning remains dynamic and can be renegotiated within interactions. I also see children as natural meaning-makers (Wells, 2009) who have a desire to make meaning of their experiences and the world around them. Regarding the three levels of meaning, I only consider the first two; the semantic and the pragmatic level; to be relevant in this study, as they relate to the key aspects of SCT: social interactions and language in context. In the following sections, I will expand on these two aspects.

4.2.2 The sociocultural perspective on meaning-making

Researchers building on Vygotsky have studied how young children make meaning through social interactions, by emphasizing the influence of the sociocultural context and the role of language. In relation to the different types of meaning defined by Zittoun and Brinkman (2012), one can conclude that meaning-making in the Vygotskian logic mostly parallels with semantic and pragmatic meaning. Semantic meaning-making, hence, is the process of coming to understand the meanings of words and concepts. While some researchers use the terms meaning-making or sense-making interchangeably to describe how children learn about the meaning of words. However, there is a clear distinction between meaning and sense. As Ruthrof (2012) explains, a word's sense is bound to the context in which it is used. It might, therefore, change depending on the circumstances. On the other hand, meaning remains stable regardless of the context in which it is used. Hence, sense-making can be linked to Zittoun and Brinkman's

dimension of pragmatic meaning-making. In coming to understand the influence of a given context on the sense of the world, children inextricably learn about the values, norms, and expectations of said context.

In the following sections, I will expand on the sociocultural perspective on children's meaning-making. First, in relation to social interactions, I will explore literature about children's meaning-making as a dialogic process and play. Furthermore, I will explain how children make meaning in interaction with their phyiscal environment. Second, to highlight the role of language in meaning-making, I will present Vygotsky's theory of concept-formation and the idea of *storying* (Bruner, 1976). As young children's use of non-verbal communicative modes, such as gestures or facial expression, has been highlighted (e.g Flewitt, 2015; Taylor, 2014), I will also explore meaning-making through the use of one's entire semiotic repertoire. Whenever possible, I will refer to empirical research that has explored different aspects of meaning-making in relation to literacy in ECEC.

4.3 Meaning-making in interaction

Children's meaning-making is a co-constructive process. As such, it occurs as children interact with adults, peers or their environment. Researchers' following sociocultural approaches have described different types of meaningful interactions. Firstly, they focussed on the co-construction of meaning as children enter a *dialogue* with their peers or adults (e.g. Mercer, 1995 or Wells, 2009). Secondly, SCT foregrounds the role of play for young children's learning and meaning-making (e.g Pellegrini et al., 1991 or Bateman, 2018). Finally, as the SCT highlights the context in which learning takes place, meaning-making can also be understood in relation to children's ways of interactng with spatial and material features of their environment.

4.3.1 With others in dialogue

The following sections foreground the role of language in meaning-making. More precisely, they present dialogue, as a way of using language to make meaning in interactions with others. Dialogue can be defined as a conversation in which each utterance represents a connection to what has been said previously and to what is anticipated to come next. In this way, participants in the dialogue can achieve "attunement to the attunement of the other" (Wells, 2009, p. 269), or in other words, co-construct shared meaning in interaction. In peer interactions, dialogue is characterized by the ways in which participants build on each others' utterances to co-create

meaning in interaction. While I will focus for now on the ways in which peers make meaning interaction through talk, I will later also elaborate on meaning-making in play situations (see sub-chapter 4.3.2). Dialogue in adult-child interactions, especially in educational contexts, involves specific interactional strategies from the educator, which promote children's engagement and active participation. As such, they contribute to meaning-making, as I will illustrate in Chapter 8.

With peers

One specific form of dialogue has been described by Mercer (1995), who explored the role of language and talk in learning. Following Vygotsky's ideas, he emphasises two main functions of language: the cultural and the psychological one. While the former refers to the use of language as a means of communication, the latter relates to the idea that language is a at the heart of human thought. However, the two functions of language are in practice not really separated from each other. In a learning situation, participants can use language as a social mode of thinking to co-construct meaning and knowledge. This involves different types of interactions and talk, with different characteristics (Neil Mercer, 1995). While there are types of talk that do not contribute to the co-construction of meaning, namely disputational and cumulative talk, Mercer (1995) defined exploratory talk as: "talk, in which partners engage critically but constructively with each other's ideas" (p. 109). Exploratory talk can be seen as a communicative and collaborative process, in which knowledge, reflections and understandings are made explicit between participants In Interaction. It Is a way of connecting minds and constructing shared ideas through language. According to Mercer, it is important to encourage this type of talk in the classroom. Hence, he emphasises the role of the teacher or adult to install an environment He calls this a *dialogic* approach to teaching (Neil Mercer & Littleton, 2007). In the next section, I will focus on the role of adults in dialogue.

With adults

In his review on teacher talk and meaning-making in the context of science education, Scott (1998) differentiates between authorative and dialogic discourse (p. 66). While the former represents a teacher-centred approach that it based on the transfer of knowledge, the latter is embedded in a more flexible and student-centered approach to teaching and learning. In a dialogical discourse, several voices and perspectives are embraced and combined, to create shared meaning. For example, teachers may ask their pupils open-ended questions, to which they do not anticipate a specific answer. In turn, children may express their ideas openly, make

suggestions or offer alternative interpretations on classroom contents. Overall, the dialogue is not led by only one dominant voice, but by the collective of all participants, that are open and build upon each other's ideas (ibid.). Educators' role in supporting children's meaning-making lies in the way in which they engage and interact with them. Researchers have described interactional strategies and patterns, with differing potential effects. Scott (1998) has developed a framework of teaching narratives, which can be grouped into three main strands. As illustrated in Figure 8, the framework comprises teaching narratives, which aim to support children's meaning-making.

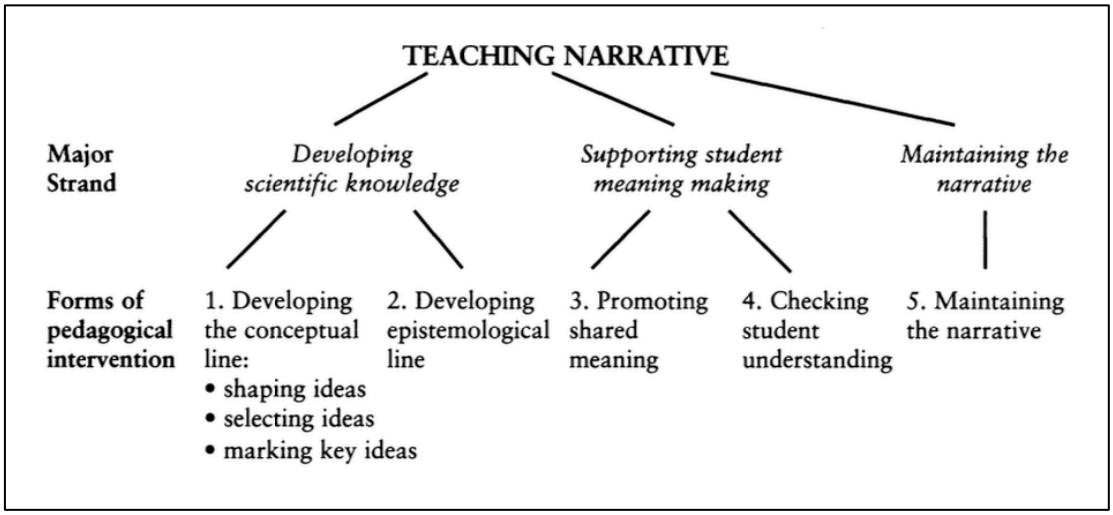

Figure 8: Framework of teaching narratives (Scott, 1998, p. 56)

This framework is based on elementary school children and science education. However, the pedagogical interventions "promoting shared meaning" and "checking student understanding" can be applied to the context of early literacy. In fact, as I will show in Chapter 8, conditions for children's early literacy meaning-making are, amongst others, the inclusion of children's perspectives and the promotion of common understanding. While Scott (1998) has focussed on different kinds of teaching strategies, other researchers have specifically addressed the role of educators' questions.

In their review of studies about educator-child interactions in early childhood, Houen and colleagues (2022) have described different types of questions, which have differing potentials of encouraging children's verbal participation and thinking. Commonly used types of questions include closed questions, such as yes/no, and WH-questions (i.e who?, what?, where?, and when?) as well as more open questions, which require explanations and justifications (ie. how? and why?). Furthermore, some educators make use of "I wonder…"(p. 8) type questions, which

challenge children's assumptions and encourage them to reflect their perspectives. The researchers conclude that educators should adapt their questions to their aims and the children's development. While closed questions are better suited to evaluate children's knowledge and understanding, open questions potentially encourage thinking and meaning-making.

Furthermore, Houen and colleagues (2022) identified shared reading as the most studied activity in relation to rich conversations. In this context, *dialogic reading* stands out as a strategy of stimulating children's talk and thinking (Kotaman, 2020). In this type of interaction around books, children are not just mere listeners but become co-storytellers. Dialogic reading has been identified as a successful way of promoting oral language development, especially in young children between two and three years old (Mol et al., 2008). Related to the different types of questions described above, dialogic reading entails the strategic use of prompts and questions (Flynn, 2011). If adults wish to introduce new vocabulary, they may ask children to name or describe elements from the pictures in the book or have children repeat words. To practice vocabulary, adults may ask more open-ended questions or expand on children's utterances. Finally, adults may encourage children to make meaning of the story in the book by relating it to their own experiences or encouraging them to anticipate the plot (ibid.). Hence, the strategy of dialogic reading, entails repeated and adapted use of the same book to support children's language development and understanding of the story. While dialogic reading is a promising practice regarding early literacy meaning-making, researchers have also drawn attention to less valuable teaching strategies. Indeed, Lugossy (2012) has shown that educators can hinder children's meaning-making through the way in which they react to children's utterances. In her study, she focusses on young hungrarian children‘s meaning-making of stories and books in their English-as-a-foreign-language class. Educators did not always respond to the chidlren‘s comments, especially when they were made in the children's first language instead of the language of instruction. While the researcher recognises the teachers‘ intentions in relation to language learning and classroom discipline, she also emphasised the educators‘ role in scaffolding and supporting children's meaning-making. For this to happen, educators need to build on students‘ comments and engage in a classroom dialogue in which meaning can be negociated and co-constructed. This example also illustrates the importance of taking into account children's whole semiotic repertoires in meaning-making. This aspect will be further explored in sub-chapter 4.4.3.

4.3.2 During play

In the previous section, I described the role of language and dialogue in peer and adult-child interactions. I will now elaborate further on peer interactions, in the specific context of play. As I have described in sub-chapter 2.3.2, sociocultural theory emphasises the role of play as an important learning context, especially in early childhood. Additionally, play has been associated with literacy development, as both relate to the emergence of symbolism (Worthington & van Oers, 2017). While I already elaborated on children's learning in play from a more general perspective, I will now focus on literacy-related meaning-making in play.

In their review on existing studies about the relation between play and emergent literacy, Christie and Roskos (2009) have identified several themes. Firstly, researchers have explored the relationships between children's behaviour in play and their literacy development, more specifically their development of narrative or decontextualized language. For example, Pellegrini and colleagues (1991) have conducted a longitudinal and quantitative study on children symbolic play and children's emergent literacy skills. More precisely they investigated the interrelation between children's play in early childhood and their later use of narrative language in reading and writing tasks. The analysis showed that children's symbolic play predicted their use of meta-linguistic verbs (e.g. read, say, explain). Hence, children increased their meta-linguistic awareness and competences during play, which supports their narrative skills, as well as later text comprehension and production. This study shows that play potentially supports children's use of decontextualized language. The positive effect of play on children's narrative competences has been confirmed by Wells Rowe (1998). She investigated what so-called book-related dramatic play. Dramatic play features both the transformative use of objects and role-playing. When in relation to books, this entails that children re-enact scenes of stories from familiar books. Children might alter or expand the stories through additional invented elements. Through this type of play, children, therefore, develop narrative competences and understandings. In another study, Bateman (2018) observed four-year-olds and early primary school children in New Zealand during pretend play and explored the recurrent action of ventriloquism. Ventriloquism is the action of giving one's voice to another person or object, for example while playing with puppets or teddybears. Through ventriloquism, children attributed meaning to objects in play, created stories and negociated roles and rules with their peers. Furthermore, children enriched their expressions in play through paralinguistic features such as gestures, gaze and intonation. Bateman (2018) sees these actions in play as early literacy practices, as they help children to develop a sense of symbolism and narration.

The second theme in relation to play and early literacy, which Christie and Roskos (2009) have identified is the relationship between the physical or social context of play and children's literacy practices. This refers to children's use of literacy tools, such as books, writing materials or letter games during free play. Such *literacy-enriched* play may result from children's self-initiated literacy activities, or from adults' deliberate offer of literacy material in the play environment. It can provide insight into children's meaning-making of literacy practices.

For example, Worthington and van Oers (2017) have observed three-to-four-year-old children's play in British nursery schools. They show, that children spontaneously engaged in literacy activities while playing or included familiar literacy events from their everyday experiences into their pretend play. This was promoted by the presence of literacy tools in the play area, such as pens and paper. Furthermore, children applied their knowledge about the function of literacy, which resulted from their observations of adults' use of literacy.

Finally, some studies have combined the aspect of material and children's early literacy productions. Snow and colleagues (2016) have focussed on one specific toy that children used in play, namely blocks. Blocks have symbolic affordances as they may represent many different things in play. Hence, the educators in this study combined blocks with writing materials in the play area to scaffold children's emergent writing. The researchers observed that children from different linguistic backgrounds included drawing and writing into their block play. For example, they drew figures or objects on small pieces of paper to represent elements of the stories they reenacted with the blocks. Furthermore, they spontaneously wrote their names and talked about spelling with their peers. The study concludes by emphasizing the value of play as an opportunity to meaningfully engage with symbolism and to practice literacy activities, such as writing. This study illustrates the importance of play situations for children's early literacy meaning-making. Moreover, it illustrates how children make meaning of literacy in interaction with material, which I will now further elaborate on.

4.3.3 With the physical environment

Sociocultural theory acknowledges the importance of children's experiences and learning in context. This includes material and spatial environments. In this section, I will focus on the ways in which children interact with their environments to create meaning. Firstly, I will present studies that have described children's interactions with specific objects.

In the context of arts education, for example, Fredriksen (2011a) analysed the use of three-dimensional materials by children between three and five years old. Children engaged in creative and exploratory play while using the proposed materials. The materials shaped their

experiences, prompted them to engage in problem solving or imagine alternative ways of using the matierlas and supported their multimodal expression of meaning. Furthermore, Fredriksen (2011b) shows, how the children's use of the three-dimensional materials, reflects that children learn when they are able to connect their past and present experiences. This idea is also reflected in the concept of the boundary object. Boundary objects are things that have the potential to connect different areas of live with each other. For example, Carr and colleagues (2012) explored the role of boundary objects during a museum visit. These objects had an important role in children's learning, as they enabled them to link their new experiences in the museum with familiar aspects of the classroom, hence, creating a meaningful learning experience.

In relation to literacy, picture books are of particular interest to the study of children's meaning-making. Researchers have explored the ways in which children used picture books in order to make meaning of stories or other contents of the book (e.g. Hu et al., 2016; Kachorsky et al., 2017). Kraayenoord and Paris (1996) have described meaning-making in relation to picture books as "the foundation of literacy during children's early years (…) because it involves constructive comprehension from what is seen or read or heard" (p.41). This definition of early literacy meaning-making as young emergent readers' ability to grasp meaning from pictures, resembles what Martinez and colleagues have called *literary* meaning-making (2013). In their work, they have focussed on the ways in which preschool children make meaning as they "read, listen or respond to written stories" (p. 222).

Kachorsky and colleagues (2017) observed first-graders who were learning to read and their interactions with picture books over a period of one year. With a focus on the semiotic resources employed by the young readers, the researchers developed a typology of students' meaning-making tools. This typology includes typographical features (e.g., font, font size, italics etc.), paralinguistic features (e.g., exclamation points, question marks), design features (e.g., sppech bubbles, page numbers, motion lines etc.), illustrations, and background knowledge (p.238). This shows that the children made use of the material and semiotic features of the picture book to grasp the meaning of the story. While this study included books that contained text, Hu and colleagues (2016) have focussed on the ways in which young emergent bilinguals make meaning of *wordless* picture books. Over a period of ten weeks the researchers, who were also the mothers of the participating children, told stories and looked at different wordless picture books together with their children. They audiorecorded the situations and identified a number of children's meaning-making "techniques" (p. 222 - 224), including commenting, naming, describing, anticipating, or showing emotions in relation to the story. These speech acts can be seen as different ways in which children expressed their understanding of the picture books.

Furthermore, children made different kinds of connections during the storytelling, which the researchers categorised as "self-to-text", "text-to-text", and "text-to-world" connections (p. 226). These connections express the ways in which young children made meaning of the stories. They resemble the strategies I described earlier (see sub-chapter 4.3.1) in relation to dialogic reading. In my findings, I also identified the aspect of *connections* as being important in children's early literacy meaning-making. This will be described further in Chapter 10.

Picture books enable children to encounter print in the form of continuous text. By contrast, environment print consists of "surrounding non-continuous print (e.g. words, letters, numerals and symbols) that is encountered in a particular context and fulfils real-life functions" (Neumann et al., 2011, p. 232). Environmental print, therefore, is a relevant feature of children's phyiscal environment, as it allows them to explore the functions of literacy in authentic contexts. As such, environmental print can enable early literacy meaning-making (see Chapter 8). Researchers have found that children's engagement with environmental print increases their print motivation and emergent literacy skills, such as letter recognition or print concepts (Neumann et al., 2012). They conclude that authentic environmental print can be an appropriated entry into literacy and may foster children's engagement. Furthermore, in a review of literature about children's engagement with environmental print, it was found that children expressed their interest in environmental print by labelling or pointing, as well as attempting to copy words from their environment in writing (Neumann et al., 2011). These examples show that children's engagement with environmental print may result in pragmatic meaning-making of the function of literacy. Furthermore, children may be encouraged to engage in emergent reading or writing, thereby making meaning of literacy practices and concepts.

Regarding the quality of learning environments, Bundsgaard and Hansen (2011) present a holistic framework for evaluating learning materials. In fact, the choice of conceptualization of learning materials is an important task of educators, through which they can support children's early literacy meaning-making. The framework differentiates between functional, semantic, and didactic learning material. Semantic learning materials are especially relevant in the context of early literacy, as they include books and other forms of text. Furthermore, according to Hansen and Gissel (2017), the quality of learning material can be assessed by considering its potential and actualised learning affordance. This comprises the inherent learning goal of material and the ways in which it can be used by the children. For example, if educators aim to foster children's enjoyment of books, they may choose books that are aesthetically pleasing and engaging. These studies highlight the importance of taking into account the physical contexts of children's early literacy meaning-making.

4.4 Meaning-making through language and other modes

Sociocultural theory highlights the importance of language in human interaction and learning (see Chapter 2). Language is seen as a distinctive human quality and an important tool for meaning-making. Hence, many studies have foregrounded the ways in which people make and communicate meaning through language. These studies can be grouped into three categories. Firstly, one aspect of Vygotsky's theory explored the ways in which children come to understand and learn the meanings of concepts (see sub-chapter 4.4.1). While Vygotsky has described this process of *concept formation* from a theoretical perspective, studies following his lead have since described how this unfolds in practice (e.g Fleer 2011). Secondly, neo-Vygotskian researchers like G. Wells and J. Bruner have highlighted the importance of narrative thinking or *storying* for children's meaning-making (see sub-chapter 4.4.2). According to them, storying serves as a way of making sense of one's experiences by embedding them into stories. Thirdly, the notion meaning-making through *language* has been expanded to include multiple languages as well as other semiotic resources (see sub-chapter 4.4.3). While concept formation addresses the topic of semantic meaning-making, the other categories of language-based meaning-making that I've mentioned, may also entail pragmatic meaning-making.

4.4.1 Concept-formation

Concept-formation has been researched by Vygotsky towards the end of his career. In the sociocultural framework it is closely linked to language development and socialisation and describes the process through which children come to understand the semantic meanings of words or vocabulary. Contrary to his contemporaries, Vygotsky believed that we live in a world of *meanings* (van der Veer, 1994) and not in a world of objective truths. He advocated for a completely different view on reality and knowledge. Acquiring knowledge and understanding of concepts, therefore, is more than a mere assimilation of knowledge, like for instance suggested by Piaget. Vygotsky saw words as embodying generalized knowledge or concepts (Berger, 2005). Hence, concept-formation from a Vygotskian point of view, is the process of learning about meanings of words in a given sociocultural context. Vygotsky differentiated between two main categories of concepts: everyday concepts and scientific concepts. Everyday concepts, as the name suggests, are developed through experience and participation in common daily practices and activities. They are learned spontaneously and without explicit instruction. Scientific concepts, on the contrary, are taught in a more structured and controlled way. They

are part of a coherent knowledge system and belong to specific domains or settings. Learning scientific concepts does not necessarily require practical experience, but rather, theoretical reasoning (Hedges, 2012). While Vygotsky seemed to acknowledge that dynamic and everchanging nature of meanings in general, his notion of scientific concept implies a more static view. This aspect of his theory on concept formation has, therefore, been criticised (van der Veer, 1994).

Vygotsky conducted so called double stimulation experiments to disentangle and describe the process of children's concept formation. He identified three stages of concept-formation. The first stage consists in syncretic heaps. During this stage, children make use of a trial-and-error strategy. They use verbal signs to denominate groups of objects or ideas, that do not seem to be logically related (Berger, 2005). During the second stage of concept-formation children apply verbal signs to different categories of complexes. This stage is mainly based on children's direct contact or visual perception of their physical environment. As Berger (2005) explains, here "ideas are linked in the child's mind by associations or common attributes which exist objectively between ideas" (p. 157). These associations or attributes might not necessarily correspond to the adult logic, but they are not arbitrary either. Rather, children develop what Hedges (2012) called *working theories* about the world. "Working theories (…) represent the tentative, evolving ideas and understandings formulated by children as they engage with others to think, ponder, wonder, learn and make sense of the world in order to participate more effectively within it (p. 144)". Working theories can either be implicit (e.g. children's internal cognitive processes) or explicit (e.g. children express their thoughts to others). Children must rely on their current experiences when developing concepts, even though they might be limited. Seeking patterns, connections, and explanations – or in other words: meanings – in these experiences, is a natural part of children's development.

Vygotsky described several types of complexes that children may form during the second phase of concept development. The most important type of complexe is the pseudoconcept, which sevres as the last stepping stone before the attainment of the actual concept. It has the same function as the adult concept and is used in the same way by the child. The pseudoconcepts can be used by the child in interactions in the same way as if they were real concepts (Berger, 2005). However, children have not yet entirely grasped the meaning of the concept, but have only learned to use it in a social context. For Vygotksy concepts contain different levels of meanings: the meaning of the concept itself, the meaning of the concept for other, and the meaning of the concept for the individual themselves. This last aspect of meaning is what is missing at the stage of the pseudoconcept. While the meaning of the concept for others is acquired early on through

social interactions and experiences, the meaning of the concept for the individual develops over time. Vygotsky situated this last step of concept-development (for everyday concepts) in the school age. The second part of Vygotsky's theory on concept development describes how the learner moves from everyday concepts to scientific or academic concepts. As this development is considered to occur only in school children, adolescents or adults, I will not describe this further.

Only few researchers have empirically implemented this rather complex chapter of Vygotky's theory (Fleer, 2011; Fleer & Raban, 2006). In a study focussing on early childhood educators in the Australian context, Fleer and Raban (2006) have introduced the theory of concept formation in professional development courses and observed how the practitioners made use of the theory in their pedagogical practice. While the educators could identify and reflect on pedagogical activities that fostered concept formation in the early childhood settings, they struggled to explicitely assist the children in their meaning-making process (p. 75). Interactions remained superficial and adults expressed their own perspectives rather than taking into acctount the children's understandings when talking about concepts.

Concept-formation has not only been studied in interactions between children and adults, but also in play situations. As described in sub-chapter 4.3.2, play is an important site for children's early meaning-making. Integrating the theory of concept formation into the play context, Fleer (2011) developed the idea of conceptual play. Rather than seeing play as a mere entertainment activity, conceptual play should help adults to acknowledge the learning potential of play situations. In conceptual play, children use their imagination to constantly connect their knowledge of the real world with the play situation. By attributing imagined meanings to objects they are obliged to engage in a dialogue with their peers to make the inherent rules of the play situation explicit to others. Finally, Fleer encourages early childhood practitioners to actively participate in children's play to foster concept-development (2011).

4.4.2 Storying

The role of language for meaning-making has been emphasised both on the internal and on the external plane. In sub-chapter 2.3.1, I have described the process through which language is internalized and transform our ways of thinking. On the internal plane, language, or more precisely stories, can be seen as fundamental means of meaning-making. Our minds work on the basis of language and construct understanding through *storying* (Bruner, 1986). Constructing stories in the mind is one way of making sense of experiences and provides people with a framework to guide their actions. Stories offer an important support for children to

connect isolated facts or information through a narrative and to learn in a holistic way, also including emotions and values. Thinking in a narrative way or in the form of stories is therefore a useful way to organise our thoughts and make meaning of ourselves and the world (Burgess-Macey, 1999). In this study, children's meaning-making has been observed in naturalistic situations. Therefore, the internal cognitive dimension of children's meaning-making cannot be explored. However, the role of storying on the external plane can be explored. Here, children may exchange their way of understanding with others by articulating their ideas in the form of stories or narration. It is through this process of articulation that meaning can be co-constructed in interactions (Lee & Smagorinsky, 2000).

Some studies have explored the ways in which storying is used as a meaning-making tool on the external plane. For example, in a qualitative study of the experiences of a one-year-old child from New Zealand, White and colleagues (2021) explored the ways in which the child Lexie, her parents, teachers and peers shared stories about the activity of having lunch. Through narrative embedding of the child's experiences, all participants collectively and multimodally attained intersubjectivity and shared meaning. They used verbal, visual and kinaesthetic forms of communication to tell personal accounts about everyday experiences during lunch. These findings illustrate the meaning-making potential of everyday stories and children's early communicative competencies (White et al., 2021). While this study focussed on a common practice of telling personal stories in early childhood contexts, other researchers have focussed on children's spontaneous storying in peer interactions. Aviezer (2003) audiorecorded children's conversations before their bedtime in a Kibbuz in Israel. Looking at the content of children's narratives, she found that about a third of the conversations referred to children's recent experiences in the Kibbuz, while the rest included past experiences, imaginary play, and more personal topics such as the children's feelings. The children's storying reflected their meaning-making attempts about emotional situations, new experiences or interpersonal conflicts (Aviezer, 2003). Storying is of particular relevance for the study of meaning-making in relation to literacy. As said, it represents a specific way of using language to make meaning internally or externally. It is, therefore, an important aspect for oral language development and, more precisely for the use of decontextualised language. Storying enables children to connect single elements or actions, to develop a coherent story in their minds. It, therefore fosters a meaningful and holistic way of understanding one's experiences.

Researchers have studied how children's narrative competences develop and how they tell stories at different ages (Andresen & Schmidt, 2010; Applebee, 1980; Becker, 2005; Pantaleo & Sipe, 2012). Analysing the narrative structures of stories told by children between two and

five years old, Applebee (1980) found that the vast majority of the stories were set in the children's immediate environments such as the family home and involve activities that the children were familiar with, such as eating, sleeping, or family conflicts. Furthermore, the length and complexity of the stories increased with children's age. Stories told by five-year-old children were, on average, three times longer and contained twice as many characters and events that the stories told by two-year-olds (Applebee, 1980, p. 138). Another interesting aspect of children's early narrations is the role of imagination. In an experiment, four-year-old children were told to invent stories based on fantasy and imagination. About one third of the children were not capable to tell such a story at all, while the other two thirds did, relying heavily on elements of their current visible surroundings (Andresen & Schmidt, 2010). These findings show how difficult it is for four-year-olds to use language in a completely decontextualised way. As children's storytelling competences develop, they tend to mix different narrative styles and elements. Five-year-old storytellers may include themselves, their family members or peers in their invented stories or add imagined elements to their accounts of real-life experiences (Becker, 2005). From a linguistic perspective, it is only at the beginning of the primary school age that children can navigate between various forms of stories and narration. At the age of six or seven, most children have developed a more playful approach to stories and are able to understand intertextuality, complex plots, or stories told from different narrators at once (Pantaleo & Sipe, 2012).

4.4.3 The use of one's entire semiotic repertoire

The use of one's entire semiotic repertoire has also been described as *translanguaging*. The concept of translanguaging is based on the work of O. García and others (e.g. García & Wei, 2014; García & Kleifgen, 2019; García & Otheguy, 2019). It relates to the idea that named languages – based on linguistic categories or societal norms – do not represent the communicative reality of people, and especially children. Instead, translanguaging "incorporates an understanding of how different modes (…) add to the semiotic meaning-making repertoire that is involved in the act of communication" (García & Otheguy, 2019,p. 24). It can be seen as a dynamic process through which meaning is expressed by using one's entire semiotic repertoire. The concept of translanguaging has further been developed and applied to pedagogy. Cenoz and Groter (2021) define pedagogical translanguaging as an approach that "is about activating multilingual speakers' resources so as to expand language and content learning" (p. 1). This view highlights educators' positive stance towards children's multilingualism and the potential of translanguaging regarding learning. In fact, empirical

studies have demonstrated that translanguaging can support children's understanding and meaning-making. In an intervention study in South Africa, Makalela (2015) interviewed pre-service teachers prior and after they received and applied a translanguaging training. The teachers stated that translanguaging enabled them to engage their students and develop positive relationships, which was important for learning. Furthermore, they declared that translanguaging fostered a deeper understanding of the teaching content. While this study focussed on the use of multiple languages and regional linguistic varieties, the work of Wu and Lin (2019) in Hong Kong also included other semiotic modes, such as gestures or the use of learning materials (e.g. mindmaps or pictures). Through a fine grained multimodal analysis of classroom interactions during biology lessons the researchers found that translanguaging – or "trans-semiotising" (p. 252) – was not only a way of illustrating lesson content, but was essential for the student's understanding. For example, through translanguaging, the students were enabled to make meaning of causal explanations in relation to biological phenomena (ibid.). These studies have focussed on learning and *teaching* in primary and secondary schools. However, the use of multiple modes of meaning-making has been emphasised particularly in the context of early childhood (education).

Researchers agree that young children do not only express and make meaning by using verbal modes, but also by employing a range of other semiotic modes (Wells, 2000; Flewitt, 2005). Focussing only on verbal communication disregards a large aspect of young children's resources and diversity of making and expressing meaning (Flewitt, 2005). By including non-verbal modes into the analysis of classroom interactions, researchers can reveal the ways in which children draw upon their entire semiotic repertoires to communicate and make meaning. Non-verbal or embodied modes are features of communication, other than language, which are produced by people's bodies. This includes gestures, gaze, posture, or facial expressions (Taylor, 2014). Researchers agree that embodied modes play an important role in shaping human's interactions and meaning-making (Flewitt, 2005; Hackett, 2014; Daniels, 2021). Especially young language learners seem to predominantly rely on embodied modes to communicate. In a longitudinal study, Flewitt (2005) used video-recorded observations of the home and the plagroup contexts to analyse three-year-old children's meaning-making throught embodied modes. She concludes that children's interactions follow certain patterns, that may depend on institutional rules, or the immediate contexts in which their actions are situated (ibid). Similarly to language use, the use of embodied modes, therefore, is situated in a socio-cultural context and shaped by people's practices. In another study, Daniels (2021) focussed on patterns of movements in an early years classroom and how movement contibuted to children's

meaning-making. She concludes that childrens‘ movements in a classroom are highly dependend on the affective atmosphere and the spatial aspects of the classroom. Children might feel enable or hindered in their freedom to move and to express themselves. Hence, educators should become more aware of the importance of spatial dimensions for children’s learning. While the environmental contexts shape children’s use of embodied modes, in turn, children’s movements may shape spaces. By looking at children walking and running during a museum visit, Hackett (2014) found that the ways in which children move around are a powerful intentional and communicative practice. Through their movement, children created meaning of their experiences in the museum.

4.5 Summary

In this chapter, I presented the second important concept of my study: meaning-making. It has become clear that the term meaning-making has been frequently used in various areas of research, although researchers understand it differently. While some focus on meaning-making as a way of expressing meaning (e.g. Bezemer & Kress, 2008), others have described how children grasp meaning from interactions with people, environments, or print (e.g. Mercer, 1995 or Kachorsky et al., 2017). Meaning-making is, therefore, both a productive and a receptive activity. Furthermore, in relation to learning, meaning-making has been used synonymously to understanding. In this regard, meaning-making describes a specific form of learning, which surpasses the mere acquisition of knowledge and skills. Instead, meaning-making refers to the *appropriation* of concepts and practices (see sub-chapter 4.2.2).

This study takes a sociocultural approach, which highlights the importance of social interactions and language for meaning-making. While I presented these aspects separately in this chapter, they are of course interrelated. For example, concept-formation refers both to the internal meaning-making processes of the individual child and the co-construction of understandings through social interactions. In this study, I understand meaning-making as a situated and social learning process, during which children come to understand semantic or pragmatic meaning. More precisely, in relation to literacy, this entails learning about literacy-related skills, concepts and practices. Hence, early literacy meaning-making can be understood in relation to: (1) the ways in which children extract meaning from print material, (2) the ways in which children orally or multimodally express literacy-related meaning, and (3) they ways in which children co-construct meaning in interactions with peers or adults. My study aims to further develop this understanding of early literacy meaning-making, by providing examples and describing the

contexts and conditions of early literacy meaning-making in the specific context of ECEC in Luxembourg. While, it has become clear that adults have an important role in supporting children's early literacy meaning-making, I have highlighted the child perspective in early literacy meaning-making by emphasising the role of multiple modes of communication, as well as play and peer culture.

Chapter 5: Research Context

5.1. Introduction

In this section, I will present the Luxembourgish context. The historical and geographical background of the country have shape Luxembourg's highly multilingual and multicultural population. Children who grow up in Luxembourg encounter many different languages at home, in their daily lives and in educational institutions. In the following chapter I will, therefore, present the different factors that shape language use in Luxembourg. Furthermore, I will present the Luxembourgish educational landscape with a focus on the ECEC sector. I will outline the framework for non-formal education and the multilingual education policy. These policies considerably influence the experiences of the children in these studies, as they are applied in the three participating crèches. Finally, I will introduce the research project COMPARE of which this dissertation is part.

5.2 The Grand-Duchy of Luxembourg

This study takes place in three crèches in Luxembourg. To contextualise the data and the findings of this study, it is crucial to know more about the country of Luxembourg and its Early Childhood Education sector.

5.2.1 Historical and geographical background

Luxembourg is a small country in the Centre of Europe. It has a surface of only 2586,4 km^2 and a population of approximately 660 000 people (STATEC, 2023a). Luxembourg is located between France, Germany, and Belgium. It is a democratic state under the form of a constitutional monarchy, with the seat of government located in the capital Luxembourg-city. The Grand-Duchy lies between the linguistically Germanic and Romanic parts of Europe and has lived through different phases of political dependence in the course of its history. These geographical and historical factors have contributed to Luxembourg's high degree of multiculturalism and multilingualism.

The Luxembourgish territory as we know it today has been defined by the Treaty of London in 1839, following the Belgian Revolution. The territorial demarcation of Luxembourg was highly influenced by the linguistic border and so, the majority of the general Luxembourgish population at the time spoke the same German dialect, called West-Moselle-Franconian (Fehlen, 2002). Nevertheless, Luxembourg was not a monolingual country. French was the language of the bourgeoisie and standard German the language of the Church. Over time, the West-Moselle-Franconian dialect became more and more influenced by the neighbouring Romance dialects of Wallonia in Belgium and Lorraine in France. As a result, the Luxembourgish patois *Lëtzebuergesch* developed. It became increasingly important on the way to Luxembourgish independence and the wish for a distinct national identity. In 1984, *Lëtzebuergesch* was declared the national language of Luxembourg (Fehlen, 2002). Since then, numerous efforts have been taken to promote the standardization of the language and use it in its written form. French and German are the languages of administration and jurisdiction. Luxembourg is, therefore, officially a trilingual country.

5.2.2 Demographics and citizenship

Luxembourg has a highly diverse population. About 47% of the residents do not have the Luxembourgish citizenship[8] (STATEC, 2023a, p. 47). While the proportion of non-nationals has been growing since 1981, it has recently slowed down. This is due to an increasing number of people that acquire the Luxembourgish citizenship through a naturalisation process. About 20% of the residents have at least two citizenships, including Luxembourgish (STATEC, 2023a, p. 18). Overall, there are more than 170 different citizenships represented in Luxembourg. The population's diversity is higher in the Centre and South of the country, with a few exceptions. The highest percentage of non-nationals can be found in the capital Luxembourg-city with about 71% (STATEC, 2023a, p. 11). Apart from local and regional differences, there are also differences regarding the age groups. The proportion of non-Luxembourgers is particularly high in the age group of the working people (30 – 54 years) and in very young children (0 – 4 years) (STATEC, 2023a, p. 9). This is possibly because families mainly immigrate to Luxembourg for professional reasons. As people have reached the retirement age, they possibly leave Luxembourg and return to their home countries, or they have acquired the citizenship if they plan to stay in Luxembourg. The most represented nationalities – apart from Luxembourgish

[8] The term citizenship refers to the legal attribution of a person to a country. I use it here to refer to the information in people's official documents. This gives no indication about place of birth, parents' nationalities or the moment of acquiring the citizenship.

and the citizenships of the neighbouring countries – are Portuguese (29,4%) and Italian (7,9%) (STATEC, 2023a, p. 13).

5.2.3 Migration and language use

The Portuguese and Italian migration to Luxembourg can be historically explained. During the industrialisation and the second half of the 20th century, workers from Italy and Portugal came to Luxembourg to find work in the steel industry. The Luxembourgish government supported this migration through agreements with both countries. Today, many residents are second- or third-generation descendants from these migration-waves. Apart from people of different nationalities living in Luxembourg, daily commuters from France, Belgium and Germany play an important role in relation to the country's diversity. About 185.000 residents of the neighbouring countries cross the borders every day to come working in Luxembourg. These features of the Luxembourgish population and the labour market make Luxembourg a highly multicultural and multilingual country. However, Luxembourg's multilingualism is also deeply anchored in its history and identity. Moreover, people's language use does not necessarily mirror their nationalities.

Living and working in Luxembourg almost inevitable means hearing and speaking more than one language every day. Both the number of languages in Luxembourg and the ways in which people use languages can be considered as a unique incubator of multilingualism. While Luxembourg is a small country language use still highly varies depending on the regions and the situational contexts. In everyday life, for example, the languages used in supermarkets, gaz stations, or other stores are different in the West of Luxembourg than in the East. This is due to the proximity to the different Francophone or Germanophone neighbour countries and the many cross-border workers. Accordingly, in the East of Luxembourg – which is close to the German border – German is used more frequently than in the West of Luxembourg – which is closer to the French-speaking region of Belgium. Regardless of the regional differences, people use multiple languages at work and at home. Statistics show that three out of four people work in multilingual environments and that mastering up to four different languages is a job requirement for many (STATEC, 2019, p. 1). French is the most-used language in the work environment (78%), followed by English (51%) and Luxembourgish (48%). In practice, this means that people frequently switch between languages in daily interactions as they navigate different multilingual spaces. The flexible use of multiple languages, or *translanguaging*, is the societal norm in Luxembourg.

The increasingly important role of English in the workplace is not mirrored in people's language use at home. Here, Luxembourgish is used by many families (53%) and is the language that many residents feel most confident using (42%). Many families also use French (32%) and Portuguese (19%) at home (STATEC, 2019, p. 1).

A recent survey conducted with about 8.000 parents has showed that about 38% of the parents speak two and 28% speak three or more languages with their children at home (SNJ, 2023, p. 16). Parents indicated to use over 100 different languages with their children, either exclusively or in combination with other languages. Luxembourgish and French are the most frequently used languages in families with preschool children. This is the case for both monolingual families and for families that use either Luxembourgish or French in combination with another language. Families' language use slightly changes when it comes to their literacy practices. For example, parents of preschool children indicated that they mostly read to their children in Luxembourgish (55%), French (42%) and German (34%) (SNJ, 2023, p. 20). Considering the previously described language use in everyday life and the workplace, the use of German may seem surprising at first. It can be explained by two main factors. Firstly, German books have always been present in Luxembourgish-speaking families as the availability of books in Luxembourgish was very limited and has only been growing over the past years. Secondly, German is the first language of literacy in the public school system. In the following, the roles of the different languages in the educational system will, therefore, be explained more in detail.

5.3 Educational landscape in Luxembourg

In the context of Luxembourg, compulsory schooling starts with two years of pre-school, for children aged four (before the 1st of September of the upcoming school year). The entry into the first year of primary school usually happens at age six. Since 1998, parents have the option to extend the pre-school time by one additional year (Kirsch & Seele, 2019).

Like the Luxembourgish society, the Luxembourgish educational system has always been a multilingual one. In 1848 a policy of bilingual instruction has been introduced (Fehlen, 2002). Reflecting the language statuses of the time, German was predominantly used in the lower classes, while French became more and more important for the higher levels of education. This is still true today. Pupils in the public school system learn how to read and write in German at the age of six and start to learn French as a second language at the end of second grade. At the

level of elementary education[9] (from 6 to 12 years), German is used as the main language of instruction for all subjects, apart from French language courses. Consequently, all written learning material is presented either in German or French. As pupils transfer to secondary education (from 12 to 18 years), the main language of instruction depends on the type of school they frequent. In General Secondary Education (ESG) – which prepares students to obtain a general higher education entrance qualification or to begin vocational training – pupils might be oriented towards German- or French-dominant classes. In Classical Secondary Education (ESC) – which is aimed at students' continuation in higher education – the main language of instruction is French. Luxembourgish is used as the main language of communication between pupils and teachers, both in elementary and in secondary education. All pupils also learn English as a third language in the second or third year of secondary education. Additional language classes, for example in Spanish, Italian, Latin, or Greek, are possible for students who wish to further specialize in languages.

Over 43% of the students in the public educational system do not have the Luxembourgish citizenship (MENJE, 2023), and presumably speak other languages than only Luxembourgish at home. In elementary school, for example, about 67% do not use Luxembourgish as their first language at home (MENJE & SCRIPT, 2022).

While the Luxembourgish educational system is highly multilingual and offers various potential trajectories, it has been showed that it reproduces societal inequalities and puts students of lower socio-economic status and migrant background at a disadvantage (LUCET et al., 2021). The system seems insufficiently adapted to the complex and diverse family and language situations of the pupils. In fact, the language policy of elementary school is tailored to the needs of Luxembourgish-speaking pupils, especially regarding literacy. Based on the fact that German is linguistically close to Luxembourgish and, the assumption that it is, therefore, easy to learn, children become literate in German. While German is not a familiar language for most of the students, it is taught as a first language. Learning how to read and write in German is, therefore, especially challenging for most of the pupils. The results of the 2018 PISA for reading skills, for example, have placed Luxembourg in the first place of countries with the highest differences between advantaged and disadvantaged students (OECD, 2018). The language of literacy could be one of many factors that lead to educational equalities in the Luxembourgish system. The further pupils progress in their school career, the more pronounced the differences based on language background become. For example, in ESG – the non-academic track of secondary

[9] I apply the same terms as in the English version of the official website of the Ministry of Education (www.men.public.lu).

education – has a considerably higher proportion (31,5% compared to 7,5%) of Portuguese-speaking pupils than the ESC – the academic track of secondary education (MENJE & SCRIPT, 2023a, 2023b).

Early childhood education is recognised as a powerful force to tackle such inequalities and to lay the ground for later school success (Burger, 2010; Hornung et al., 2023; Joo et al., 2019). Accordingly, the Luxembourgish government heavily invests in the ECEC sector and aims to improve quality through policy development and increased monitoring (OECD, 2022). In the following, I will describe the recent developments of the Luxembourgish ECEC sector, its structure, and the different actors (e.g. children and practitioners).

5.3.1 The ECEC sector in Luxembourg

ECEC facilities in Luxembourg are an offer for parents of children who have not yet attained the compulsory school age of four years. Compared to other European countries, the ECEC sector in Luxembourg is relatively young. Following international developments and the recommendations of the European Council in Lisbon (2000) and Barcelona (2002) to promote mothers' employment, as well as children's educational perspectives, the ECEC sector in Luxembourg has been promoted since the early 2000s (Schumacher et al., 2021).

At first, political attention was focussed on ensuring access to institutionalized care arrangements. This was, for example, reflected in the introduction of a childcare-voucher system *(chèques-services d'accueil)*, which supported parents financially (Kirsch & Seele, 2019). Initially early childhood was under the jurisdiction of the Family Ministry. In 2013 it became part of the Ministry of Education and Youth (MENJE). This transition of ministerial responsibility reflects a change in objective from merely providing care to the pursuit of a concrete educational mission (Honig et al., 2013). Consequently, the focus shifted towards the development of a framework for *non-formal* education, that was first introduced through the Children and Youth Act in 2016 (Kirsch & Seele, 2019) and revised in 2018 and 2021. This document outlined the characteristics and principles of non-formal education, as compared to formal schooling. Furthermore, with the aim of regulating language use in ECEC and tackling educational inequalities, a multilingual policy was introduced in 2017.

The ECEC sector in Luxembourg is divided into a formal and a non-formal part. As described earlier, this split system originates from the former ministerial separation and the relatively late development of non-formal education in Luxembourg. Studies conducted in the context of professional development courses have investigated caregivers' and teachers' attitudes and ideologies in relation to multilingualism (Aleksić & García, 2022; Kirsch, 2020) and identified

differences between teachers working in formal and educators working in non-formal ECEC. After participating in the professional development on translanguaging pedagogies, preschool teachers video recorded lessons in which they applied what they had learned (Aleksić & García, 2022). The analysis of these recordings showed that, despite the professional development, some activities continued to reflect teachers' negative attitudes towards their students' multilingualism and a deficit-oriented view on children. The study revealed strong language ideologies among preschool teachers, such as hierarchical views on languages or 'one-nation-one-language' beliefs. Furthermore, teachers did not seem to perceive young children as competent learners and engaged in othering (Thomauske, 2017) or labelling in regard to children's linguistic identities. While this study demonstrated the existence of negative language ideologies in formal early education, the participants of Kirsch's study (2020), taking place both in the formal and the non-formal sector, had a more positive stance. More precisely, from the beginning of the professional development the participants affirmed to see multilingualism as beneficial. The participants were able to overcome their initial scepticism about multilingual education and critically reflected on the purpose of *responsible* translanguaging (Kirsch, 2020). These studies show that professional's attitudes and understandings can strongly influence their pedagogical practices.

Among the differences between the formal and the non-formal ECEC sector are alos the practitioners' professional background and qualifications. Figure 9 gives an overview of the structure of ECEC in Luxembourg. It indicates the existing types of ECEC and the age of the children (between brackets) they are addressing. Qualifications of staff members are relatively low in non-formal settings, compared to formal settings (de Moll et al., 2024). In formal settings, practitioners need to have obtained a qualification of at least a bachelor's degree or equivalent. Practitioners in non-formal ECEC generally hold lower degrees and those members who have studied in one of the available Bachelor programmes at the university of Luxembourg, did not have a curriculum specialised on Early childhood (OECD, 2022). As shown in the figure, teachers (T) work in the formal sector, while educators[10] (C) mainly work in the non-formal one. The MENJE monitors and regulates the sector through the system of the *Service d'éducation et d'accueil* (SEA). SEA are all non-formal structures that offer education and care and have a contractual agreement (convention) with the government (Hekel & Simoes Lourêiro, 2021). This agreement goes beyond the minimal security and hygiene requirements necessary to offer a care service. Having a convention with the MENJE makes SEA structures eligible for

[10] The term *caregiver* is used here as an overarching term for all practitioners who work in early education, but do not have initial training as teachers. The term does not give any further indication of the professional qualifications, as opposed to the term *educator* that refers to a specific degree obtained in the Luxembourgish context.

additional governmental funding under the form of childcare vouchers (*chèques services d'accueil)*. These vouchers entitle each child to twenty hours of free attendance in an SEA per week.

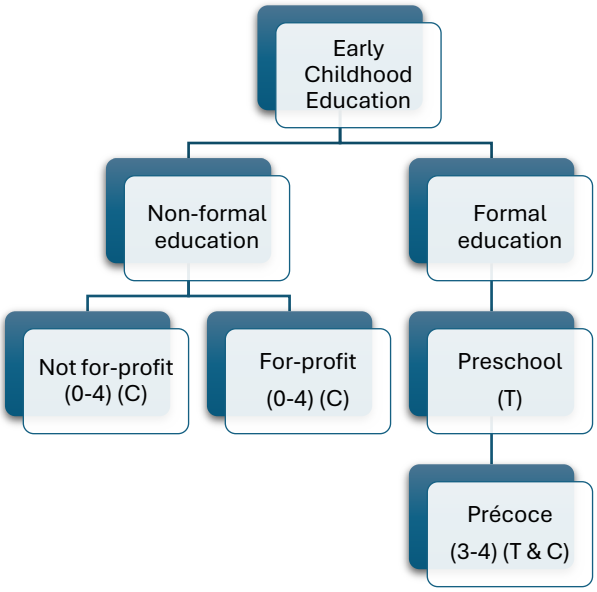

Figure 9: Structure of the ECEC sector in Luxembourg (Kirsch et al., 2020, p. 6)

As the present study takes place in the non-formal sector exclusively, the formal one will only be shortly described. Formal early education in Luxembourg is synonymous to pre-school education. It comprises the two first years of compulsory schooling, called *Cycle 1* for children aged four to six. Furthermore, parents can choose to enrol their children in an optional *précoce* class, one year before they attain the compulsory school age. *Précoce* classes are usually integrated into school facilities and can be seen as preparation for pre-school. While *précoce* classes do not yet follow the same curriculum, they resemble pre-school classes in terms of classroom spaces, activities, and focus on educational goals. *Précoce* classes are co-taught by a teacher and a caregiver and accommodate an average of sixteen children per class (Kirsch et al., 2020). Depending on the availabilities in their municipality, children may frequent *précoce* on a half-day schedule, either in the morning or on a few afternoons during the week. Switching between a *précoce* class in the morning and another non-formal care arrangement in the afternoon is a daily reality for many children (Bollig, 2015).

As Figure 9 shows, the non-formal part of ECEC in Luxembourg is again subdivided into for-profit and not for-profit facilities. Not for-profit facilities are managed by the municipalities or by other organisations, such as Caritas, Croix-Rouge, or other NGOs. In 2019, only 30% of

crèches were not for-profit (OECD, 2022). For-profit facilities, make up the majority of crèches and are managed by self-employed independents or commercial carriers. As a result, the working conditions of caregivers are very different. While caregivers who work in not for-profit facilities benefit from the collective bargaining agreement and higher salaries, caregivers in for-profit facilities gain less and often work more hours (de Moll et al., 2024). Apart from these financial and managerial aspects, there are differences regarding the size and infrastructure of the care arrangements. The most frequently represented type of care arrangements are daycare centres, called *crèches* in Luxembourgish. Crèches accommodate children between zero and four in their equipped premises. Crèches follow an internal structure, with a so-called manager at the top of the hierarchy. This person has higher qualification requirements than the other staff members and takes on administrative and team-leading tasks. They usually have less contact with the children and only seldomly participate in the pedagogical activities. Oftentimes, the crèches' activities are organised according to the age of the children, with separated groups for babies (zero to two) and toddlers (two to four). These activities are carried out by a team of caregivers. The government defines a ratio of caregivers per children in crèches. For three-year-olds, for example, one caregiver caters for a maximum of eight children (Kirsch et al., 2020). Not for-profit crèches have stricter employment conditions than for-profit crèches, for example in terms of language requirements. In combination with the above-described differences in salary and working conditions, this leads to a segregation of the workforce in ECEC (de Moll et al., 2024). Generally, one can say that the state funded sector employs more Luxembourgish-speaking and higher qualified staff than the for-profit sector, that has a higher number of lower-qualified and cross-border workers.

While crèches are the most common non-formal education and care arrangement in Luxembourg, other forms exist. Children may also visit so-called *mini-crèches* or home-based care (*"day-parents").* These forms of non-formal education differ from crèches in terms of the size and age-related heterogeneity of groups.

To sum up, the ECEC sector in Luxembourg comprises a range of different educational offers. Theoretically, parents are free to choose if they prefer to assure the care of their children themselves (or through the help of other family members) or if they wish to benefit from one of the previously described arrangements. Practically, however, financial, or geographical constraints are often decisive. For example, both partners might be required to work full-time to afford their livelihood, or the preferred care arrangement might not be available in proximity of the family's home. As a result, the care arrangements that parents choose might not always reflect their real preferences. Many parents choose to enroll their children in institutionalized

childcare. About 51% of the children under three and 87% of the children between three and four years are enrolled in some form of childcare. Overall, the age group from zero-to-four-year-olds in Luxembourg comprises about 30.000 children per year (Hekel & Simoes Lourêiro, 2021). Compared to the other European countries, this places Luxembourg under the six countries with the highest enrollments of under three-year-olds (Chzhen et al., 2019). While these numbers give the impression that the majority of children have similar experiences during their preschool years, research shows that the opposite is the case. Firstly, families' socio-economic status influences the types of ECEC facility and the child's attendance. Children from families of lower socio-economic status are more likely to attend a *crèche* (as opposed to other ECEC offers), but generally attend less hours than children from families of higher socio-economic status (Kaufmann et al., 2022). Secondly, differences have been found according to the migration background of the families. Couples in which both partners are Luxembourgish (more than two generations) are more likely to send their children to a *précoce* class than parents with a migration background (1st or 2nd generation) (Kaufmann et al., 2022). As a result, disparities in school performance as early as in first grade have been found (Hornung et al., 2023). Considering the underlying aim of ECEC to increase the educational perspectives of children with a migration background and from lower socio-economic status, these numbers show that efforts and investments might not reach those in need. Consequently, the OECD recommends to target investments more towards ECEC facilities that reach a bigger number of children from socio-economically disadvantaged and language minority backgrounds (OECD, 2022).

5.3.2 The Luxembourgish framework for non-formal education

The framework for non-formal education (MENJE & SNJ, 2021) is addressed to practitioners working with children and adolescents in out-of-school-contexts. It contains a general introductory part with general pedagogical guidelines and more specific chapters on the different age groups (i.e. young children, school children, and adolescents). It was first published by the Ministry of Education and Youth in 2016 and revised in 2021. In the following, I will first describe how the document frames the view of the child and the caregiver in non-formal education. Thereafter, I will present the understanding of learning and literacy represented in the framework.

The view of the child reflects adult's ideas and understandings of childhood. It describes how adults perceive children's roles in society and reflects educational values. Moreover, practitioners view of the child shapes their pedagogical actions (Whitaker, 2019). The national

framework for non-formal education defines three main aspects of the view of the child. Firstly, the child is seen as a competent individual (p. 17). Every child is naturally inclined to learn and discover the world around them from an early age on. Children dispose of unique and individual resources that they develop through exploration and learning. The framework emphasises children's creativity, curiosity, and individuality. Secondly, children are described as social and cultural beings (p. 17). Through their interactions with others, they co-construct their own learning processes, as well as their social environments. This makes them equal partners in the learning process. Finally, children are seen as equal members of society (p. 18). This aspect relates to children's rights to grow up in freedom, safety, and health. Children's wellbeing and their right to live in peace, enjoy free time, and play is emphasised. Education is seen both as a fundamental right and as a vehicle towards knowledge, independence, and agency.

The framework also outlines the role of caregivers in non-formal education. Caregivers are described as important persons of reference ("*Bezugspersonen")* for children (p. 18). They should create a positive and valuing environment to support children's wellbeing and build a relationship of trust. Caregivers should respond to the needs and interests of individual children as well as the whole group. In line with the characteristics of the child, caregivers are seen as partners in the learning process. The role of the caregiver is to offer a rich learning environment and to observe and document children's behaviour (p. 18). This enables them to interact with children in authentic and spontaneous learning opportunities. By leveraging children's individual competences and previous experiences, caregivers support children's autonomy and self-efficacy. Furthermore, caregivers should provide enough time and space for children to develop at their own pace. One important task of caregivers is to cooperate with families and other educational actors (e.g. schools). This relates to the second and third pillar of the *éducation plurilingue*. The aim of this cooperation is to create a coherent learning environment and to facilitate children's transitions between institutions (p. 19). Finally, caregivers should be reflective and committed to lifelong learning and professional development. The framework for non-formal education mentions languages as part of children's repertoire of resources that should be used by caregivers to foster learning (p. 17, 18). To achieve this, openness and a positive attitude towards multilingualism is required.

The framework uses the German term *Bildung* and defines it as the "active and dynamic engagement of humans with themselves and their environment" (p. 19, translated by me). Three desiderata for *Bildung* are mentioned: the right to self-determination, the right to participation, and the right to assuming responsibility. As clarified in the document, these principles are based on the values of the European Enlightenment which emphasise the intellectual freedom of every

citizen. The framework defines non-formal education in contrast to formal education in schools and informal education in ordinary everyday life situations. While formal education entails learning for the purpose of achieving a qualification, non-formal education pursues other aims and is organised outside of school. Non-formal education is a voluntary pedagogical offer addressed to a defined target audience (p. 19). Learners in non-formal education are free to define their own learning goals and co-determine the learning methods and contents. The framework characterises non-formal education as an opportunity for children to "play, have fun, and relax" (p. 20, translated by me). Practitioners participate in learning processes and take on a structuring role but leave children the freedom to explore their own interests. Hence, *Bildung* is more than a mere appropriation of knowledge and competences, but contributes to children's empowerment, holistic development, and independence (p. 20). While the framework does not name learning theories or pedagogical approaches, it advocates for learning based on individualisation, differentiation, participation, and process-orientation (p. 21). Appropriated ways of learning that are mentioned in the framework are play, peer interactions, and inquiry-based learning.

Whereas the previously described content of the document generally addresses all ages and settings of non-formal education, there are additional explanations for early childhood specifically. At first, the view of the child and the role of the practitioner are repeated, with some more age-specific explanations. For example, the importance of trustful relationships between children and caregivers is emphasised as a precondition for the attainment of gradual independence of children (p. 39). Thereafter, prerequisites of learning in relation to the spatial, material, and temporal aspects are described. Some recommendations about the design of the rooms, toys or other learning material, and the schedule of the day are provided. Finally, the framework elaborates on seven domains of action: (1) emotions and social relations; (2) values, participation and democracy; (3) language, communication, and media; (4) aesthetics, creativity and arts; (5) movement, body awareness, and health; (6) science and technology; and (7) transitions. These domains are not specifically chosen for the early childhood but apply also to the other age groups addressed in the framework. As early literacy is mentioned in the third domain – language, communication, and media (p. 46) – I will now elaborate on this.

Language is conceptualised as the main mean of communication and expression, therefore, being a key-aspect for lifelong learning and participation in society. Children's language development is addressed in relation to the multilingual context of Luxembourg. Flexible use of one's language repertoire and non-verbal communication is recommended to ensure authentic interactions and, hence, foster language development. Furthermore, caregivers are

said to be role models for children to encounter complex and rich language. The framework mentions some strategies and activities that are beneficial for language development, such as action-accompanying speech, open questions, and story reading. One paragraph of the framework, more specifically, relates to literacy and media. Early literacy is defined as "encompassing all competences of children when engaging with books, storytelling, and written language before they actually learn to read and write" (p. 47, translated by me). Rhyming, finger games, nursery rhymes, scribbles, and reading of picture books are examples of early literacy mentioned in the framework. Furthermore, the framework recommends a regular and "pedagogically accompanied" access to books in different languages. This is seen as an essential educational opportunity. In addition to books, media material such as, short videos or audio books could lead to richer and more varied early literacy experiences. Finally, the educational value of such experiences is emphasised. The framework mentions that early literacy experiences are an important aspect of children's language development and facilitate the development of further literacy skills. Non-formal early childhood education settings are said to play an important role in providing these learning opportunities, especially for children with less stimulation home-environments (p. 47).

To summarise, the framework promotes a positive and valuing view of the child and advocates for a child-centred pedagogical approach. It touches upon principles for learning but does not give clear guidelines for implementation. While it mentions co-construction and the participation of both children and adults in learning processes, it focusses on the child as an individual learner. When reading the document, one gets the impression that non-formal education is being positioned as the opposite of formal education, or at least as opposed to negative associations one could have towards formal schooling. Learning is mainly intrinsically motivated, and children's wellbeing and freedom of choice are emphasised as unique features of non-formal education settings. This leaves the reader with the misleading impression that such learning cannot happen in formal settings. Furthermore, the explanation of the caregivers' role in learning processes remains vague. Without a critical reflection of the text, practitioners might interpret their role as being purely peripheral to the learning process. Several mentions of the caregiver as a provider of the learning environment and the importance of children's self-efficacy may give the misguided impression that practitioners should not interfere actively in children's learning processes. This possible way of reading the framework would lead to a *laisser faire* approach, which contradicts the socio-constructivist understanding of learning (see sub-chapter 2.2.2).

5.3.3 Language use and *éducation plurilingue* in non-formal ECEC

Until 2017, there were no formal language policy guidelines in institutionalized early childhood (S. Neumann & Kirsch, 2022). The linguistic background of staff members and the demands of the parents determined the language use in non-formal structures of early childhood. Before the policy implementation in 2017, early childhood facilities could be categorised into three types of linguistic profiles: Luxembourgish-dominant; French-dominant; and bilingual structures. In the case of the latter, bilingual language use was integrated into the pedagogical approach. However, several ethnographic studies have showed the general presence of multilingual practices in early childhood facilities (Bollig et al., 2015; S. Neumann, 2015; Seele, 2015). These studies have also uncovered practitioners' orientation towards monolingual norms and a lack of systematic and reflected language use.

Following the Child and Youth Act 2016 (MENJE & MFIN, 2016) and as a response to the growing educational inequalities linked to children's family backgrounds, the Ministry of Education and Youth introduced a new policy for multilingual education called *éducation plurilingue* in 2017. Since 2018, it has been integrated into of the national framework for non-formal education (Hekel & Simoes Lourêiro, 2021) and its implementation is a prerequisite for SEAs to be part of the care-voucher system (see sub-chapter 5.3.1). The aims of the *éducation plurilingue* are to promote a positive attitude to languages and language learning in children and to facilitate their language development in their multilingual environment. This should contribute to the reduction of educational inequalities. The *éducation plurilingue* is described in the national framework (MENJE & SNJ, 2021) as being transversally integrated into the facilities' everyday life, instead of being added on to existing activities (p. 122).

The plurilingual policy has three main pillars: (1) promoting children's language development; (2) building partnerships with parents; and (3) networking with educational institutions or other local partners (p. 122 - 124). The first pillar is the most relevant one in the context of my research. While the *éducation plurilingue* promotes the value of multilingualism in general, the roles of Luxembourgish and French are highlighted. Children should have contact with these languages from an early age on through the implementation of the *éducation plurilingue*. Considering the language practices in early childhood facilities, this can have different practical implications. For example, crèches in which French is used as the main language of communication and where staff-members are mainly French-speaking, a way to integrate Luxembourgish must be found. The same counts for the integration of French into the language practices of Luxembourgish crèches. In the policy guidelines for the *éducation plurilingue* the importance of meaningful and authentic interactions for language learning is highlighted. More

precisely, children should be emotionally and cognitively involved in interactions and caregivers should value all their verbal and non-verbal communicative resources. This entails a flexible use of languages and a benevolent view on children's multilingual language development. Some practical recommendations for caregivers are listed. for example, a reflective stance towards one's own language use, the use of language stimulating and modelling strategies, and the creation of a rich and engaging environment (p. 122 – 123). Apart from French and Luxembourg, the children's family languages should be valued and integrated into the pedagogical activities through the *éducation plurilingue*. To achieve this, caregivers should collaborate closely with the children's parents in an educational partnership ("*Bildungspartnerschaft*"). Such a partnership entails the organisation of common pedagogical activities or events for parents, the representation of children's cultural backgrounds in the surroundings of the facilities, and open communication between parents and caregivers (p. 123). Finally, the *éducation plurilingue* requires caregivers to embed their pedagogical practice into a larger local context by collaborating with other educational or cultural institutions. To support the implementation of the *éducation plurilingue*, the framework requires one educator per crèche to absolve specific professional development courses. These educators, called *référents pédagogiques* should then act as the experts for the *éducation plurilingue* in their crèche, and support their colleagues in implementing the framework.

Empirical studies that have been conducted after the introduction of the *éducation plurilingue* have investigated practitioners' attitudes towards multilingual education and language practices in ECEC. In the MuLiPEC project, Kirsch and colleagues could confirm the existence of monolingual ideologies and negative attitudes towards multilingual education but also managed to address this in professional development courses (Kirsch et al., 2020). Since then, multilingual practices and *translanguaging* have been legitimized in the non-formal education contexts. As survey-data about literacy practices in crèches shows, educators – or visiting parents – use multiple languages when talking, singing, or reading with children (Kirsch & Aleksić, 2021). While they predominantly focus on French and Luxembourgish, they also offer literacy events in Portuguese, English, German, Italian and Spanish. These are, however, only a few of the children's family languages. Despite a shift towards more positive and open attitudes towards languages, language practices in crèches, therefore, reflect societal language hierarchies and ideologies (ibid.). Nevertheless, these findings show that the *éducation plurilingue* has strengthened existing multilingual practices in early childhood facilities.

Considering the children's language use, Simoes Louêiro and Neumann (2020) found that children aligned with institutional language policies implemented by educators. Children knew

exactly in which situations which languages were expected to be used. This pragmatic competence was confirmed by Kirsch and Mortini (2021) for children as young as two years old. These children had already learned to adapt the use of their verbal and non-verbal resources to the respective situation and interlocutor. Hence, in peer-interactions, children were inclined to use common home languages (Simoes Lourêiro & Neumann, 2020) or creatively reproduced the language practices of adults (Kirsch & Mortini, 2021). Furthermore, children's language use was influenced by the *translanguaging* practices in the ECEC settings (Kirsch & Mortini, 2021). Reversely, through *translanguaging*, children were able to undermine less flexible language policies of adults (Simoes Lourêiro & Neumann, 2020). These practices demonstrate children's language-based agency and their active role in language learning.

As the *éducation plurilingue* is still relatively recent, its implementation and effect still need to be analyzed. Studies have, however, already pointed to risks and challenges. As the policy is limited to the early years and does not apply to primary or even secondary schools, its effects might not be sustainable. Aligning the language policies for children of all ages, would increase the continuity between the different systems and facilitate transitions (Hornung et al., 2023). Other incoherencies result from the dichotomy of formal and non-formal education. While the unification of both parts under the same ministry has been a first advancement, barriers in coordination and communication should be addressed to ensure quality (OECD, 2022). On the policy level, the challenge of creating a framework for both formal and non-formal education in an increasingly diverse sector remains. Furthermore, in the non-formal sector, facilities differ in terms of organisation, languages, and pedagogies. Hence, the implementation of the framework, in particular the *éducation plurilingue,* highly depends on individual contexts. Simoes Lourêiro (2023) has identified a lack of clarity regarding the policy goals, that potentially leads to ambiguities and misinterpretation. This could also be due to the subsequent integration of the *éducation plurilingue* in the existing framework for non-formal education.

5.4 The research project COMPARE

My PhD study is embedded in the larger research project COMPARE, which stands for "Collaboration with Parents and Multiliteracies in Early Childhood Education in Luxembourg". The project was proposed by its principal investigator (PI) Prof. Claudine Kirsch in response to the National Research Fund's (FNR) annual CORE call for multi-annual thematic research in 2019. It was further funded and supported by the Ministry of Education (MENJE), the National Youth Service (SNJ), and the University of Luxembourg (Uni.lu). The project COMPARE was

conducted over a period of three years, starting in April 2020, and applied both quantitative and qualitative methods of data collection. After my Master studies, I was recruited by Prof. Claudine Kirsch to fill the position of PhD candidate on the project. The position entailed being a member of the research team and conducting research to obtain a PhD degree. Hence, the COMPARE project has determined both constraints and opportunities during my study and has shaped my PhD in many ways. In the following, I will summarise the methodology of COMPARE and explain the ways in which it has influenced the present study.

5.4.1 The methodology of COMPARE

The research project COMPARE (see https://www.uni.lu/fhse-en/research-projects/compare/) aimed to develop, support, and investigate (multi)literacy in crèches, as well as collaborative practices between educators and parents. It addressed three main research questions: (1) In what ways do educators and parents engage in (multi)literacy activities with children?; (2) What is the perspective on the collaboration between educators and parents and how do these actors develop collaboration?; and (3) What influence do the developing collaboration and (multi)literacy practices have on the educators, parents and children?

In line with the aims and research questions, a mixed-method approach was applied to collect data in the COMPARE project. With the support of the MENJE, a questionnaire for parents and educators was disseminated in February 2020. The questionnaires allowed us to investigate and explore the perspectives of educators and parents regarding (multi)literacy practices and collaboration. To develop and support the multiliteracy practices and partnership building between educators and parents, a professional development course was organised in April and October 2020. About forty participants, who were specialized educators (*référents pédagogique*s) and managers of about twenty different crèches participated in the course about (multi)literacy and collaboration with parents. Furthermore, group interviews with regional agents *(agents régionaux)* were conducted in Spring 2020 to collect preliminary data about (multi)literacy and collaborative practices. From September 2020 to June 2021, qualitative fieldwork was conducted in three crèches in Luxembourg. During fieldwork, observations were documented through video and audio recordings, fieldnotes, and thick descriptions. Additionally, semi-structured interviews with parents and educators were conducted and the crèches' use of the logbooks (*journaux de bord*) was documented. Finally, interviews with librarians were conducted to investigate the collaboration between crèches and libraries.

To further support practitioners and parents, we published educational movies to be used in professional development courses (see www.enfancejeunesse.lu), dialogic reading guides in

several languages (Kirsch et al., 2023), and information events for parents. Furthermore, we organised workshops and conferences in October 2020 and in May 2023, in which practitioners took part (see appendix A2.2).

5.4.2 Introducing the members of the COMPARE team

For pragmatic reasons, the members of COMPARE0s research team focussed on different aspects of the project. In line with their individual qualifications and interests, the team members participated in different parts of the data collection and focussed on the perspectives of different participants. Table 2 gives an overview of the research team members and their respective focus on COMPARE, as well as the parts of the data collection and analysis in which they were involved.

Table 2: The members of the COMPARE team

Name	Focus	Involvement in data collection and analysis
Prof. Claudine Kirsch (PI)	Educators' perspectives and synthesis	Professional development, questionnaires, focus group interviews with regional agents, qualitative fieldwork
Dr Gabrijela Aleksić	Educators' and parents' perspectives	Questionnaires
Dr Džoen Bebić-Crestany	Collaboration between parents and educators	Qualitative fieldwork, interviews with parents and librarians
Valérie Kemp	Children's perspectives	Qualitative fieldwork, interviews with parents
Laura Colucci	Educators' perspectives	Qualitative fieldwork, interviews with parents and librarians

Apart from the internal collaboration between the members of the research team, further collaboration took place with external experts. Prof. Drorit Lengyel, Prof. Christine Hélot, Prof. Nancy Hornberger, and Prof. Ofelia García met annually with the members of the research team to provide advice and consult on the project.

5.5.3 Selection criteria and access to the field

The participants of the COMPARE project were recruited through the support of the co-funder SNJ and by means of the professional development course in Spring 2020. Educators from

twelve ECEC centres, took part in the course (Kirsch & Hornberger, 2024). As one of the main providers of professional development courses and the agency responsible for the implementation of the *éducation plurilingue* policy, the SNJ disseminated the questionnaires for educators and parents and helped to find participants for the professional development course and group interviews. Furthermore, the professional development course, which aimed to promote multiliteracies and collaborative practices, allowed us to identify crèches that had a potential interest in participating in the qualitative fieldwork. During the professional development course, the participating educators were informed about the further research plan, the aims and methods of the qualitative fieldwork, and the applied selection criteria. They could then, volunteer to further participate in the qualitative data collection of the project. Among the interested crèches, three were selected after consideration of the selection criteria.

The selection criteria for the qualitative fieldwork aimed to ensure, firstly, to be interested and invested in a collaboration between the crèches and the research team, and secondly, a diversity of settings in terms of their organisational structure, language practices, and location. In relation to the first aim, it was crucial that all staff members of the crèches were willing to participate over an extended period of time. Furthermore, the crèches were expected to demonstrate prior experiences with (multi)literacy and/or collaboration, or that they wished to further develop such practices through their participation in the project. In this regard, the participating crèches were enabled to fulfil their own interests and motivations (Oliver, 2003), thereby benefitting from their participation in COMPARE. Finally, the size of the crèches and the group of children were expected to allow us to identify three focus families of different language backgrounds per crèche. In relation to the second aim, the participating crèches were selected for maximum diversity regarding geographical location and language profiles (see Kirsch & Hornberger, 2024). All three crèches were for-profit and located in different areas of Luxembourg. Two Luxembourgish-dominant crèches and one French-dominant crèche were chosen. In sub-chapter 5.5.4, I will provide further information on the three crèches.

Apart from these initial criteria, other individual aspects of the crèches were relevant in relation to the aims of the project. For example, the crèche *Water* had an ongoing collaboration with a local library and the crèche *Earth* was interesting because many of its pedagogical activities were organised outside, in a near-by forest. These circumstances made it possible to observe (multi)literacy practices in different contexts. Within each of the three crèches, three focus families were selected. Again, the selection criteria for the focus families were based on (1) the parents' interest and willingness to participate over the duration of the whole data collection, and (2) different language backgrounds (see Aleksić & Kirsch, 2024). The educators of the

crèches suggested potential focus families, as they had knowledge about the families' language practices.

Due to the COVID-19 restrictions and the limited time frame during which we collected data we did not get to know the families before starting to collect data and had to rely on the help of the educators. As the educators – especially the *référents pédagogiques* and the managers of the crèche – were aware of the aims of our project and knew the parents well, they could recommend potential candidates to us. The research design of COMPARE included the filming of collaborative events, parental interviews, and some collection of home-based videos to analyse home literacy practices. Therefore, participating parents needed to consent to being filmed and interviewed throughout the year. The parents' willingness to participate was, therefore, a crucial aspect in the selection of the focus families. The educators' recommendations were based on previous experience with the parents. They tended to suggest parents who, in the past, had been actively engaged in collaborating with the crèche. As we wanted to collect data on parent-crèche collaboration, this was an important aspect to consider. Furthermore, since our focus was on *multi*-literacy, families with different linguistic backgrounds were chosen.

Access to the field was obtained through contact with the managers of the crèches, who had participated in the professional development and explained the project to their staff. This process is what Oliver (2003) calls *access to the field via gatekeepers*. A gatekeeper is an individual person "who controls access to a location where it is hoped to carry out research" (p. 39).

5.5.4 Participating crèches

This study takes place in three crèches in Luxembourg. The pseudonyms of the three crèches are the natural elements *Air, Earth,* and *Water,* which allude to features of the crèches' locations, such as a river or a field. Figure 10 situates the three crèches on a simplified map of Luxembourg. The crèche *Air* is represented by the balloon, the crèche *Earth* by the tree, and the crèche *Water* by the boat icon. Furthermore, the map indicates the neighbouring countries and the location of the capital Luxembourg-city.

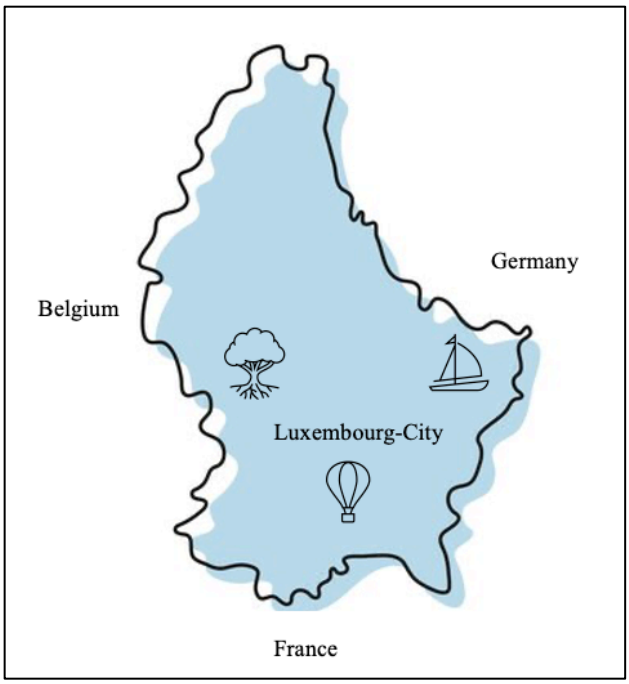

Figure 10: Map of Luxembourg and location of the participating crèches

In the following section, I will present the three crèches with a focus on their structural organisation and pedagogical approaches. For this, I will refer to papers that have been published as a part of the COMPARE project.

Air

The crèche *Air* is located in close proximity of the Luxembourgish capital, in the south of the country. It is a for-profit crèche, founded and managed by Ms Angélique. The *référente pédagogique* at *Air* was Ms Laura, who mainly worked in the group of two-to-three-year olds. In the crèche, the main language was French, which was the first language of most of the educators. While some of the educators also spoke other languages, they rarely used them inside the crèche. The children at *Air* were grouped according to age. The group, that we observed in our fieldwork was comprised of children aged three to four years. However, some flexibility was permitted to accommodate group sizes and the children's individual developmental levels. On the website, the educators from *Air* present their pedagogical approach as "open and interactive", however, this does not correspond to most of the activities that we observed. As Kirsch and Hornberger (2024) illustrate, literacy and other pedagogical activities at *Air* followed a skills-based approach, with alludes to behaviourist teaching methods. For example, educators used closed questions, encouraged repetition and frequently evaluated children's

responses. This corresponds to the type of pedagogical practice which Siraj-Blatchford and colleagues (2002) qualified as teacher-guided (see sub-chapter 2.2.2).

Earth

The crèche *Earth* is located in a rural area in the west of Luxembourg. It is a for-profit crèche founded and managed by Ms Dominique. The *référente pédagogique,* Ms Joana had been working in the crèche for nearly ten years and co-developed their pedagogical concept together with Ms Dominique. Ms Joana and Ms Dominique were the main persons of reference for the group of two- to four-year old children. The dominant language of the crèche was Luxembourgish. However, the educators frequently used other languages, such as Portuguese, French, or German in conversations with parents and children. The pedagogical concept of *Earth* was based on the values of inclusion and community. This was in part demonstrated by the way in which educators continuously collaborated with all parents from the crèche (Kirsch & Bergeron-Morin, 2023). Parents frequently visited the crèche, participated in different kinds of activities and contributed songs or stories in their home languages. A key element of the pedagogical practice at *Earth* was the outside environment. As the educators explained in the presentation of their pedagogical concept, they would organise daily visits to different areas of the nearby forest. In fact, depending on the children's schedules, they regularly spent the whole morning or even the whole day outside. The outside environment helped the educators to implement their pedagogical approach, which was based on socio-constructive learning theory (Kirsch & Hornberger, 2024) and a holistic approach to literacy.

Water

The crèche *Water* is located in the east of Luxembourg, close to the German border. Consequently, Luxembourgish and German were the dominant languages (Kirsch & Bergeron-Morin, 2023). While *Water* was, like the other two crèches, a for-profit crèche, it differed in that it was part of a group of crèches, run by the same commercial carrier. The manager, Ms Claudia, was an employee of the carrier, as were the other educators. This aspect influenced the daily practice at *Water* as the commercial carrier opposed rules and regulations, for example in regard to COVID-19 measures (see sub-chapter 5.6). The children at *Water* were divided into two groups: babies and toddlers. The toddlers were further split into two groups: the *wolves* and the *tigers*[11]. The *référente pédagogique*, Ms Henrike, mainly worked in the baby group, but

[11] Pseudonyms

accompanied the toddlers on their regular visits to the library. The pedagogical practice at *Water* follows the fundamental principle of the *competent* child, defined in the national framework (MENJE & SNJ, 2021). Pedagogical activities emphasised children's autonomy and the importance of a rich learning environment. While educators provided opportunities for learning, they did not reflect on their own roles in supporting children's learning processes. As Kirsch and Hornberger (2024) confirm, children spent an important amount of time playing on their own. Interactions between children and educators were focussed on relational and emotional aspects. Overall, the educators' practices at *Water* were less consistent than in the other two crèches, which was also due to a high staff turnover (Kirsch & Bergeron-Morin, 2023).

The following table summarises the key information pertaining to the three participating crèches. It includes the findings of the COMPARE project (Kirsch & Hornberger, 2024; Kirsch & Bergeron-Morin, 2023), as well as a reference to the types of ECEC pedagogies, that I presented in sub-chapter 2.2.2. Furthermore, I have added information about the children's home languages in the three crèches. These reflect the overall multilingualism as well as regional differences oinf Luxembourg. For example, the highest proportion of residents with nationalities other than Luxembourgish can be found in the surroundings of the capital, where *Air* is located (STATEC, 2023a). In the eastern region of Luxembourg, the use of German is common, due to the proximity to the German border.

	Air	***Earth***	***Water***
Organisational structure	For-profit Accredited	For-profit Accredited	For-profit Accredited
Dominant language(s)	Luxembourgish / German	French	Luxembourgish
Region of Luxembourg	East	South	West
Pedagogical approach	High-scope / Teacher-guided	Open / Dialogic	Child-centred
Manager	Ms Angélique (founder)	Ms Dominique (founder)	Ms Claudia (manager)
Référent pédagogique	Ms Laura	Ms Joana	Ms Henrike
Educators working in observed group(s)	Ms Amandine (until March 2021) Ms Fabienne (from February 2021 on) Ms Marianne (from February 2021 on) Ms Morgane Ms Sylvie (from May 2021 on) Ms Delphine (from April 2021 on)	Ms Dominique Ms Joana (from January 2021 on) Ms Daria Ms Aline	Ms Isabela Ms Paul Ms Ariane Ms Sophie Ms Melanie (until February 2021)

Number of children in observed group(s)[12]	30	26	Wolves: 11 Tigers: 12
Language backgrounds of the educators	French, Italian	Luxembourgish, Portuguese	Luxembourgish, German, Portuguese
Home languages of children[13]	**French** **Italian** **Russian** Spanish Catalan Rumanian Greek Hebrew English	**Luxembourgish** **French** **Icelandic** **Swiss German** German English Portuguese Chinese	**Luxembourgish** **German** **Portuguese** Greek Arabic Serbian

5.5.5 The findings of the COMPARE project

While my study focusses on the perspectives of children at *Air, Earth,* and *Water,* other members of the COMPARE team have explored the perspectives of practitioners and parents in the three crèches as well as in other crèches across Luxembourg (see sub-chapter 5.4.2). In this sub-chapter, I will provide an overview of their findings and refer back to the publications of the COMPARE team.

Kirsch and Aleksić (2021) have investigated the educators' and parents' language use in daily conversations as well as literacy activities, using quantitative data of the online questionnaires. Their findings confirmed that the language and literacy practices in Luxembourgish crèches are multilingual, as has already been shown by previous research (e.g Seele, 2015; Kirsch, 2021). Educators and parents indicated to mostly use French and Luxembourgish and, at times, English, Portuguese, German, Italian, and Spanish during literacy events at the crèche (Kirsch & Aleksić, 2021). Other family languages remained invisible at the crèches. In comparison to everyday conversations, German seemed to gain relevance in literacy events, which may be linked to the status of German as a language of alphabetisation in primary schools. These language practices seemed to reproduce existing language hierarchies of the Luxembourgish society. Furthermore, educators indicated that they organised collaborative (literacy) activities with the parents at the crèche a few times a year (44%) or every few weeks (17%) (p. 10).

In another paper, Kirsch and Bergeron-Morin (2023) explored qualitative data on such joint literacy events at *Earth* and *Water*. They confirmed that educators and parents used several languages when reading or singing with children during collaborative activities. Furthermore,

[12] These numbers comprise all children who attended the crèche throughout the period of data collection. The actual daily group sizes may have varied.

[13] Home languages of the focus children marked in bold. See Chapter 6 for a more detailed presentation of the focus children.

they analysed the roles of parents in joint events at the two crèches. While the parents at *Earth* seemed to be more actively involved and worked together with the educators as a "team" (p. 1395), the parents at *Water* appeared to be engaging with children in parallel activities, or had marginal roles as "bystanders" or "observers" (p. 1397). Nevertheless, parents mostly seemed to be satisfied with the collaboration and the paper remarks that joint multilingual literacy activities in crèches are only beginning to develop in Luxembourg.

In another book chapter, we explored children's experiences with writing at *Air* and *Earth* (Kirsch & Kemp, 2024). Overall, children's opportunities to observe or actively engage with writing were rare and the ways in which educators and children interacted while writing varied. In the chapter, we related the variation across settings to different underlying learning theories and approaches to literacy. While all children seemed to be curious about writing, their differing experiences has influenced the ways in which they made meaning of print. Due to the formal and skills-based approach to literacy at *Air,* the children may associate literacy with acquiring isolated skills. At *Earth,* were writing was embedded in authentic learning situations and interactions were child-centred, children may recognise the function of literacy as a way of expressing meaning. While this chapter focussed on practices in relation to *writing*, in general literacy practices across the three crèches varied and represented different approaches. I will further explore this aspect in Chapter 11.

This insight led to the connection of the COMPARE data to the continua of biliteracy, developed by N. Hornberger (2008). In a recent paper, Kirsch and Hornberger (2024) have applied the continua to qualitative data from the COMPARE project to expand our understanding of multilingual early literacy and illustrate the diversity of ECEC contexts in Luxembourg. This paper has profoundly influenced the conceptualisation of literacy in my thesis (see Chapter 3).

Finally, Aleksić and Kirsch (2024) have combined the quantitative insights of the parental questionnaires and qualitative data of the focus parents' home literacy practices, which they reported in interviews as well as through self-recorded observations. The paper focusses on shared reading practices, more precisely it aimed to identify factors that influenced dialogic reading at home. The findings showed that children's "making up stories and pretending to read" as well as "the number of books at home" were the most significant factors influencing dialogic reading (p. 16). Furthermore, the focus parents regularly read to their children at home and adapted their approaches to children's age, which "influenced the choice of reading material, the duration of reading, and the interaction patterns between adults and children" (p. 17).

5.6 Conducting research in the context of a global pandemic

The fieldwork of the COMPARE project and, hence the data collection for my PhD research took place between September 2020 and June 2021. During this period, the world was impacted by the COVID-19 pandemic. In Luxembourg, primary schools were closed for a total of forty eight days in 2020 and 2021, which is one of the lowest numbers, compared to other countries (OECD, 2021). ECEC facilities were officially closed from March to May 2020. After that, they remained open until the Christmas break, during which they closed again for a period of two weeks. In between, ECEC facilities applied different measures, depending on individual contexts and need, to prevent the spread of the virus. As such, for a significant stretch of time, our data collection could take place and we were allowed to enter the three crèches as planned. However, the COVID-19 pandemic impacted the three crèches that participated in the fieldwork of the COMPARE project in different ways. All three crèches implemented different hygiene measures that were visible in the data. At *Air,* adults had to wear masks and plastic shoe covers before entering the crèche. This not only applied to us as researchers, but also to the parents and educators. From spring 2021 on, these measures gradually lifted. Children did not have to wear masks, but their temperature was checked and documented every day as they arrived at the crèche. At *Water,* the commercial carrier applied strict hygiene measures. Educators, as well as the researchers of the COMPARE team, wore masks inside of the crèche. Like at *Air,* the educators measured the children's temperatures upon their arrival. The separation of the two toddler groups was more strict than before the pandemic, and educators had to make sure that children did not mix between groups. Furthermore, parents were prohibited from entering the crèche's building for the whole duration of the fieldwork. At *Earth,* hygiene measures were less tangible, because most of the activities took place outside. While the educators wore masks inside of the crèche, they were not obliged to wear them outside. The same applied to the parents and to us researchers. Furthermore, the COVID-19 pandemic impacted the educators', parents', and children's interactions in all three crèches. Generally, adults seemed to be more cautious if children were unwell or if they were ill themselves. This led to frequent absences, children and educators alike. Having to wear masks influenced the ways in which educators communicated with children. As the masks covered their mouths, educators had to mostly rely on their gaze and voice to make themselves understood. They often took off their masks, told the children to look at them, and expressively pronounced words if they thought that the children had misunderstood. On several occasions, educators voiced their concerns about the impact of masks on children's language development. Finally, the COVID-19 pandemic and the related hygiene measures may have created more distance between myself and the participants.

Wearing a mask and subconsciously trying to maintain physical distance unavoidably influenced my relationship with the children, educators, and parents. From the children's perspective I must have been a strange adult, acting neither like a parent nor an educator. Additionally, communication through facial expressions or touch was limited. This may have inhibited the process of building a relationship of trust with the children. Nevertheless, I could also express my respect for each crèche's rules and my attentiveness towards the children's and educators' health by adhering to the COVID-19 restrictions.

5.7 Summary

In this chapter I presented the context of multilingual Luxembourg and its ECEC sector. It has become clear that ECEC in Luxembourg presents a highly diverse and complex research context, which is rapidly evolving. Furthermore, I presented the research project COMPARE, of which this study is part. I outlined the research aims, methodology, the role of the different team members and the influence of the COVID-19 pandemic on the research. Furthermore, I presented the three participating crèches *Air, Earth* and *Water* and summarised the findings of COMPARE. It has become clear, that the three crèches were very different in terms of language use, literacy practices and pedagogical approaches. This aspect will be further developed in Chapter 7. While I provided and overview of the COMPARE methodology in this section, I will now move on to present the methodology of my PhD study more in depth. As my data collection was part of the qualitative fieldwork conducted in the context of COMPARE, I will refer back to the project to contextualise my research process and clarify my individual methodological choices.

Chapter 6: Methodology

6.1 Introduction

In this chapter, I will present the methodology of my study. I will start by presenting the three research questions, then I will situate my study within the interpretive research paradigm and justify the use of my qualitative research design. After that, I will introduce the participants of this study, the nine focus children, and explain how they were chosen and recruited. I will describe my process of data collection, which was based on naturalistic observations, documented through video recordings, fieldnotes, thick descriptions and photographs. Furthermore, I conducted member-check interviews with some of the educators at the end of the data collection. I will provide a detailed description of my analysis process, by presenting my analytical approach and the tools that I used to process my data. Then, I will declare how I selected my data and formed different data sets. In my analysis, I used a combination of content, sociocultural discourse, and conversation analysis and triangulated my data and analysis in different ways. Furthermore, I will describe and reflect my coding process. In the final section of my methodology, I will present the ethical considerations, with a focus on procedural ethics and ethics in practice.

6.2 Research questions

Over the course of my four-year long PhD studies, my research was always guided by research questions. These questions were developed and adapted inductively. I reformulated and reshaped them, to refine the focus of my study and to adjust the questions to my evolving understanding of underlying theoretical concepts. For example, the initial versions of my research questions contained the notion of *multiliteracies*, in line with the research questions of COMPARE (see sub-chapter 5.4). However, as I gathered data and explored more literature, I realised that the terms *literacy* or *literacies* were more appropriate for my PhD study.

The focus on the children's perspective was, on the one hand due to my personal interests as a teacher (see sub-chapter 1.2), but also due to the prerequisites of the research project COMPARE and its funders. At an early stage in the research, I decided to work with meaning-making as one of my main concepts. From a preliminary literature review in July and August 2020, the multimodal aspect of children's meaning-making stood out and caught my attention.

As I progressed, I developed my understanding of early literacy and meaning-making theoretically, conceptually adapting the formulation of my research questions accordingly. Finally, I decided on the following research questions:

In three crèches in Luxembourg…

1. Which early literacy events are two- to four-year old children engaging in and what practices underlie these events?

2. In which ways are two- to four-year old children making meaning of literacy on their own and together with others?

3. In which ways are two- to four-year old children interacting with peers and adults when making meaning in reading and writing situations?

6.3 Methodological approach

My focus on literacy as a social practice that is shaped by a socio-cultural context requires a qualitative research approach. Qualitative studies allow us to address complex social interrelations and contexts through participation and observation. Furthermore, to observe practices, immersion in the field over a longer period of time is necessary. Practices can only be understood by identifying routines as well as underlying values and understandings. This is why a longitudinal research design that planned data collection over a period of ten months was implemented. This also allowed the participants to acclimatise to my presence and to continue their daily practices authentically.

The present chapter starts with positioning my study in a research paradigm. A research paradigm is determined by underlying ontological and epistemological assumptions, which I will outline in the first section of the chapter. In the second section, I will explain why a qualitative research design, based on observations was chosen to address my research questions.

6.3.1 Ontological and epistemological positioning

Ontology and epistemology determine the theoretical and methodological approach of every research study, as they guide the researcher's view of reality and knowledge production. Ontology refers to how a person understands reality, while epistemology characterises how a

person develops knowledge about reality (Mack, 2010). Together, research ontology and epistemology compose the underlying research paradigm. Ontology is, hence, closely linked to the underlying theoretical assumptions of a research study, while epistemology shapes methodological choices. In line with sociocultural theory and socio-constructivist learning theories, I situate my research in the interpretivist paradigm, or sometimes also called the constructivist paradigm. The interpretivist paradigm, contrary to the positivist paradigm, aims to understand social phenomena, rather than to explain causality. It emphasises the role of the researcher as the *interpreter* of social situations and, therefore, acknowledges that different people may have different views on the same realities. In the interpretivist paradigm, there is no one true reality, only individual understandings of events, objects, or practices (Mack, 2010). The interpretivist paradigm is determined both by my own experiences and background, and by the prerequisites of the research project COMPARE, which have been defined by my supervisor Prof. Claudine Kirsch. In the project COMPARE, and consequently also in my PhD study, a sociocultural theoretical framework has been adopted. As Prof. Kirsch was also the supervisor for my Master thesis, I was already familiar with this framework. Furthermore, my PhD study revolves around the concept of meaning-making, which inherently acknowledges the plurality and subjectivity of meanings. The interpretivist paradigm fits this view as it allows us to "focus on how people interact in, with and to create social scene" (Manning & Kunkel, 2014, p. 3). Meaning-making is a social process in which understandings are constantly being renegotiated and shaped by sociocultural contexts. Hence, in my study, meaning-making has a double role. It is the subject of interest and it also reflects my own process of researching and coming to an understanding. In my aspiration to analyse and understand how children make meaning of their early literacy experiences, I am myself engaging in a process of making meaning. Researching meaning-making from different ontological perspectives, for instance the positivist view, would be a contradiction in itself. Applying a positivist research paradigm would entail a more psychological and developmental approach that would not focus on meaning-making, but on other cognitive processes. For example, as I observe and analyse children's use of books, I am able to interpret *how* they use the books and *how* they develop an understanding of the content of the book or its role as a literacy tool. I am, however, unable to clearly state *what* they have understood or *why* they have come to this understanding. Furthermore, as the children in this study were only between two and four years old, I cannot access this information. To do so, a different approach, for example using interviews with older children, would have been necessary. Based on the contexts, I can make assumptions, but I cannot make any claims about the cognitive processes that are involved.

The interpretivist view of knowledge and knowledge construction implies certain methodological choices. While research situated in the positivist paradigm often apply quantitative methodologies to access or measure reality, the interpretivist paradigm requires the use of other methodologies. The aim of describing and understanding social phenomena entails the use of authentic and contextualised data. Qualitative methodologies, allow for the fulfilment of this aim. From this point of view, the interpretivist paradigm with its links to the sociocultural framework and the focus on meaning-making infers the use of a qualitative research methodology. I will discuss this further in the following section.

6.3.2 Qualitative research design

While the distinction between quantitative and qualitative research designs is often made according to the methods at use, Guest and colleagues (2012) suggest a definition based on the type of data that is generated. From this perspective, quantitative research focusses on decontextualised data, while qualitative research is based on contextualised data about social phenomena. Quantitative data is mostly presented in the form of numbers or statistics, while qualitative data is text- or image-based. Hence, quantitative data allows us to study delimited aspects of social life on a larger scale, while qualitative data paints a more holistic and fine grained picture. Furthermore, quantitative methodologies aim to describe and explain phenomena based on correlation and causality, while qualitative research is more interested in understanding the underlying processes. For example, when investigating literacy practices, a survey on the literacy practices of families in Luxembourg allows us to draw conclusions about the number of books that families have at home or the frequency with which they read to their children. Observations of a few family contexts, on the other hand, allow us to describe in greater detail which kinds of books the families have, how they use them, and how they interact with their children while reading. Quantitative and qualitative research approaches are fundamentally different in their respective processes. Quantitative studies tend to follow a deductive approach, with a predefined hypothesis and aims that are to be verified through data collection. Qualitative approaches, follow an inductive approach that allows for questions to emerge and change throughout the research process (Krauss, 2005). Such an approach inherently requires the researcher to adopt a reflective stance and to rethink and question their own approach in an iterative way (Birks et al., 2008). Qualitative research can, therefore, hardly be described in a linear way.

According to Manning and Kunkel (2014), qualitative research under the interpretivist paradigm offers the opportunity to study meaning-making as it unfolds during activities and

social interactions. Repeated and continuous observations allow us to gain insights into processes, practices, or cultural rituals. Furthermore, such an approach facilitates access to understudied groups of participants, such as minorities or marginalised groups. As qualitative research tends to be conducted in a more direct way, researchers have to build a personal relationship of trust with their participants. This enables researchers to illustrate real life experiences of participants in a more authentic way.

One of the most common approaches taken by qualitative studies in the social sciences is ethnography. As Doak (2019) explains, an ethnographic approach involves "direct and sustained contact with participants in their everyday lives using a wide range of methods (…) with the aim of producing a rich qualitative account which values both emic and etic perspectives" (p. 31). Mercer (2010) adds, that the aim of qualitative or ethnographic fieldwork is to gather data in order to describe social phenomena in greater in-depth, not to generalise.

6.4 Participants

In this section I will introduce the main protagonists of this study: nine children between two and four years old. The nine children visited the three participating crèches, which I have presented in sub-chapter 5.5.4. I will now describe the ways in which they were selected and recruited to participate in the study.

Researchers employ different terms to designate the people from whom data is gathered. Whether these people are described as respondents, subjects, or participants indicates the researcher's understanding of the research process and the relationship between themselves and the studied social environment (Oliver, 2003). I chose to refer to the people that appear in my data as *participants*. This term reflects my epistemological view, that knowledge results from co-construction. Furthermore, the view that knowledge production within my research resulted from a participatory process accords agency and autonomy to the participants. I use the term participants as an umbrella term for the settings and people that I have observed during my data collection. This includes the managers and educators of the crèches and the parents, as well as the focus children and their peers. In the following section, I will explain how the participants were selected and how I got access to the field. I will also present the nine focus children.

6.4.1 Recruitment and selection of the participants

In sub-chapter 5.5.3, I already explained how the three crèches were selected to participate in the qualitative fieldwork of the COMPARE project. Within each of the three crèches, we

selected three focus families. The selection criteria for the focus families were based on the parents' willingness to participate, their previous experiences with literacy and collaboration, and their personal backgrounds. Firstly, participating parents had to be willing to participate in the data collection of the COMPARE project, which entailed video and audio recordings of themselves and their children. For example, at *Earth,* the educators told us that there was a potentially interested family. However, one of the parents did not want to be filmed and interviewed. This automatically excluded the daughter from being selected as a focus child. Secondly, as we wished to collect data on home literacy practices and collaboration between parents and educators, the parents needed to be interested and have experience in these two domains. Finally, in regard to this last point, we called for participants with a diverse range of family languages.

The potential focus families were first approached by the educators from the three crèches. In this sense, the educators acted as "gatekeepers" (Oliver, 2003, p. 39), who supported us researchers in getting access to the families. As the limited time frame during which we collected data did not allow us to get to know the families before approaching them, we relied on the help of the educators. As the educators – especially the *référents pédagogiques* and the managers of the crèche – were aware of the aims of our project they also knew the selection criteria for the focus families. Furthermore, the educators had already built a relationship of trust with the parents, which facilitated the selection process. The educators informed all parents of the crèche's participation in the COMPARE project. They also talked to individual families, whom they considered to be potential candidates for further participation. In turn, the parents decided upon the participation of their children, who were the main participants of this study. As the participating children were too young to understand the consequences of their participation, the parents assumed the responsibility. This will be further discussed under the aspect of consent and assent in sub-chapter 6.7.1. For now, I will present the nine children that participated as the focus children of this study.

6.4.2 The focus children

This study is centred around nine focus children, from three different crèches: Antonia, Cécilia and Justine from *Air;* Niklas, Lia, and Etienne from *Earth;* and Joyce, Tobias and Luisa from *Water.* The pseudonyms I use for the children fulfil some characteristics that I consider to be important. Firstly, to facilitate the collective analysis process among the research team members of COMPARE, the pseudonyms have the same initial letters as the original name. The spelling of the children's names, and particularly the initial letter of their names, was the subject of

several literacy events. For example, Lia was particularly interested in letters and I often observed her spelling or counting the letters of her name. Therefore, I chose a pseudonym that contained the same number of letters as her original name.

Secondly, I chose pseudonyms that originated from similar cultural and linguistic backgrounds. As words and names carry meaning that may – even subconsciously – influence our interpretations, I did not want to choose pseudonyms that were too different from the original names. Furthermore, names are part of the children's cultural identity, which I wished to respect.

Table 3 gives an overview of the focus children's age (from oldest to youngest), their home language(s), their parents' occupation, and the number of books they had at home. The colour of each child's name, and the letters between brackets, indicate the crèche they frequented – orange for *Air (A)*, green for *Earth (E)*, and blue for *Water (W)*.

The information in the table stems from a short questionnaire that the parents filled out prior to the first interviews. Some formulations regarding the parents' occupation have been shortened for conciseness. The birth dates of the children were provided by the crèche directors. Among the focus children were three boys and six girls. At the beginning of the data collection, in September 2020, the focus children were between two and four years old. The oldest focus child, Joyce, had just turned four, while the youngest, Etienne, was two years and three months old. The focus children came from different linguistic backgrounds, with most of the families using more than one language at home. The parents of the focus children had different educational backgrounds and professional occupations. All children had books at home, although the number of books differed. For example, while Antonia's parents indicated that she had about thirty books at home, Cécilia's and Etienne's parents claimed that their children had over five hundred books each.

The data for Justine is missing, as her parents did not return the questionnaire. In fact, Justine's parents withdrew their willingness to participate in the parental interviews at the beginning of 2021. They did, however, agree to Justine being further observed as a focus child. Although another family was chosen to participate in the larger data collection of the COMPARE project, my focus remained on the nine children that I had observed from the beginning of the fieldwork.

Table 3: Information about the nine focus children

Pseudonym	Date of birth	Family language(s)	Parents' occupation	Number of children's books at home
Joyce (W)	September 2016	German, Luxembourgish	accountant (M), plumber (F)	120
Niklas (E)	March 2017	Icelandic[14], French	civil servant (M), independent (F)	300
Lia (E)	April 2017	Swiss German[15], Luxembourgish	veterinary (M), veterinary (F)	70
Cécilia (A)	August 2017	French, Italian, English	general counsel (M), lawyer (F)	> 500
Antonia (A)	October 2017	Russian, Italian	advisory (M), accountant (F)	30
Tobias (W)	December 2017	German	economist (M), mechanic (F)	> 300
Justine (A)	January 2018	/	/	/
Luisa (W)	February 2018	Portuguese, French, German	housekeeper (M), craftsman (F)	> 30
Etienne (E)	May 2018	French, Luxembourgish	kindergarten teacher (M), engineer (F)	> 500

Besides the information contained in the table, several aspects of children's family background are important when seeking to understand their early literacy meaning-making. Firstly, the children's fraternity is relevant, because it may influence children's home literacy environments. For example, children may be in contact with written language when they observe or even assist their older siblings while doing homework. Furthermore, the parents' choice of literacy-related material, such as books, might be adapted to fulfil the needs of both the older and the younger children. Hence, we asked the parents about other children in the household in the initial questionnaire. Five of the nine focus children (i.e Joyce, Niklas, Antonia, Tobias and Justine) do not have any siblings, while the other four children each have one sibling. Lia and Cécilia are the oldest children in their household and have a younger sister and a younger brother respectively. Etienne and Luisa are the youngest children in their household, and both have an older brother.

[14] Niklas' family language has been changed to avoid him being identified via his rare language background
[15] idem

6.5 Data collection

The qualitative fieldwork in the three crèches has enabled me to collect data about the children's early literacy meaning-making in different ways. In what follows, I will first describe the design of my fieldwork, focussing on the timeline and organisation of my visits. Secondly, I will provide information about the different methods I employed to gather data. Videography and fieldnotes were used to document my observations in the field and to record the participants' interactions during literacy events. Furthermore, semi-structured interviews were conducted with some of the educators as so-called member-checks towards the end of the data collection. These interviews gave me insight into the educators' perspectives on the focus children's behaviour and development over the course of the data collection – and, further allowed me to compare them to my own interpretations.

6.5.1 Fieldwork design

During my fieldwork, I regularly visited three early childhood settings over the course of ten months. Rather than focussing on one particular setting, I observed three non-formal early childhood settings in Luxembourg. The timely organisation of my visits does not correspond to a typical ethnography, as the individual cycles of observation, as well as my distance from the field were short. My continuous contact with the settings allowed me to develop knowledge about each setting and understand the participants' practices from an emic (insider) perspective. Still, I did not become a participating member of the settings I observed and could, therefore, also adopt an etic (outsider) perspective. Furthermore, my interest in literacy as a social practice meant that I had to conduct prolonged and regular observations, in order to identify practices. Practices can be described as patterns in behaviour, which can only be recognised through repeated contact with the participants. Finally, collecting data over a longer period of time allowed me to grasp the children's learning process. As learning does not consist of individual and isolated moments, but of a prolonged process, a longitudinal research design is necessary to understand it.

I started to collect data in the field in October 2020. Together with my colleague, Laura Colucci, who was also collecting data in the field at the same time, we coordinated our visits in such a way that each setting would be visited by one of us at least once every three weeks. While I spent three days a week in each setting, Laura Colucci spent one. At first, I followed the rhythm suggested by my supervisor Prof. Claudine Kirsch: I visited the first setting in the first week, the second setting in the second week, and the third setting in the third week. After three weeks

of data collection, I took a three-week break, during which I did some preliminary analysis and literature research. I continued using this work schedule throughout the first trimester of data collection (see Table 4). The timeline was slightly adapted according to personal factors (illness on the 21st of October) and preferences of the crèches (week 8).

After the first trimester, I changed the rhythm of my data collection and opted for an alternation between data collection and breaks, not every three weeks but every week. This did not affect the number of days spent in the field or the frequency of visits at each setting. However it did allow me to process the collected data in one setting, before gathering new data from another setting. Figure 11 illustrates these two different rhythms of data collection.

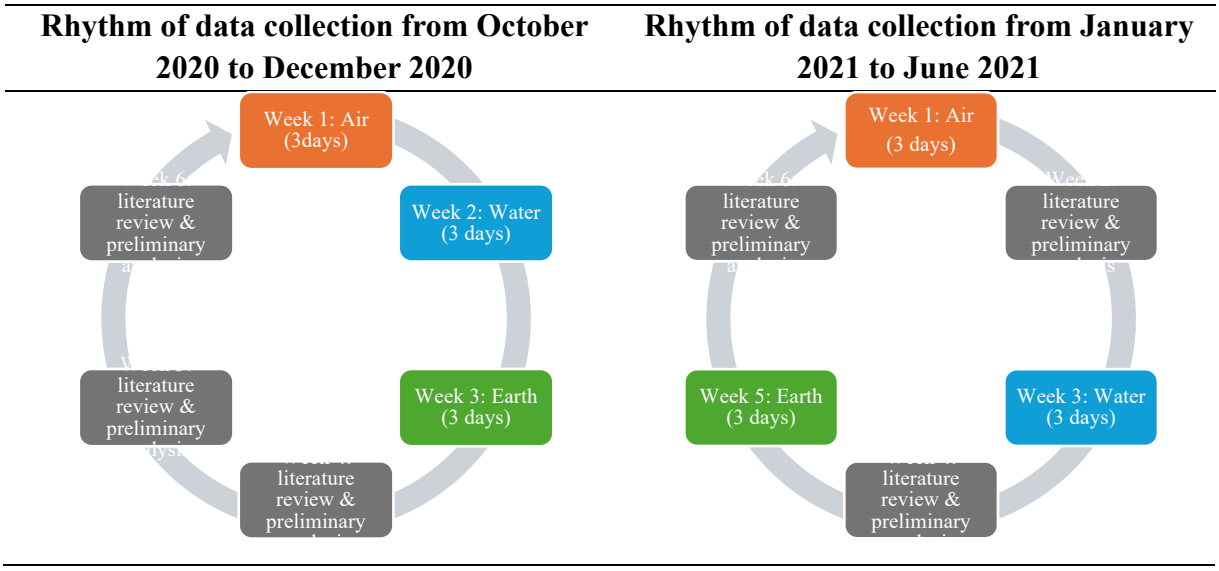

Figure 11: Illustration of the two rhythms of data collection

Each rhythm approached the scheduling of the visits differently – and each came with its respective advantages and disadvantages. The first rhythm of data collection allowed to distance myself from the field in between cycles of data collection. During the three weeks without fieldwork, I had time to revisit and organise the data. Furthermore, I could relate my observations to existing literature. After a while, I chose the second rhythm of data collection as it was more adapted to my own workflow. It allowed me to process my observations more thoroughly and systematically. As I realised during the first trimester, the many impressions that I gathered in the field could be overwhelming, especially as they added up over the three consecutive weeks of observation. As I reached the three-week breaks, I felt like I had already lost the nuances and details of my observations from the first setting in that cycle. Only the

observations that were recent remained fresh in my memory. To avoid this, I preferred to insert breaks more frequently and for a shorter period of time, immediately after observing one setting. This allowed me to progress step by step and to conclude the observation cycles setting by setting. I felt less interrupted in my workflow and more satisfied with the amount of reflection I was able to do between visits. Furthermore, the second scheduling of my visits was more balanced, as its structure meant that it no longer made a difference which setting I visited first or last during a cycle of data collection.

Finally, I adapted my visits to the presence of the focus children at the crèche and special events (e.g., visits to the library, parent events). Due to the high amount of data collected, my supervisor recommended that I spend only one day (instead of three) in each crèche for the final cycle of data collection (end of May and June 2021). The following table summarises the days of my data collection:

Table 4: Summary of the dates of data collection

	Air	***Earth***	***Water***
Dates of visits	13.10.20	26.10.20	22.10.20
	14.10.20	29.10.20	23.10.20
	15.10.20	30.10.20	09.12.20
	24.11.20	15.12.20	10.12.20
	25.11.20	16.12.20	11.12.20
	27.11.20	17.12.20	27.01.21
	12.01.21	09.02.21	28.01.21
	13.01.21	10.02.21	29.01.21
	14.01.21	11.02.21	09.03.21
	23.02.21	22.03.21	11.03.21
	24.02.21	24.03.21	12.03.21
	26.02.21	26.03.21	26.04.21
	12.04.21	17.05.21	28.04.21
	13.04.21	19.05.21	29.04.21
	16.04.21	21.05.21	17.06.21
	31.05.21	29.06.21	
Total number of days	16	16	15
Hours spent in the settings	76h	97h	91h

At the beginning of the data collection, I stayed at the crèches for the whole day (approximately 8am to 6pm). I soon realised how the daily schedules of the crèches and the presence of the focus children differed. For example, at *Air*, the focus children only arrived around 9am, whereas at *Earth*, some focus children only came to the crèche on two days a week. I tried to adapt my visits in a way that would both be beneficial to the aims of my PhD study and the

COMPARE project in the most efficient way possible. For example, in all the crèches, there was naptime from around 1pm to 3pm and multiliteracy activities were very rare after that. Therefore, I eventually limited my visits to the crèches to the mornings, using the afternoons for preliminary analysis and other tasks.

6.5.2 Methods of data collection

During my fieldwork, I had the double role of collecting data for the purpose of the project COMPARE and for my PhD study. Consequently, I collected different types of data, some of which were not expected to be part of my PhD. For example, I conducted several interviews with parents in the winter 2020 – these were part of the data collection for COMPARE, not for my individual study. Furthermore, I observed situations that were relevant for COMPARE but less so for my thesis. This includes the aspect of collaboration between parents and educators, such as drop-off and pick-up conversations.

The most important way of collecting data during qualitative fieldwork is through observation. Observation is at the basis of human learning and sense-making. Angrosino (2007) defines observation as: "the act of noting a phenomenon, often with instruments, and recording it for scientific purposes" (p. 2). From this point of view, producing data is a defining characteristic of observation for research purposes. Contrary to other forms of observation (e.g. experiments), qualitative observations are conducted in an authentic and naturalistic setting. They can be punctual or repeat regularly over a longer period of time. As an observer, the researcher may adopt different roles, depending on their level of involvement in the field. These roles range from complete observer, to complete participant. In many cases, the role of the researcher lies in between those two extremes and can be described as *observer-as-participant* or *participant-as-observer* (Gold, 1958). I qualify my role to be that of an observer-as-participant in the field. This role focusses on the activity of observing, while still acknowledging involvement in the field. I was known to the members of the field as a researcher, with the role of observing them. On the one hand, I was present for an extended period of time and interacted with the participants. I sat together with the children during story readings or ate lunch with them. On the other, I did not carry out pedagogical activities or assume educational responsibilities, as did the other adults in the field.

I documented my observations in different ways. I used video recordings and fieldnotes. The different ways in which I recorded my observations represent different levels of documentation. While the fieldnotes provide a more personal and reflective account of my observations, the videos allow for a more detailed and fine-grained analysis, for example of semiotic resources

and interactions. In addition to the video recordings of authentic everyday activities and events in the crèches, I recorded another type of video, which I call *focus video*. This method, which I will describe later, allowed me to gather additional information and to verify some of my hunches about the focus children. In addition to my observations, I conducted semi-structured interviews with some of the educators. These interviews served as member-checks to validate my interpretations and to gain insights into the educators' perspectives. In the following section, I will describe each of the above mentioned methods of data collection in more detail.

The choices that researchers make while in the field (e.g. positioning of the camera, focus of the observation, questions asked to the participants) can already be considered as preliminary steps in the data analysis. During fieldwork, the researcher makes plans, selects moments they deem worth documenting, and reflects on their observations. This process opens up further lines of analysis later on.

Videography

Videography refers to the use of videos, that have been recorded by the researcher in an ethnographic way (Knoblauch & Schnettler, 2012). Video data enriches ethnographic data collection, as it allows us to document observations in an alternative way to fieldnotes. While fieldnotes can be used to document the complexities of social realities, they do not allow for a fine grained analysis of the social interactions. Furthermore, fieldnotes always only represent partial elements of observed situation, as the researcher can never record every aspect in writing. Through videos, on the other hand, researchers are able to record many different aspects of an observation at the same time and revisit their observations later on, or as many times as they wish. The use of video also has specific advantages when researching young children. As two- to four-year old children tend to communicate through many semiotic modes rather than only verbally (Flewitt, 2005), video recordings allow us to analyse their interactions holistically. Furthermore, authentic situations in early childhood settings often involve many simultaneously occurring interactions and activities. As video recordings can facilitate our understanding of such multi-activities and allow for a more fine-grained analysis of multimodal semiotic resources (Mondada, 2008), they are indispensable for the study of young children's meaning-making. Finally, the sociocultural perspective of language and learning entails the concept of mediated activity (see sub-chapter 2.3.1). The principle of mediation proclaims that the ways in which subjects make use of concrete and psychological tools influences their thinking and learning. Therefore, it is important to not only take into account the subject and the activity, but

also the tool itself (Wertsch et al., 1995). This becomes possible through the use of visual data, such as videos.

I recorded the videos using a small mobile camcorder. These devices allow for flexibility when documenting authentic situations in the field (Knoblauch, 2012). As they are small and easy to handle, they can be used without any other technical equipment and are discrete. This is important, as having to operate larger devices, such as tripods, microphones, or other equipment would disrupt the participants' regular activities. Furthermore, the camcorder allowed me to spontaneously decide whether I should make a video of an observed situation or not. At the beginning, I recorded situations that I considered to be literacy events. These included shared reading or storytelling activities, children's use of books, singing or rhyming activities, and other activities involving letters or signs. As the data collection proceeded, I stopped recording recurring literacy events, such as the circle time, as many recordings of these situations already existed. My way of filming largely depended on the situation I observed. Many activities were rather stable, with fixed spatial arrangements. For example, during story reading situations, educators and children mostly remained seated, not doing much. Other situations were more dynamic and involved a lot of movement. For example, children's play or outdoor activities. Therefore, some videos were taken while I was standing or sitting, whereas other videos were recorded while walking. When I was recording the videos, I tried to find the right balance between capturing all relevant information (e.g. utterances), and maintaining the authenticity of the situation. In other words, I had to gauge how closely I could position myself to the participants, with the camera, without disturbing them. While filming, I also tried to switch between different perspectives by using the zoom function or by moving around. My way of recording videos and the length of the videos changed as I became more experienced with this method of data collection and as I clarified my research aims throughout the process.

In addition to the videos of authentic situations, I recorded so-called focus videos. These videos show situations that I created artificially and purposefully. I recorded these videos towards the end of the data collection and made one for each focus child, which means that I recorded nine focus videos in total. The aim of these videos was to make observations, that I could not make in the authentic everyday activities taking place in the crèches. More specifically, I wished to observe the focus children's interactions during individual or small group story reading situations. This was necessary to better estimate the children's language development and emergent literacy skills, and to compare their behaviour in individual and group situations. Therefore, I encouraged the focus children to accompany me to a quiet and undisturbed area of the crèche and to tell me a story, using a book of their choice.

Overall I recorded about 38 hours and 30 minutes of video data. Table 5 gives a detailed overview of the number and duration of videos that I recorded per crèche. However, this table does not yet indicate the amount of video data that I used for the analysis. This will follow in sub-chapter 6.6.3.

Table 5: Total amount of recorded video data

	Air	***Earth***	***Water***
Number of videos recorded by me	323	254	248
Duration of video recordings by me	15h11min	11h44min	11h38min

Fieldnotes

Taking notes while spending time in the field, is a common way of documenting one's observations in qualitative and ethnographic research. Fieldnotes can take the form of text, sketches, or audio recorded speech. The researcher usually produces fieldnotes simultaneously or right after an observation. In combination with more direct methods of documentation, such as video recordings or photographs, fieldnotes allow the researcher to trace their subjective experience at the time of the observation (Jarzabkowski et al., 2014). For example, fieldnotes may include information about the atmosphere in the room or other less tangible aspects of the observation, which are difficult to document using other methods. Hence, fieldnotes are often used in combination with other observational methods.

I used both written and audio recorded fieldnotes during my data collection. As some observations (especially at Earth) were made outside, for example on the playground, during a walk, or in the forest, sitting and writing down my fieldnotes, was not always possible. In these situations, I used a small recording device to document my reflections and observations. For my written fieldnotes, I used different notebooks (one per setting) in A5 format. This helped me to structure and organise my notes according to the three crèches. After each cycle of observations, I scanned the written fieldnotes and saved a digital copy. Table 6 below is an overview of the number of fieldnotes that I wrote in each of the three settings.

Table 6: Overview of the quantity of fieldnotes

	Air	***Earth***	***Water***
Number of written fieldnotes (A5 pages)	252	160	183
Wordcount fieldnotes[16]	~ 12.600	~ 8.000	~ 9.150

My fieldnotes always included the date of observation and regular indications of the time. Most of my fieldnotes are written in the form of bullet points or short sentences, but some also include sketches of the spatial arrangement or direct quotes from participants that caught my attention. After a while, I also began to write goals and checklists at the beginning of a day in the field. These checklists helped me to focus my observations on specific aspects or situations, that I was interested in. I also used the checklist to consciously fix my attention on a particular focus child. The children who were more dominant and active than others, appeared more often in my data. To balance this out, I sometimes focussed my observations on the quieter children, who would otherwise have been easily overlooked.

The way in which I wrote my fieldnotes depended on the situation and on the focus of my observation. For example, my notes about a situation in which children were having lunch are much less detailed than my notes about a story reading event. My fieldnotes refer to different levels of observations. Firstly, there is organisational and structural information, such as timestamps to document the length of an activity, or explanations about the daily schedule provided by the educators. Secondly, there are observations about particular literacy events that include information about the verbal and non-verbal interactions of the participants. Thirdly, there is an interpretative and reflective dimension to the fieldnotes, as I recorded any questions or hunches as that emerged from my observations. Finally, I would sometimes consciously adapt my way of taking fieldnotes depending on my aims for their use. As I will describe in the following section, I wrote thick descriptions about recurring situations and literacy events in the crèches, such as morning routines, lunch or naptime. I wrote some fieldnotes with the aim of transforming them into thick descriptions later on. As such, they were highly detailed and contained direct quotes, so as to be as accurate as possible. This way of taking fieldnotes demanded a great deal of concentration and fast writing; hence, I have it in a targeted and measured way.

[16] Approximation, based on a mean wordcount of 50 words per page

It is also worth adding that, fieldnotes develop their analytical value through the researcher's further processing. Working with fieldnotes and transforming them from raw data into evidence (e.g. memos) is a crucial step in the analytical process (see sub-chapter 6.6).

Thick descriptions

Thick descriptions or vignettes are a form of processed fieldnotes that are frequently used in ethnographic research. These texts can be defined as "short evocative stories that enable the author to slip in and out of different ways of presenting data" (Jarzabkowski et al., 2014, p. 280). In fact, thick descriptions describe specific events or practices in more depth and from the personal point of view of the researcher. The deeper the researcher's knowledge about the routines or values of the researched contexts, the more capable they are of making their descriptions *thick* by adding an interpretative dimension. Thick descriptions are, therefore, subjective and help to make observations livelier and more tangible for the reader.

During my time in the field, I first used my fieldnotes for the purpose of documenting the everyday activities in the crèches and my reflections. It was only after a few weeks of fieldwork that I was introduced to the process of writing thick descriptions. I started to write thick descriptions about specific and recurring activities in the crèches. For example, I described the crèches' morning routines, lunch times, and shared reading activities. Although I had already observed and recorded these types of situations on several occasions, the use of thick descriptions brought in a new perspective to revealing different levels of meaning and reflection. I wrote up to two thick descriptions for one day of observation. I planned ahead so as to be prepared for the situations I wanted to write thick descriptions about; however, I remained flexible and adapted my objective if necessary. After returning from the field to my office in the afternoon, I transformed these parts of my fieldnotes by typing them up on my computer as thick descriptions. The produced texts were between one and four pages long. At times, I enriched the texts by adding photographs or sketches, so as to visualise the spatial arrangement of the room or the material used by the participants. Table 7 shows the number of thick descriptions I have written for each of the settings, the total number of produced pages, and the situations that I have described.

Table 7: Overview of the thick descriptions

	Air	***Earth***	***Water***
Total number of thick descriptions	13	10	10
Total number of written pages	34,5	24,5	23
Described situations	Morning routine (5) Workshops (3) Before naptime (2) Singing (2) Story reading (1)	Morning routine (2) Breakfast (2) Before naptime (2) Lunchtime (2) Getting dressed (1) Story reading (1)	Free play (3) Lunchtime (2) Morning routine (1) Before naptime (1) Naptime (1) Story reading (1) Crafting activity (1)

As the table indicates, I wrote the majority of the thick descriptions at *Air.* The reason I wrote fewer thick descriptions at *Water* and *Earth* could be the differences of time and space in these settings. While the daily routines at *Air* were more structured and predictable, the activities at *Water* and *Earth* were programmed in a more flexible and at times, spontaneous way. This made it easier for me to maintain my plan for writing thick descriptions at *Air*. Furthermore, taking notes for the thick descriptions involved a great deal of writing. As I explained earlier, writing on my notepad was not always possible at *Earth*, due to the forest context. The described situations show that there are commonalities and differences between the crèches' practices. For example, in each of the settings I described morning routines, before naptime situations, and story readings. Other activities, such as workshops at *Air*, the crafting activity at *Water*, or getting dressed at *Earth*, were more context-specific.

Photography

The use of visual data in qualitative studies is common (Flick, von Kardorff, & Steinke, 2004). During fieldwork, researchers may use videography or photography to visually document their observations. Harper (2004) defines a photograph as a "record of the subject at a particular moment" (p. 231). Hence, photographs document the researchers' observation at a precise moment in time. For example, Snow and Park (2016) studied children's ways of using letter-blocks in literacy-enhanced free play. The researchers observed the children and photographed their block-constructions and the disposition of the letter-blocks at different moments throughout the play situation. In my study, I also used photography to document the physical

dimensions of my observations. For example, I photographed the spaces, or used material from literacy events in the three crèches.

Table 8: Total amount of photographs

	Air	***Earth***	***Water***
Total number of photos	315	489	369

Compared to other methods of data collection, photographs have certain affordances and limitations. In contrast to fieldnotes, photographs allow us to capture a significant amount of visual information in a short amount of time (Harper, 2004). Furthermore, they enable the researcher to document aspects of the field, that would be difficult to put into words (Naidoo, 2012). Hence, the use of photographs can facilitate the documentation of the researcher's observations. However, as opposed to videos, photographs can only capture a static image. This only allows the researcher to analyse the physical dimension or specific visual aspects in one unmoving portrayal of a situation. Unlike videos, photographs do not allow us to interpret interactions, the atmosphere of a situation, or how the situation is unfolding. Therefore, in ethnographic studies, photographs need to be contextualised through the use of other methods of data collection, such as videos and fieldnotes. For example, in my study, I photographed pages from the books that were used during shared reading. This allowed me – with the help of other observations made about of the respective shared reading situation – to better understand the children's reactions and utterances to the pictures in the book, as well as the ways in which the educators used the book to tell a story.

Finally, photographs are a valuable tool that can enrich the presentation of research findings. Using photographs in addition to text can foster the readers' understanding and enhance trustworthiness (see sub-chapter 12.2.2). In my study, I used photographs to illustrate certain aspects of my data in the presentation of my findings. In addition to the photographs taken in the field, I used screenshots from the video data, to render my analysis more tangible. Furthermore, photographs and screenshots have been used in the multimodal transcripts and descriptions of video data (see 6.6.2). While photographs seemingly depict a precise moment in time in a neutral way, taking photographs to collect data is an interpretative process (Naidoo, 2012; Harper, 2004). The researcher influences this process by choosing the motive, angle, and framing of the photograph. Therefore, photographic data should be seen as a depiction of the researcher's gaze on a particular aspect of the observed field.

Member-check interviews

A characteristic of qualitative research is the consideration of participants' perspectives (Flick et al., 2004). One way of approaching this, is by collecting data through interviews. In the context of ethnographic studies, the aims of interviewing can be to access participants' insider knowledge about the field or to gather their subjective perspectives (Hopf, 2004). For example, Streelasky (2019) explored six-year olds' experiences in a forest-based environment and the ways in which this was expressed in children's multimodal text productions. She not only observed the children's everyday activities in the kindergarten, but she also interviewed and encouraged them to visualise their knowledge through photographs, paintings, or drawings. This way, she could access children's perspectives and verify her interpretations of the observed experiences.

In this study, I interviewed educators from all three crèches to gain insight into their perspectives on the focus children's development and literacy-related behaviour. Furthermore, I wanted to verify my own interpretations by sharing them with the educators.

This member-checking is an advantage of consecutively using different methods, making it a strength in qualitative studies (Carter et al., 2014). It is not uncommon and can be considered part of data triangulation (see 6.6.5).

I sent the recorded focus videos (see 6.5.2) to the interview partners, so they could watch them before the interview. The interview partners, therefore, knew the focus of the interview beforehand and could prepare themselves. In this sense, I conducted what Hopf (2004) called a "focussed interview" (p. 205), with a predetermined and shared focus. I chose the focus-videos as a starting point of the interview for two reasons. Firstly, because they did not show the educators themselves. I wanted to avoid the educators feeling evaluated or obliged to justify their own behaviour. The focus of the interview should be the children's behaviour and, therefore, this was also the focus of the videos that the educators watched in preparation. Secondly, by showing the educators an uncommon situation, that was not part of their daily practice, I wished to entice them into relating the children's behaviour to their daily practices. I supposed that seeing an unfamiliar situation would lead the educators to talk about the familiar.

I used a semi-structured interview guide (see Appendix 5) to conduct the interview. Semi-structured interviews entail only a certain amount of structure, as compared to structured interviews. They, therefore, allow for more flexibility and openness. At the same time, they are structured enough to guide the interviewee to address specific topics. Therefore, semi-structured interviews are a well-suited tool to conduct focussed interviews. They allow us to address specific information, while still enabling the participants to contribute their own

meanings (Galletta, 2013). For example, I asked the educators if the children's behaviour in the focus videos had surprised them in any way. While this questions clearly focusses the conversation on the differences between the video and the child's behaviour in other situations, it also leaves the educators with freedom. Hence, educators talked about different topics, such as the children's oral language, their way of interacting with peers, or their interests in books.
Practically, interviews were conducted while the children were taking a nap in the afternoon. While the interview at *Air* took place in the main group room, the interviews at *Earth* and *Water* took place in meeting rooms. At *Air* I conducted the interview in French, and at *Water* and *Earth* in Luxembourgish. At *Air* and *Earth*, I conducted the semi-structured interview with three, respectively two of the educators, that mainly worked with the focus children. As the focus children at *Water* were divided into two groups, I conducted two separate interviews with the respective group leaders. Table 8 is an overview of the dates of semi-structured interviews, the length of the interviews, and the interviewed educators in each of the settings.

Table 9: Overview of the semi-structured interviews

	Air	***Earth***	***Water***
Date of the semi-structured interviews	June 10th, 2021	June 29th, 2021	June 17th, 2021 June 17th, 2021
Length of the semi-structured interviews	1 hour	40 minutes	20 minutes 40 minutes
Interview partners	Ms Morgane, Ms Delphine & Ms Mélissa	Ms Dominique & Ms Joana	Ms Ariane, Ms Isabela

6.6 Data analysis

Through my analysis I, firstly, aimed to describe what early literacy is and how it is implemented in the different educational settings. Secondly, I wished to gain a deeper understanding of children's meaning-making in the context of early literacy, and identify the processes it entails. Krauss (2005) compares data analysis to a "learning process" (p. 763) as data analysis results in the creation of new information, knowledge, and understandings. In line with this perspective, I see many parallels between my data analysis and the concept of meaning-making. Both are ongoing, everchanging and develop in interaction with different materials and people. Still, data analysis involves a certain degree of structure and a systematic approach that does not necessarily correspond to other learning processes.
In this sense, my analytical approach was characterised by two main underlying principles: the alternation between inductive and deductive processes (Flick, 2013), and the technique of comparing and contrasting (Bollig & Kelle, 2012). In sub-chapter 6.6.1, I will describe these

principles of my analytical approach and the ways in which they relate to my research. Furthermore, my data analysis can be structured into a preliminary phase of analysis, which I will describe in sub-chapter 6.6.2, and a deeper engagement with several data sets, which I will describe in sub-chapter 6.6.3. These phases are not to be understood chronologically. Rather, my process of analysis consisted in a constant oscillation between an overarching and a fine-grained perspective. In fact, Flick (2013) states that data analysis in qualitative research usually combines the processes of structuring or categorising data into data sets, which are then coded and interpreted in a second step of analysis.

Finally, my data analysis was informed by several methods of analysis. I combined aspects of qualitative data analysis (Mayring, 2019), sociocultural discourse analysis (Mercer, 2004; 2010), the sociocultural theory approach to conversation analysis (Seedhouse, 2005), and triangulation (Flick, 2004; 2018). Combining and adapting different methods of analysis in a way that fits the research context and topic, is common in qualitative research (Flick, 2013). In sub-chapter 6.6.4 I will outline these different methods and explain the ways in which I have used them in my analysis.

6.6.1 Analytical approach

In this sub-chapter, I will justify the use of induction and deduction, as well as comparative methods in my analysis. Firstly, I will introduce deduction and induction as types of logic reasoning and, secondly, I will explore comparing and contrasting as analytical tools.

According to Reichertz (2004), deduction and induction are the main drivers of knowledge creation in qualitative research. In a deductive approach, the subject of analysis is "subordinated to an already known rule" (p.161). This means, that the analysis employs theoretical concepts and approaches that have been predefined. For example, Kotaman (2020) explored the effects of parental dialogic reading on children's receptive vocabulary and reading attitudes. Children's vocabulary and attitudes were measured using existing assessments, both before and after having experienced dialogic reading for a period of seven weeks. This approach allowed the researcher to compare the results to his hypotheses. Hence, studies using a deductive reasoning approach allow us to determine if something that we already know is correct, or simply applicable in a specific context. However, deductive approaches do not result in the development of new concepts or ideas. For example, in the study on dialogic reading (Kotaman, 2020), the researcher would not have been able to identify the unexpected ways in which children expressed their reading attitudes. Inductive approaches, on the other hand, aim to reveal surprising or new aspects, by letting the data guide the analysis and interpretation

(Reichertz, 2004). Researchers employing this analytical strategy do not try to make their data fit into known categories, but instead follow the logic of their data or interpret it in a new way. For example, Bateman (2018) explored children's experiences with storytelling in a kindergarten classroom. She collected audio and video recordings of twelve children during shared reading and free play situations. Her analysis revealed that ventriloquism, or the act of lending one's voice to an object to make it come to life in play, was an important aspect of children's meaning-making in relation to storytelling. While ventriloquism is not an unknown concept, it has not previously been used in the context of children's play. As Reichertz (2004) claims, most research is a reconstruction of what is already known or what has already been described in other contexts, using other words. Nevertheless, deduction and induction are important processes that ensure the embedding of the analysis into existing knowledge, whilst enabling originality. Many studies, therefore, combine deductive and inductive reasoning. For example, Bengochea and colleagues (2018) investigated the purposeful modal choices and strategies of an emergent bilingual child as he engaged in play activities with his peers. Deductively, they used Kress and Van Leeuwen's (2006) multimodality framework to categorise the semiotic modes employed by the child. Inductively, they identified the child's "transmodal repertoire" (Bengochea et al., 2018, p. 47), thereby expanding the existing framework to match the emergent bilingual child's translanguaging practices.

My data analysis was similarly driven by both deductive and inductive reasoning. The aims of the COMPARE project, as well as my previous knowledge regarding education and literacy, guided my analysis. For example, the focus on literacy-related practices was predefined in the COMPARE's research objectives. Furthermore, the categories and codes of my analysis (see sub-chapter 6.6.6) follow existing frameworks, such as the foundational skills of emergent readers described by Brown (2014), and the non-verbal modes of meaning described by Wells (2000). However, the use of these frameworks was not predefined, but chosen because it helped me to make sense of my data. In this sense, my analysis was inductive and data-driven. My research questions and the foci of my analysis were adapted according to my current state of understanding. For example, I directed my attention to the spatial and material aspects of children's literacy practices, as this was revealed to be relevant in my data (see Chapter 7). Furthermore, I identified the aspect of different connections as a strategy of making meaning in interaction (see Chapter 10). This idea emerged when I read a paper entitled: "When past and new experiences meet" (Fredriksen, 2011b, p. 65). As these examples show, my research process was shaped by a constant oscillation between the deductive exploration of data and the inductive conceptualisation of my own perceptions. As Flick (2013) states, a certain degree of

structure is needed, that said, qualitative analysis should also entail a certain "degree of intuition" (p. 12). In sum, combining deductive and inductive reasoning has increased my reflexivity during the research process and, thereby, contributed to the quality of my research (see sub-chapter 12.2.1).

Another important aspect of my analytical approach was the technique of comparing and contrasting. Comparative approaches to data analysis are not uncommon in qualitative studies. According to Flick and colleagues (2004), they often emerge in the second or further steps of analysis, after the data has been gathered and initial analyses have been made. Comparing and contrasting can support researchers in testing hypotheses or clarifying concepts and theories. In ethnographic studies, particularly, comparing data from different fields can help the researcher to discover relevant aspects that would otherwise have been overlooked. However, during the analysis, researchers should not only focus on the comparable elements of the data, as this entails a risk of overlooking individual aspects of the field (Bollig & Kelle, 2012). Depending on the methods of analysis, researchers use comparisons to achieve different aims. For example, in grounded theory, comparisons lead to the identification and formulation of relevant categories (Corbin & Strauss, 1990). For instance, Kachorsky and colleagues (2017), used the grounded theory approach to develop a typology of young children's use of semiotic resources when making meaning of picture books. The researchers compared video data of eight emergent readers and developed five meaning-making categories: (1) paralinguistic resources, (2) illustration, (3) design features, (4) background knowledge, and (5) typography. This typology of early readers' semiotic resources for meaning-making in relation to picture books emerged from a constant comparison of different data sets, and a collaborative, reflective approach (Kachorsky et al. 2017). While comparative methods in qualitative research are often associated with grounded theory, I did not follow this approach in my study. Although my research design outlined data collection in three crèches, which would allow for comparisons, it was not thought of as a comparative approach. Rather, I used comparisons as a thinking and reasoning tool, at different moments throughout the research process. As Bollig and Kelle (2012) explain, this technique is used in ethnographic research to work out commonalities and differences across fields, practices, or situations. Due to the variety of the three crèches' contexts and practices, I found this technique useful for my analysis. Furthermore, comparing across data sets is part of data triangulation (see sub-chapter 6.6.5), which is a way of increasing trustworthiness and reflectiveness in interpretative research (Lüders, 2004).

Bollig and Kelle (2012) explain the difference between comparing and contrasting. Both can be based on fields, practices, situations, or smaller units of analysis. Comparisons analyse the

different natures of common features. For example, in all three crèches observed during my fieldwork, the educators routinely organised circle time. However, circle time was very different in each of the crèches. This allowed me to compare the circle time routines based on different features, such as the educators and children's interactions, or the literacy-related material they employed. At the same time, the comparison enabled me to identify commonalities across settings, such as the integration of literacy into daily routines. Contrasting, on the other hand, puts the focus on variance and differences, in order to highlight specific aspects of the data (Bollig & Kelle, 2012). In my study, I contrasted different situations from the data to clarify my analysis. For example, I contrasted the educators' ways of reacting to children's interest in environmental print. While some educators let children explore environmental print on their own, others engaged and interacted with children while exploring the print. Contrasting these situations allowed me to show, to what extent the educators' different reactions, created learning opportunities and enabled children to make meaning of literacy. Similarly, Mortini (2021) strategically used comparison in her analysis of children's agency within translanguaging practices in ECEC in Luxembourg. By comparing the practitioners' and the children's language practices, she described to what extent children creatively reproduced adult practices and which role this played in their agentic behaviour.

To sum up, moving between deductive and inductive perspectives, as well as comparing and contrasting, were important analytical techniques in my study. These approaches informed my analysis and, thereby, the formulation of my findings. In the following section, I will further describe how I processed my data, as the first step in my analysis.

6.6.2 Tools of preliminary data analysis

In this sub-chapter, I will present the tools of preliminary analysis, which I used from the beginning of my data collection. In my preliminary analysis, I used analytical memos, overview tables, and different types of audio and video transcripts. As Flick and colleagues (2004) state, one defining characteristic of qualitative research is that it is a "textual discipline" (p.9). Therefore, the purpose of using the tools described below was to render my observations and experiences in the field accessible and tangible, by turning them into different forms of *texts*.

Analytical memos

Memoing is a frequently used tool in qualitative research. As Birks and colleagues (2008) describe, memoing has several functions. It helps to document research activities, allowing us

to access deeper levels of meaning in the data. It also sustains momentum and supports research communication. Creating memos helps researchers to immerse themselves in the data and to keep track of the evolution of the research process. Therefore, memoing extends throughout the whole research process and is not limited to specific moments. While there are no formal or structural rules for memoing, some guidelines exist. Memos should always include titles or other structural elements that can help with retrieving specific information later on. They should also include dates and be formulated in an open and transparent way, so that the researcher can understand and use them in retrospective (Birks et al., 2008).

In the case of my research, memoing was both an individual and a collective activity. The other members of the COMPARE research team and I created a shared memo to collect ideas and reflections about our observations in the field. Furthermore, these memos were a useful tool of communication, ensuring continuity throughout the data collection. For each of the three settings we created one shared document. This allowed us to follow up on the observations of other team members and to combine our knowledge.

We wrote most of these memos during the fieldwork and continued to structure and comment on them afterwards. As we progressed in the research process, our foci shifted and became more precise. This is reflected in the way we worked with the memos. At first, the memos consisted of rather unstructured notes and comments for each day of data collection. I often relied on my fieldnotes to remember my observations and to spark further ideas. Gradually, the memos became more complex and structured. We included topics and questions, connected different elements, commented on each other's memos, and engaged with our observations in greater depth. We continued to use the collaborative memos, even after the fieldwork period ended. They were often the starting point of further analysis and could be used to verify interpretations. The following excerpt from one of the analytical memos shows how I commented on the observation of one of my colleagues, Dr Bebić-Crestany. She had categorised her observation as relevant for our interpretation of the practitioners' view of the child.

View of child:
The children are all undressed and dressed when entering and leaving the library and are not encouraged to do it by themselves at all.
VK (10.05.21): Interesting how this is different from the "getting-dressed" moment at the crèche!

Excerpt 1: From analytical memo on the 30th of April 2021 (Water)

As the excerpt shows, I included the date and used a differently text colour to distinguish between the original content of the memo and my retrospective comment. This excerpt from one of the analytical memos contributed to the further investigation of the importance of different spaces, and how they shaped participants' interactions.

In addition to the collective memos, I kept an individual research journal. As I reflected on my observations in the collective memos, I used these individual memos in a different way. Throughout the whole research process, I wrote down digital and handwritten notes about the research process and documented my methodological choices. This allowed me to retrace the development of my own research interests and methodological approach over the past four years. Furthermore, I reflected on overarching questions, ideas, and issues that emerged at different moments of my research. My research journal often contains open questions and musings, struggles and solutions, and future plans. These reflections were sparked by different situations, such as academic courses, conversations with colleagues, conferences, reading, or simple everyday experiences. I kept a digital research journal that was organised by topics, such as "ethical reflection" or "open questions"; however my handwritten were simply structured chronologically and spread over several notebooks. Table 9 summarises the approximate wordcounts of the different types of memos. It is important to note that the collective memos were mostly written in plain text or in the form of sentences, which allowed other readers to follow my reflections, whereas my personal research journal was formulated in a much shorter and denser way.

Table 10: Wordcount of my analytical and reflective memos

	Wordcount		
My contributions to the collective memos	***Air*** 8931 words	***Earth*** 8127 words	***Water*** 7159 words
My personal research journal	Approximately 11.000 words (digital) + several handwritten notebooks		

Overview tables

While the dichotomy between qualitative and quantitative research suggests a difference in the amount of data that is used, qualitative fieldwork produces a large amount of data. Not all of this data will be analysed in the same way and depth, but every piece of data contributes to the formulation of the research findings. The use of tables is common in qualitative research as it allows for the handling, processing, and presentation of larger bodies of data (Jarzabkowski et

al., 2014). Tables help prove that the presented examples are not unique, but rather that they illustrate patterns, contrasts, and prevalence. Therefore, they are an important tool that can be used to validate and enhance the quality of qualitative data.

I contributed to the creation of shared tables for the research project COMPARE and established tables on my own. We used different types of tables at different moments of the research. While some of the tables fulfilled the purpose of summarising and cataloguing data, others were more analytical. During the fieldwork, we created shared inventory tables of all the recorded videos per setting. These tables contained information about the visual data we collected. For each crèche, we created one overview table of the video data and one overview table of the photographs. Excerpt 2 shows a part of the overview table of the photographs. The table comprises information about the content of each photograph, as well as notes on patterns, or themes in the data. Considering the total amount of photographs taken throughout the data collection (see sub-chapter 6.5.2), the table helped us to retrieve the photographs needed to illustrate specific aspects of the data. Furthermore, establishing the table while collecting data in the field helped me to reflect on the purpose of each piece of data and my reasons for recording it. For example, photograph six, which I took on October 10th 2020 (see Excerpt 2) might, at first sight, not be related to the topic of early literacy. However, it is a record of children's independent activities in one of the crèches. Therefore, it is related to the pedagogical approaches of the crèches, a category which became relevant in my further analysis. The overview table of photographs was not only a catalogue of files, but also a tool of preliminary analysis.

Name of the file	Content of the photo	Notes
Photo5_VK_E_30.10.20	scribbles by Niklas	
Photo6_VK_E_30.10.20	Etienne is carrying his bags	independence / autonomy of children
Photo7_VK_E_30.10.20	looking at the brush cutter	
Photo8_VK_E_30.10.20	Niklas is enacting the movement of the brush cutter	
Photo9_VK_E_30.10.20	looking at the brush cutter	Niklas & Etienne / gaze / body language

Excerpt 2: From overview table of photographs

We also used overview tables for the video data. They acted as an inventory, that helped us to quantify all the collected video recordings, detect individual pieces of data, and identify aims

for further data collection. For each of the three crèches, we created one overview table. These tables contained information about the file (i.e name and duration), the filmed activities, the participants' language use, and the type of interactions. Moreover, we stated first hunches and possible patterns. Excerpt 3 below is from one of these tables.

			Participants & Language use			Type of interactions			
Name of doc	Duration	Activit(ies) filmed	Educators / Parents (Languages)	Focus Children (Languages)	Other children (Languages)	Adults' behaviour / strategies	Adult-child interactions	Children's behaviour	Patterns
Obs5_VK_[redacted] 09.03.21	02'25"	[redacted] and [redacted] are lookinng at a book during free play			[redacted] (G, L); [redacted] [redacted] (L)			[redacted] pretends to talk on the toy phone	
Obs6_VK_[redacted] 09.03.21	03'50"	Songs and rhyme before lunch (ARamSamSam & Fingerchen & Piep Piep)	[redacted] (L, D), [redacted] (L)	[redacted] (L, G), [redacted]	[redacted]			[redacted] makes the gestures (back turned on [redacted]) looks back sometimes [redacted] puts her headon the table with song lyrics "ganz ganz stille"	different speeds and volumes in the song
Obs1_VK_[redacted] 11.03.21	02'37"	Morgenkreis (Song Bonjour & Piep Piep)	[redacted] (Fr, G, L)	[redacted] (G, L); [redacted] (G, L); [redacted] (L)	[redacted] (L)		translanguaging	[redacted] claps at the end of the rhyme	translanguaging
Obs3_VK_[redacted] 11.03.21	01'47"	Waiting for the bus	[redacted] (G)	[redacted] (L); [redacted] (G); [redacted] (G)			[redacted] points at the bus schedule to show / explain [redacted]		

Excerpt 3: From overview table of the video data

The overview tables contained all the videos that we recorded, regardless of their content. We also established tables of videos that focussed on the two main focus areas of the COMPARE project: collaboration and multiliteracies. In these tables we only included video recordings that contained elements of collaborative or literacy practices. This helped us to make a first selection of relevant videos and to exclude interesting, but less relevant data. Furthermore, working with these tables helped us to develop our understanding of collaboration and literacy in practice. Throughout the research process, we adapted the tables to our shifting conceptualisations of collaboration and literacy, to make them more precise and accurate. As Sipe and Ghiso (2004) explain, grouping, (re)organising, and rethinking categories is an important aspect of analysis, which helps to clarify concepts and research foci.

I will illustrate this evolution based on the tables about multiliteracies, as this topic is more relevant for my PhD than collaboration. The aim of this table was to regroup all the video recordings of literacy events and to categorise them according to different activities. The initial version of the literacy table, therefore, contained the following categories of literacy activities: reading a story, telling a story, dialogic reading, looking at books, talking about a book/story,

listening to a story, rhyming, listening to a song, playing with letters/sounds, writing, reading labels, and counting. These categories were based on our initial understanding of literacy and our expectations regarding literacy activities in early childhood. For example, previous studies have shown that reading books represents a common literacy practice in ECEC (e.g. Melzi et al., 2022). Therefore, our initial tables contained the categories: *reading a story*, *telling a story*, *dialogic reading* and *looking at books.* This shows our interest in the different ways in which books were being used in the crèches. However, throughout the data collection, we learned that some of our categories were not appropriate. For example, practitioners' ways of using a book could involve both *reading* and *telling* a story at the same time. On the other hand, the category of *dialogic reading* only rarely fit our observations. Furthermore, the categorisation of activities could vary, depending on the perspective (i.e. adult- or child-perspective). While we intended for the category *looking at books* to contain videos of children using books on their own, we sometimes also observed situations in which children and adults looked at books together. The interactions in these situations were very different from those in group reading activities. Children using books on their own did not just *look* at the books, but also interacted with the books in very different ways. Finally, some of the observations we made were related to literacy, but did not belong to any of our predefined categories. For example, in one of the crèches, we observed that the practitioners encouraged the children to recite the current day's in a formulaic way during circle time. While this activity entails the use of decontextualised language, which links to literacy, we had not expected to observe this type of activity in non-formal ECEC settings. To sum up, our initial expectations were not always fulfilled and we had to adapt our categories to our observations. As such, we reformulated, regrouped, and changed the categories in the final version of the overview table of literacy events. Excerpt 4 shows an extract from the final literacy event table.

Document	Duration	Reading a story/listening (opportunity for asking question)	Telling a story with or without a book	Dialogic Reading	Looking at books/talking about a book/story /song	Rhymes/ formulaic speech	Listening and singing (songs, music including rituals)	Playing with letters/ sounds/ words	Writing/ dictacting	Reading symbols, recognise letters/ sounds	Language activity/ Vocabulary training/ numeracy	Notes / Questions
Obs6_VK_[redacted] 10.02.21	1'26"					Arriving in the forest (ritual): [redacted] (L); [redacted] (L); [redacted] (L); [redacted]						Rhyme: "Moie léiwe Wanterbësch"
Obs8_VK_[redacted] 10.02.21	11'03"		Attaching images of book in the cabin: [redacted] (L); [redacted] (L); [redacted] (L); [redacted] (L); [redacted] (L)									Book: "Rotschwänzchen"
Obs9_VK_[redacted] 10.02.21	0'59"					Leaving the forest (ritual): [redacted] (L); [redacted] (L); [redacted] (L); [redacted] (L); [redacted] (L); [redacted]						Rhyme: "Äddi léiwe Wanterbësch"
Obs10_VK_[redacted] _10.02.21	2'57"						Walking: [redacted] (L, D); [redacted] (Fr, L); [redacted] [redacted] (L); [redacted]					educators sing songs to comfort / motivate children "hu hu ech sinn de Wand" "Kleine Meise" "Alouette" / L sings "Léiwe Kleeschen"
Obs12_VK_[redacted] _10.02.21	5'27"				before nap: [redacted] (L, Fr); [redacted]							

Excerpt 4: From the literacy event table

As I continued to analyse data for my PhD, I noticed that the collaborative tables had other limitations when it came to my individual research interests. For example, the collaborative tables were focussed on verbal language use in interactions. They contained little information about children's non-verbal modes of communication. Therefore, based on the existing tables, I created other tables that were more specifically adapted to my research questions. These more specific and analytical tables, which I used for the purpose of coding my data, will be presented in sub-chapter 6.6.6.

Summaries and descriptions of video data

The tools of preliminary analysis that I have described so far are based on the original pieces of data (fieldnotes or video recordings). I will now move on to the ways in which I transformed the content of video data into text. This process is an important step of data analysis, as it allows for the coding and categorising of distinct instances of data. The first type of text that I produced on the basis of the video data were summaries or descriptions. In contrast to video transcripts (see section below), summaries and descriptions enabled me to process videos in a time-efficient and pragmatic way. I used summaries and descriptions whenever transcripts were either unnecessary for the pursue of the analysis, or unfeasible. For example, to analyse the contextual aspects of early literacy events and practices **(RQ1),** it is unpragmatic to transcribe the entire interaction of a literacy event in detail. Additionally, as my data shows the practices of two- to four-year-old children, videos often showed very little or unclear speech. As I wanted to consider children's non-verbal aspects of communication **(RQ2 and 3)** without conducting a detailed multimodal analysis, describing their behaviour as opposed to transcribing it was

sufficient. Furthermore, given the multilingual context of the data collection, videos contained speech in languages that I did not master, such as Romanian or Portuguese. Some of these utterances turned out to be relevant when making sense of the interactions and, as such, these, were transcribed and translated by proficient colleagues and student assistants. In other situations, for example parental storytelling, it was relevant to know in which ways parents used their home language(s) in interaction with the children, but the exact wording of their utterances was less important. In fact, not understanding all the languages spoken by the parents allowed me to better comprehend the children's position as emergent language learners. If parents' or educators' non-verbal communication allowed me to follow the story, the same could be true for the children.

I summarised and described videos that were used for the analysis of the COMPARE project in collaboration with other team members and student assistants. Furthermore, I added relevant videos for my individual analysis. For example, the videos of children's independent engagement with literacy were relevant to my second research question, but irrelevant when addressing the perspectives of parents and practitioners.

The aspects that I describe in the video summaries reflect points of interest for my analysis, as the following example shows:

> During a walk along the river, children notice an information board with text in German. They stand in front of the board to look at it. They point at the text and talk in Luxembourgish and German. Some children follow the direction of the text with their fingers. Joyce and Jakob imagine what it could say on the board. I ask Joyce about it and she tells me that it is about the fish in the river. Meanwhile the educators are heard talking in the background.

Excerpt 5: From description of observation on the 10th of December (Water)

This description summarises a video recording of about two minutes, from a walk with the educators and children at Water. In the text, I included information about the nature of print (e.g. information board in German), the children's language use (e.g. Luxembourgish and German), their non-verbal communication (e.g. pointing, moving finger over text), their interactions (e.g. imagining meaning), and the educators' behaviour (e.g. talking in the background). These aspects were relevant to the analysis of literacy events and practices **(RQ1),** and the ways in which children make meaning of literacy together with others **(RQ2).** The quality of the recording and the short length of interactions between the children **(RQ3)** and myself, meant that further analysis was unfeasible. While the terms "summary" and

"description" suggest a neutral representation of reality, the process of describing video data is an interpretative one. Although I was cautious in my choice of words and tried to avoid excessive interpretation, I found this to be challenging. For example, in the description above I wrote: "children follow the direction of text with their fingers". This sentence reflects my perspective as a literate person. A more precise and descriptive formulation would have been: "the children touch the board and move their index fingers from left to right". This shows, that not only do the descriptions allow me to analyse the content of the videos, but they also allow me to reflect on ways in which my own perspectives was shaped my interpretations. In any case, the children's gesture expresses that they relate text to some kind of linearity. To increase the accuracy of video summaries and descriptions, I sometimes added screenshots of videos to the descriptions. This allowed me to illustrate children's gestures as well as the videos' spatial dimensions. Excerpt 6 shows a video description, in which I included screenshots from the video.

Lia points at Gloria's direction and says: "Oh Schof ass kal" in a pitiful voice. Gloria answers: "Jo mega kal. Mëss du och mat deng Papa sou maachen, sou?". She makes an angry face and stretches out her hand (with wide-spread fingers) towards Jana's face in a fast movement and makes a "Ha" sound. There is no reaction from Jana visible. Gloria turns to the next page and wraps her hands around herself, as if she was very cold.

Gloria leans towards Jana and asks her again: "Hues du och doheem sou een?" Before Jana answers, Gloria points at all the other children and says "An tu tu tu tu". She smiles, wraps her arms around herself and points at Jana and says something like: "An da bass du och kal".

Excerpt 6: From description of observation on the 17th of December 2020 (Earth)

Apart from their role in the analysis, the summaries and descriptions of videos have served as the basis for the writing of *vignettes*, which I use in the presentation of my data. In the vignettes, further details were added if necessary, to enhance informative value and readability.

Transcripts of audio and visual data

Transcripts are used to transform audio or video recordings into materialised and visual representations of data. They allow for deeper engagement with the data and for in-depth analysis. Transcribing data can be seen as a preliminary analysis step, as it involves attributing relevance to certain aspects of the recordings while omitting others (Moritz, 2014). Hence, according to Seedhouse (2006), all transcripts are "incomplete, selective renderings of the primary data" (p. 166). Writing transcripts involves constant contemplation on readability, comprehensiveness, and accuracy.

In my study, I used different types of transcripts. The chosen transcription method depended on the type of primary data and on the objective of the analysis. First of all, many transcripts were written in the context of the COMPARE project and with the assistance of student workers. These transcripts were adapted to the general aims and research interests of COMPARE. Secondly, I produced transcripts of video data that focussed on the children and emphasised the multimodal dimensions of their interactions. At times, these transcripts were written on the basis of existing transcripts for COMPARE.

Transcripts of audio recordings

Transcribing audio recordings is a way of visually representing participants' speech. Transcripts can take the form of tables or continuous texts. A written transcript facilitates the analysis and coding of audio recorded data. Different transcription conventions allow for different types of analysis. The way in which the researcher chooses to transcribe audio data depends on their research questions and interests (Mercer, 2004). Researchers may be interested in the content of spoken language or on the ways in which spoken language is used. For example, conducting a linguistic analysis of speech requires the transcription of para-linguistic features such as intonation, speed, or pronunciation. Such details are of little use if the analysis is more focussed on the semantics and pragmatics of speech. Transcripts usually contain indications about the speakers and the time and date of the transcribed recording. Furthermore, a legend of the transcription conventions should be provided.

I collected two types of audio data: spoken fieldnotes and recordings of the semi-structured, member-check interviews. Both were transcribed with the aim of analysing the content of the spoken language. However, the spoken fieldnotes were not transcribed word for word. The recordings were in Luxembourgish or English, while the transcripts were written in English. To increase efficiency, they took the form of short summaries. Excerpt 7 provides an example of such a summary.

File	Duration	Content
Audionote5_VK _Earth_17.12.20	00'00'59	I talk about the walk back from the forest to the day care centre. Some children complained about being cold. The educator started singing a song about the wind (referencing the wind that day). The children sang along and stopped complaining. One child also looked up in the sky and notices aeroplanes and condensation trails. The formed the shape of the letter "H". She stated that this looks like "Hugo". She had also mentioned this before in the forest with a branch that had a similar shape.

Excerpt 7: From transcribed audio fieldnote on the 17th of December 2020 (Earth)

The second type of audio-data was the recordings of the semi-structured interviews. As I was not interested in the educators' way of using language, but only in the content of their speech, I did not transcribe para-linguistic aspects (e.g. intonation, volume, prosody). On the contrary, to facilitate readability and understanding, I simplified certain aspects of the educators' speech that naturally occurred in spoken language. For example, I rectified slips of the tongue, unnecessary repetitions, and grammatical mistakes. The transcripts of the semi-structured interviews were formatted in a table to include information about the speaker and time. Excerpt 8 is from the transcript of the member-check interview conducted at *Air*.

Line	**Time**	**Speaker**	**Speech**
35	04:13	Mélissa	Et bon après elle la racontait à sa manière avec les images que pour elle ça lui donnait des idées quoi (rigole)
36	04:20	VK	Mhmh (affirmative)
37	04:22	Delphine	En plus pour le moment ça fait un peu écho à ce qu'elle vît parce qu'elle va avoir aussi une petite sœur tu vois c'est aussi
38	04:25	VK	Oui elle fait le lien aussi
39	04:27	Delphine	Oui oui oui (rigole) de mon avis elle oui voilà elle s'identifie elle connaissait quand même le fil de l'histoire quoi oui et sinon pour les deux filles aussi Cécilia et Antonia on a trouvé qu'il y avait entre elles il y a toujours un comment on appelle ça un petit rapport de force

Excerpt 8: From the transcript of the member-check interview (Air)

As the excerpt shows, the text does not correspond to grammatical conventions. For example, it does not contain punctuation. Furthermore, between brackets I included some information about the tone of voice (e.g. affirmative humming or laughing), to facilitate the reader's understanding of the utterances.

Transcripts of video recordings

The transcription of video recordings was a step in the data analysis, which primarily took place after the data collection. Considering the large amount of recorded video data (see sub-chapter 6.5.2), I strategically selected the videos that were to be included in the transcription. Part of this selection was made together with the other members of the COMPARE team, with whom I coordinated the transcription process. We were further assisted by several Master and Bachelor students. Videos that were transcribed were either chosen because they stood out from the rest of the data, or because they were representative of recurring events. For example, we selected the interactions about letter-shaped candles at *Earth* because they contained rich interactions related to letters. Furthermore, we transcribed one video, that was representative of the circle time routine at *Air*. This selection process was based on the previously described overview tables and video summaries.

The transcription of video recorded data allowed me to analyse multimodal aspects of communication, such as the use of non-verbal modes, or the use of objects. While I am aware of the privileged status of language in communication, I acknowledge the importance of all semiotic resources in children's early literacy meaning-making. Therefore, in my way of transcribing video data I include different vocal and non-vocal modes (see figure 15). As Jewitt (2009) states, all modes should be valued in their communicative potentials and affordances. To achieve this, transcripts of multimodal data should combine modes to document the interplay of different modes in social interactions and practices (Flewitt et al., 2019).

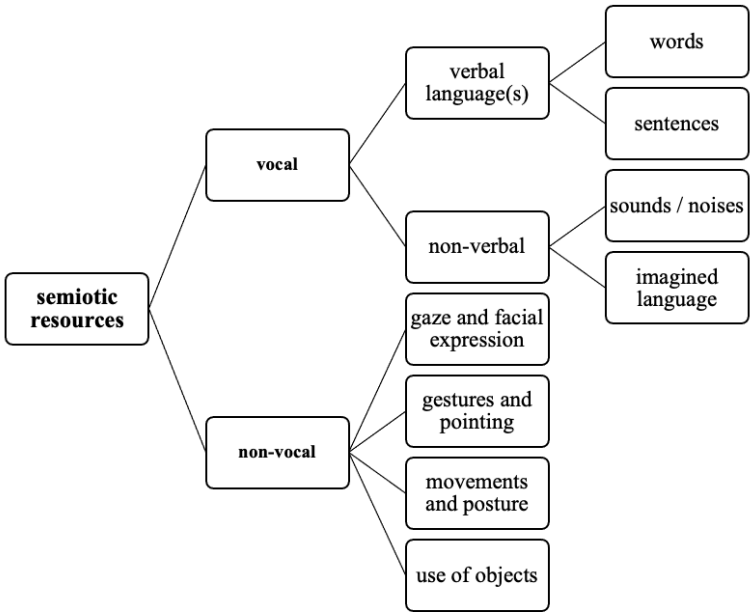

Figure 12: Organigramme of communicative modes considered in the transcription of video data

Excerpt 9 shows an example of a transcript of a video from *Earth,* as it was used during the analysis. The transcript includes information about the interlocutors (on the left), their speech (on the right) and their non-vocal communication (between brackets). The transcription key for all transcripts presented in the findings chapters can be found on page XIII of this thesis. Transcripts presented in this thesis have been reformatted accordingly.

Dom	ah da kuck emol gutt op dat wierklech dee selweschten ass do (holds her pointing fingers at the U and the V)
Lia	nee
Dom	kuck mol mh wat ass dann do anescht bei deem (points at U) a bei deem (points at V)
Eti	déck (leans over table)
Dom	mh do deen (points at V) an deen (points at U)

Excerpt 9: From a video transcript from the 15th of December (Earth)

Although I included multiple modes in my transcripts, I wish to clarify that I did not focus my analysis on the interplay of modes. In contrast to other approaches, such as multimodal interaction analysis (Norris, 2004), I did not transcribe video data with the aim of analysing multimodality itself. Rather, I acknowledged the importance of all semiotic modes in

communication, especially for young children, and used transcripts of video recordings to illustrate, how non-verbal modes of communication contribute to the co-construction of meaning in social interactions.

To facilitate the transcription of video data, I used the transcription software ELAN 6.1, which allowed me to replay segments of videos repeatedly and in slow motion. This software helped me to disentangle the complex multimodal interactions of the participants.

6.6.3 Data selection and data sets

In this sub-chapter, I will present how I analysed my data in practice. As Sipe and Ghiso (2004) criticised, qualitative data analysis is often portrayed as a mystical process during which findings and insights *emerge* naturally. This representation fails to acknowledge the impact of the researcher's methodological choices and to render the research process transparent. In the following, I attempt to counteract this common limitation of qualitative data analysis.

My process for analysing data was structured using several data sets, by which I mean collections of visual data. I regrouped these according to the different aims of my analysis. Given the total amount of data that I collected in the context of COMPARE, this approach helped me to select the data most relevant to my research questions. In one initial round of analysis, I selected all the videos that showed literacy events in the three crèches, excluding those that had been observed by other team members. This pre-selection allowed me to get a first impression of the most common literacy events in the three crèches **(RQ1).** Furthermore, the varying frequency of literacy events is an indication of the practitioners' understanding of early literacy learning. I will reflect on this in Chapter 11. Below is a quantitative overview of my data corpus and the prevalence of observed literacy events (see Table 10).

Table 11: Quantitative overview of the entire video data corpus

	Description	**Amount of data**		
		Air	***Earth***	***Water***
Shared reading	An adult (practitioner or parent) uses a book to talk to the children about the content of the book (story or other).	4h50min (N = 42)	1h55min (N = 13)	3h40min (N = 24)
		Total: 10h25min (N = 79)		
		Air	***Earth***	***Water***
Children using books on their own	A child or several children is/are using (a) book(s) independently from adults.	1h54min (N = 45)	2h15min (N = 31)	2h16min (N = 40)
		Total: 6h25min(N = 116)		

Singing or listening to songs	Children engage in adult-led or child-initiated singing or listen to music.	***Air*** 1h37min (N = 39)	***Earth*** 2h07min (N = 43)	***Water*** 2h20min (N = 36)
		Total: 6h04min (N = 118)		
Using letters or other signs	Children engage with written language or other signs, with or without an adult.	***Air*** 1h35min (N= 19)	***Earth*** 1h09min (N = 22)	***Water*** 9min (N = 4)
		Total: 2h53min (N = 45)		
(Re)telling a story	Participants (children or adults) (re)tell a story with or without using material.	***Air*** 37min (N = 6)	***Earth*** 1h17min (N = 8)	***Water*** 12min (N = 2)
		Total: 1h55min (N = 16)		
Rhymes and fingerplay	An adult (practitioner or parent) recites a rhyme or does a fingerplay activity together with (a) child(ren).	***Air*** /	***Earth*** 6min (N = 5)	***Water*** 42min (N = 17)
		Total: 47min (N = 22)		
TOTAL		***Air*** 10h32min (N = 151)	***Earth*** 8h48min (N = 122)	***Water*** 9h18min (N = 123)
		28h29min (N = 396)		

This table is meant to serve as a quantitative overview of the video data that I have used in my analysis. However, it needs to be interpreted in a nuanced way, following a reflective research approach. Firstly, regarding my analysis: the amount of video data in the table does not correspond to the amount of video data that I transcribed or analysed on an interactional level. Some of the videos were analysed in greater depth, while others were viewed but not transcribed. These videos, nevertheless, contributed to my general understanding of early literacy practices in the three settings. Furthermore, the video data was the basis of my analysis, but it was always triangulated with other data sources, such as the fieldnotes, memos, or thick descriptions (see sub-chapter 6.6.5).

Secondly, regarding the literacy practices of the three crèches: while the amount of video data gives an indication of the prevalence of observed literacy events, it does not represent the actual frequency of literacy events. Moreover, the categorisation of the different types of situations is based on my own (adult-centred) understanding of literacy-related activities in ECEC, which does not always correspond to the behaviour of the participants. As Sipe and Ghiso (2004) state, categorising is a deeply personal step of the analysis, related to the individual experiences of the researcher. For example, I might categorise a video as being mainly a *shared reading*

activity. Nevertheless, this video could also include short moments of humming or singing. Likewise, literacy events in ECEC can be fleeting (Church & Bateman, 2022). These moments are difficult to anticipate; as such, they may not necessarily be captured in the video data, or they may only emerge in longer videos of everyday interactions. Hence, the duration of a video, does not necessarily correspond to the duration of the literacy event.

Based on the video data, I conducted a qualitative content analysis (see sub-chapter 6.6.4) to identify the most relevant and interesting phenomena that would help me to answer my second and third research questions. For example, although singing was a commonly observed literacy event, the participants' behaviour in these situations did not allow me to observe the co-construction of meaning **(RQ2 and RQ3).** Therefore, these events informed my understanding of early literacy practices in the three settings, but were not included in the more in-depth analysis. Other literacy events stood out because they were rare (e.g. using letters or signs) or because they showed a very different kind of child behaviour (e.g. children using books on their own). This data contributed to the originality of my work and allowed me to highlight the children's perspectives. These considerations resulted in the formation of four data sets, which were subject to further analysis.

Table 11 provides an overview of the different data sets, the amount of data, and the selection criteria that I applied to the group video data. Some videos were excluded from the analysis due to technical issues, such as a blurred image or an unclear sound. This information is not included in the following table.

Table 12: Quantitative overview of the four video data sets

Data set		Selection criteria	Amount of data		
I.	***Children's independent use of books***	- situation involves at least one focus child - child(ren) interact with books - present adults do not interact with children about the books	***Air*** 1h43min (N = 42)	***Earth*** 1h32min (N = 24)	***Water*** 58min (N = 21)
			Total: 4h13min (N = 87)		
II.	***One-to-one or small group interactions with books***	- situation involves at least one focus child - interaction is based on the use of a book - interaction between one adult and one or more children - peer interaction between two or more children - situations outside of whole group shared reading	***Air*** 48 min (N = 9)	***Earth*** 38 min (N = 7)	***Water*** 54 min (N = 14)
			Total: 2h20min (N = 30)		

III.	***"Writing" situations***	- adults writing in front of children - children dictating to adults - children using writing tools to produce signs or symbols - children producing words using other material	***Air*** 7min (N = 2)	***Earth*** 57min (N = 17)	***Water*** 6min (N = 1)
			Total: 1h10min (N = 20)		
IV.	***Collaborative literacy events***	- literacy events during parental visits at the crèche	***Air*** 26min (N = 4)	***Earth*** 1h12min (N = 11)	***Water*** /
			Total: 1h 38min (N = 15)		

Most of the data sets are limited to data that I recorded myself, as seen in the video data presented in sub-chapter 6.5.2. I only included data recorded by other members of the COMPARE team in the data sets that would otherwise have been too small. For example, I included four videos of collaborative literacy events, which have been recorded by others than myself. Apart from the analysis of the different data sets, I analysed several cases for the purpose of course or conference presentations (see Appendix A2.2). As Flick and colleagues (2004) state, the starting point of qualitative analysis often lies in the analysis of individual cases. Correspondingly, my case analyses have contributed to my further analysis and category-building (see sub-chapter 6.6.6).

Finally, both my analysis and my literature review (see Chapter 3 and 4) revealed the relevance of material aspects for children's early literacy experiences. Hence, I analysed some of the material used by the crèches, namely books and the literacy-related activity trays used during free play at *Air*. More precisely, I systematically analysed the languages, topics, and material aspects of the books that practitioners used in shared reading, as well as the books that children used independently. Furthermore, I analysed the material, the content, and the underlying purpose of the literacy-related activity trays at *Air*. This analysis was based on photographs and screenshots of videos showing the material while it was being used.

6.6.4 Methods of data analysis

The different types and forms of data required me to adapt my way of analysing according to the aims of my analysis. In general, my data analysis was inductive and I did not follow one specific method. Rather, I developed my own approach, based on the work of several authors and their data analysis methods. In the following, I will first describe the three methods of data analysis that have influenced my approach: content analysis, Mercer's sociocultural discourse

analysis, and Seedhouse's conversation analysis. I will give a brief overview of each method and specify the aspects that I have integrated into my analysis. Finally, from a more practice perspective, I will describe my process of coding the data and how this influenced the research findings.

Content analysis

I used content analysis to gain a deeper understanding of the three crèches' literacy practices and the ways in which children and adults co-construct meaning in literacy events. Content analysis is a frequently used method in qualitative data analysis. The aim is to identify patterns or themes of the data through coding (Cho & Lee, 2014). While the purpose of content analysis remains to produce qualitative findings, it does not exclude the use of quantitative approaches, such as counting amounts, or frequency (Mayring, 2019). Researchers have described several advantages of content analysis. Firstly, it allows us to make use of inductive and deductive approaches flexibly (Cho & Lee, 2014). Although content analysis follows a certain predefined structure, it allows categories and codes to be developed inductively. Furthermore, content analysis enables the researcher to access different levels of the data, by identifying content on the visible surface level as well as on a more latent level requiring interpretation (ibid.). For example, categories can refer to words or sentence structures used in oral language, or to the underlying meanings and functions of utterances. Finally, content analysis allows for the systematic use of large data sets in qualitative research. However, it requires a rigorous contextualisation of the data through theory and triangulation. Otherwise, content analysis remains purely descriptive and does not allow for interpretation.

Researchers have used content analysis to study early literacy practices in different contexts. For example, Özdemir and colleagues (2019) used content analysis to approach parts of their data. In their study about the use of picture books in preschool classes, they combined case studies and interviews with teachers, to explore teachers' choices of material, their attitudes towards reading, and their pedagogical strategies during story reading in the classroom. They analysed their interview data using content analysis. First, they summarised and coded the key-focus of teachers' responses. Then, they grouped the responses into pertinent categories. Throughout the process, they referred to the original statements to illustrate their different categories. In fact, this process reflects the first three types of procedures in content analysis, as described by Cho and Lee (2014). According to them, content analysis involves: (1) summarising, (2) inductive category formation, (3) explicating or illustrating categories, and (4) structuring categories into typologies.

My use of content analysis also reflects these procedures. In contrast to the previously described study (Özdemir et al, 2019), my analysis was not based on interview data, but on video data. After the selection of the video data (see sub-chapter 6.6.3), the first step of my content analysis consisted of describing the videos in the form of summaries. Videos that were used for the analysis in the COMPARE project had already been summarised together with members of the research team and student assistants. I coded the video summaries according to different categories, such as the type of literacy, the material, or the languages used. I documented this process in an Excel table, which allowed me to retrieve examples of the different categories via the search or filter functions. The use of computer software is a common way of supporting content analysis (Cho & Lee, 2014). In sub-chapter 6.6.6, I will provide more detail on my coding process, and the ways in which I used content analysis to experiment with typologies. Content analysis was especially relevant to my first research question, about the early literacy events and practices of the three crèches. Firstly, it allowed me to group my observations according to the different types of literacy events, such as shared reading, singing, or writing. Secondly, it helped me to identify the most common literacy events and their characteristics in the three crèches, which informed my understanding of the underlying literacy practices. For example, through content analysis, I realised how rarely children in all three crèches engaged in writing activities. Furthermore, if they encountered writing, they mostly had passive roles and observed how adults were writing. This realisation supported my finding that children need to participate and be engaged in order to make meaning of literacy. This example showed that my content analysis and the categories that I identified were guided by my research questions, which is a distinct feature of content analysis – in contrast other methods, such as grounded theory.

Sociocultural discourse analysis

Sociocultural discourse analysis (SDA) is based on the work of educational researcher N. Mercer. Rooted in sociocultural theory, SDA focusses on the use of language as a social mode of thinking, a tool for teaching and learning, and a way of co-constructing knowledge (Mercer, 2004). In this sense, SDA is "less concerned with the organisational structure of spoken language, and more with its content, function, and the ways shared understanding is developed, in social context, over time" (N. Mercer, 2010, p. 9). SDA is an overarching approach to data analysis, combining both qualitative and quantitative methods of data analysis. Quantitative data (e.g. counting of key-words, learning assessments) may be used to verify and contextualise qualitative analysis. The aim is to analyse educational processes and their learning outcomes.

Mercer (2004) describes several characteristics of SDA. Firstly, it is based on data that has been collected over a longer period of time and not just when there are singular occurrences. Data may consist of audio or video recordings in combination with fieldnotes. As the same contexts and participants are observed repeatedly and over an extended period, SDA allow for the observation of changes and developments over time. Secondly, transcripts of the data focus on language, but also include non-verbal aspects of communication that are meaningful for the interaction. During the analysis process, the researcher should regularly return to the raw data. Transcribed extracts from the data, that are commented on and contextualised by the researcher, serve as the basis for presenting the research finding (N. Mercer, 2010) Finally, SDA should involve oscillating between group and individual analysis. Researchers should regularly exchange ideas about their analysis with others, as this reflects the principle of collective knowledge creation.

Conversation analysis

Conversation analysis originates in the field of sociology but has since been adapted for use in different fields, such as anthropology, psychology, or sociolinguistics. Conversation analysis, as the name suggests, focuses on: "the study of everyday talk in interaction" (Doak, 2019, p. 33). It does not aim to determine cognitive or psychological states of interlocutors, but investigates the ways in which common understanding is built in interaction (Seedhouse, 2006). While initially, conversation analysis was based on verbal interactions only, the increased use of video recordings in social sciences has led to the rise of multimodal conversation analysis. This methodological shift allows us to study how people use their bodies (e.g. gaze, gestures) in interactions to create meaning (Flewitt et al., 2019). Video recordings can enhance traditional approaches to conversation analysis, as they can reveal and distinguish simultaneously occurring interactions while describing the relationships (e.g. foreground, background, paces) of such "multi-activity" (Mondada, 2008).

Seedhouse's (2006) has applied sociocultural approaches to traditionally linguistic and more complex types of conversation analysis. His methodology focusses on the role of language as a social tool, and on the organisation of social interactions. He describes the process of conducting conversation analysis as following three stages. Firstly, the documented talk is systematically ordered, and the interactions structured and organised. Secondly, the interaction is related to the context in which it took place, to identify to what extent the context has shaped the interaction. Finally, the analysis is revised to include details that seemed irrelevant at first.

This last step ensures that the researchers question their own assumptions and do not overlook unexpected elements.

Similarly, to sociocultural discourse analysis, conversation analysis does not consist of a linguistic analysis of talk, but, rather, highlights communicative practices and the social aspects of interactions (Flewitt et al., 2019). Language is, therefore, not seen as an autonomous system, but always in relation to *how* it is used, by whom, and in what context (Seedhouse, 2006). However, conversation analysis alone does not address the question of *why* language is used in a certain way. To do this question, ethnographic methods may be used in combination with conversation analysis. In fact, conversation analysis represents an *emic* perspective on interactions and, as such, requires the researcher to gain knowledge about the context of the interaction through participation (Seedhouse, 2005).

The analysis of documented interactions is systematic. This means, that the researcher analyses the interaction sequentially to reveal the underlying structure and organisation (Doak, 2019). Furthermore, conversation analysis can be used inductively, so as to allow unexpected phenomena to emerge from the data. While conversation analysis is predominantly qualitative, quantitative methods may be used conjointly. That said, quantifications cannot supplement qualitative analysis, but instead serve to identify and isolate interesting phenomena, or to strengthen the contextualisation of the interactions (Seedhouse, 2005). This is another parallel to sociocultural discourse analysis.

6.6.5 Triangulation

Triangulation can be briefly defined as "the observation of the research issue from (at least) two different points" (Flick, 2004, p. 178). It is a commonly used strategy in qualitative research to ensure the validity of analysis and research findings, as it allows us to explore phenomena in geater depth (Carter et al., 2014). Denzin (1978) defined four types of triangulation: data triangulation, investigator triangulation, theory triangulation, and method triangulation. Flick's (2004) elaboration on the types of triangulation is summarised as presented in the following table:

Table 13: Denzin's types of triangulation (1978) as explained by Flick (2004, p. 178)

Type of triangulation	Definition
Data triangulation	Data triangulation combines data from different sources at different times, in different places or from different places

Investigator triangulation	Investigator triangulation means the use of different observers or interviewers to balance the subjective influences of individuals
Theory triangulation	Theory triangulation means to approach data with different perspectives and hypotheses in mind
Method triangulation	Method triangulation combines different research methods within (e.g. subscales of questions) or between methods

Researchers have used different types of triangulation to investigate children's early literacy meaning-making. For example, Flewitt (2005) used method triangulation to overcome technical difficulties and to ensure reliability and validity of the analysis. The researcher used several methods, such as audio recordings, video recordings, and fieldnotes to document three-year-old children's multimodal meaning-making at home and in a playgroup. In fact, Flick (2018) confirms that method triangulation is a way of overcoming the limitations of one method, by combining it with another method. In another study about three bilingual children's meaning-making of wordless picture books and consequent storytelling, Hu and colleagues (2016) conducted investigator triangulation. They documented their own children's interactions in relation to the picture books through the use of audio recordings, observations, and reflective journals. In the last analytical step, the researchers shared and analysed each other's reflective journals. This helped them to validate their data and ensure consistency in their analysis.

In my study, I used both data and method triangulation. As I explained in sub-chapter 6.5.2, I used different data sources, such as fieldnotes, videos, and interviews, to collect data. The different types of data, allowed me to gain a deeper understanding of children's early literacy meaning-making.

Moreover, I used method triangulation on the level of data collection and on the level of data analysis. Regarding the former, I used observation, in combination with member-check interviews. While I focussed on the children's perspectives in my observations, the interviews showed me to the educators' perspectives.

Finally, my study's rootedness in the COMPARE research project unavoidably led to a certain degree of investigator triangulation. Among the members of the research team, we regularly exchanged our interpretations and reflections.

6.6.6 Coding process

In the above section, I presented the role of different analysis methods in my study. Now, I will provide more details on the categories and my coding process, and how this contributed to the

formulation of my research findings. It is important to note, that the categories and coding do not correspond to my research findings, but rather, were steps towards them.

The coding process of this study extended over the last three years of my PhD. I approached the data from different angles, with different questions in mind and using different tools. As Sipe and Ghiso (2004) confirm, coding is a recursive and iterative process. Previous studies about children's meaning-making have also emphasised this aspect of coding. For example, Pahl (2012) described how she discussed preliminary coding with her adolescent research participants before returning to the analysis. In my study, the coding was discussed with the other members of the COMPARE team. Furthermore, I presented intermediary results and analyses at various academic courses and conferences. In fact, my regular participation at different conferences considerably shaped the coding process. Presenting certain topics and cases at conferences helped me to clarify relevant aspects of the data and settle on further steps of analysis. For example, while exploring the case of Lia's interest in letters or Luisa's way of expressing meaning in interaction, I discovered the relevance of emergent literacy skills and multiple modes of communication for my study. While conferences influenced the timeline and progress of my coding, the tools I employed influenced my analytical approach. I used different tools, such as pen-and-paper, Excel tables, and the coding software Nvivo to code my data. During the analysis I alternated between these tools and experimented with their affordances. I will further reflect on this in sub-chapter 6.6.7.

The following explanations about my coding are structured according to the three research questions. That said, coding did not proceed in this chronological and linear way.

Coding of literacy events (RQ1)

I will start by describing the way in which I coded and categorised the video observations of literacy events. This analysis is based on the entire corpus of video data (see sub-chapter 6.5.2). Considering the amount of data that I used, the coding in this step of the analysis was rather descriptive. My aim was to get a first impression the data and the crèches' literacy practices. Therefore, the analysis was guided by my first research question: which early literacy events are two- to four-year old children engaging in and what practices underlie these events? Practically, I established an Excel table that I used to document my coding process. I used the descriptive summaries of the video data, which were presented in sub-chapter 6.6.2. Whenever the descriptions were unfit for analysis, for example because of missing relevant information, I reconsulted the original video data and annotated the descriptions. Furthermore, I kept track of my analytical process and the development of my coding system in my research journal. In

table 13, I illustrate the codes and subcodes that I used in the analysis of literacy events in the three crèches. Furthermore, I give examples of the precise labels that I used to describe the codes and subcodes in relation to the data. The table is not an exhaustive representation of the coding system, but rather gives an overviews of my focus in the analysis.

Table 14: Overview of the coding system (literacy events)

Codes	Subcodes	Examples
Situational context	Activity	- circle time - follow up activity - parental visit - excursion - walking or waiting - free play
	Type of situation	- adult-planned - adult-initiated - child-initiated
	Participants	- name(s) of the children - name(s) of the educators
Spatial and material context	Place	- reading corner - psychomotricity room - nap area / room - forest - library
	Material	- book - printed book pages - letter-shaped candles - information board or sign - tablet - blackboard - writing tools
Literacy	Type of event	- formal literacy event - informal literacy event
	Type of literacy	- printed text - pictures - letters - pictograms - immaterial literacy (decontextualised language)
Interactions	Language(s)	- monolingual - translanguaging - translating
	Children's role	- observing - following / imitating - contributing - creating /leading

As the table shows, some of the codes have been developed deductively, and others inductively. For example, the coding of the types of events represent the differentiation between formal and informal literacy events, described by Sénéchal and LeFevre (2002). On the other hand, the coding of children's roles in interactions, is not directly linked to previous literature.

This initial coding of the literacy events allowed me to develop different categories of literacy events. These categories are at the basis of the different data set that I have used for further analysis. Some of the codes allow me to quantify and, thereby, contextualise my data. For example, through the coding, I can determine that all literacy events belonging to the category "using letters or other signs" at *Earth* were *informal*, whereas they were mostly *formal* at *Air.* This finding contributes to my understanding of the crèches' literacy practices. Furthermore, through the analysis of literacy events, I developed ideas and leads for further investigation. For example, the initial coding did not allow me to analyse the role of non-vocal modes of communication in early literacy. I developed and coded this aspect as I continued my analysis. Finally, the coding of literacy events helped me to decide which videos I wanted to transcribe in more detail. For example, I chose videos that contained a lot of verbal interactions, or intriguing elements in regard to the co-construction of meaning. These videos were then transcribed and could be used in further analysis of participants' interactions. I will now describe my coding process in relation to the second research question, about the ways in which children make meaning in literacy events, both alone, and together with others.

Coding of children's engagement with literacy (RQ2)

The coding of children's engagement with literacy can be divided into two parts, in line with the formulation of the second research question. Firstly, I coded observations during which children engage *on their own* with literacy, and, secondly, I coded observations during which children engaged with literacy *together with others.* In this step of the analysis, I used the data sets I and II (see sub-chapter 6.6.3). Starting with the video data about children's independent book used, I proceeded in a similar way to that described in the previous section. I used Excel to document my coding in the form of a table. This time, my analysis was guided by the underlying question: in which ways are children using books on their own, and how are they (verbally and non-verbally) expressing their engagement with the content of the books? To answer this question, I developed a coding system for the children's modes of engagement, which is illustrated in table 14 below.

Table 15: Overview of the coding system (Children's use of books)

Codes	Subcodes	Examples
Child's non-vocal modes	Gaze (focus)	- on the book - on the surroundings - on the others' - moving between…and…
	Gestures	- pointing - moving around
	Use of objects	- way of holding the book - way of turning pages - way of using manipulable elements of the book - way of using other objects
	Facial expression	- concentrated - showing emotions - mouthing silently - imitating expressions from characters of the book
Child's vocal modes	Speech	- named language(s) - mumbling - words / sentences - imagined language - singing - narrative intonation - no speech
	Sounds	- humming - animal noises

While I also considered the situational, spatial, and material context of the observations in this analysis step, I did not repeat this information in the table, as it had already been mentioned in the previous section. At this stage of the analysis, I noticed considerable differences in the soundscape of the videos (ranging from quiet and calm to noisy and hectic), and therefore added a subcode for this. Apart from the codes shown in the table, I took notes of the interactions between children and adults during the videos. The coding of children's modes of engagement was rooted in my exploration of literature about children's multimodal ways of communicating (e.g, Narey, 2009; Flewitt, 2005; Kenner & Kress, 2003). It also included aspects that emerged from the data, such as children's practice of making animal sounds or using what I called *imagined* language when looking at books. The analysis of the modes of engagement also informed my way of transcribing data (see sub-chapter 6.6.2). Furthermore, at this stage of the analysis, I analysed the books that were used by educators and children on the basis of the visual data (videos and photographs) as well as the fieldnotes. In the analysis of books, I coded the languages, types (e.g. fiction, non-fiction, hidden object book, alphabet), and material aspects (e.g. picture book, manipulable book, paper or cardboard pages) of the books. This analysis, in

combination with the analysis of children's engagement with books, has helped me to deepen my understanding of the ways in which the material aspects of literacy influence children's meaning-making processes. My analysis of children's engagement with literacy on their own preliminarily focussed on children's use of books. This is due, to the prevalence of this type of engagement in the data. At a later stage, I extended my analysis to other literacy-related situations, beyond the use of books. For example, I included videos showing children playing with literacy-related toys or engaging with environmental print. These situations were, however, rare and often changed as practitioners joined the children in reaction to their expressing their interest in literacy. Hence, these situations were also included in my analysis of the ways in which children make meaning of literacy together with others.

Coding of interactions during reading and writing situations (RQ3)

The last and most fine-grained step of my coding relates to the interactions between adults and children during reading and writing events **(RQ3)**. This analysis was limited to these two types of events, as they proved to be the richest in terms of interactions, as compared to other literacy events (i.e. singing). I used transcripts from the data sets II and III (see sub-chapter 6.6.3) as well as several transcripts of shared reading situations, that were representative of this type of activity in the three crèches. Here, I coded using both pen-and-paper and the coding software Nvivo. The aim of this coding was to identify moments of interaction that illustrate the ways in which practitioners and children co-construct meaning. Therefore, I coded the strategies that practitioners used to actively engage children in literacy events and to foster their understanding. Furthermore, I coded the children's vocal and non-vocal ways of participating and expressing their understanding of literacy. Finally, I grouped the moments of interaction according to the literacy-related theme that they were focussing on. In table 15, I present some of the codes and subcodes that I used. Since I presented the codes in relation to the children's ways of expressing meaning in the above section, I will not repeat this.

Table 16: Overview of the coding system (interactions during reading and writing)

Codes	Subcodes	Examples
Educators' way of engaging children	Illustrate elements from book	- re-enact /mimick - compare to surroundings - change voice
	Build on children's utterances	- include ideas in storytelling - ask for children's choices - elaborate on children's utterances

	Connect to children's lives	- refer to previous experiences / events - mention children's families
	Encourage thinking	- ask open question - challenge - make intentional mistake - ask for explanation - ask opinion
Literacy-related theme of the interaction	Literacy tools	- books - writing material - signs / symbols - digital tools
	Emergent literacy skills and knowledge	- phonological awareness - letter knowledge - spelling - vocabulary

The codes in this table point to several aspects that have become important in the formulation of my research findings. For example, "compare to surroundings", "refer to previous experiences / events", and "mention children's families", refer to instances which contributed to my finding regarding the role of connections in early literacy meaning-making (see Chapter 10). Likewise, these codes helped me to formulate the argument that early literacy meaning-making happens on three different levels (see Chapter 9).

While I coded the interactions of educators and children in relation to books, I used different forms of visualisations to support my own understanding. My underlying question was: *how* are children expressing meaning in relation to books, and *what* are they making meaning of? I visualised these aspects in the form of a quadrant model, which I further adapted and developed (see Figure 13).

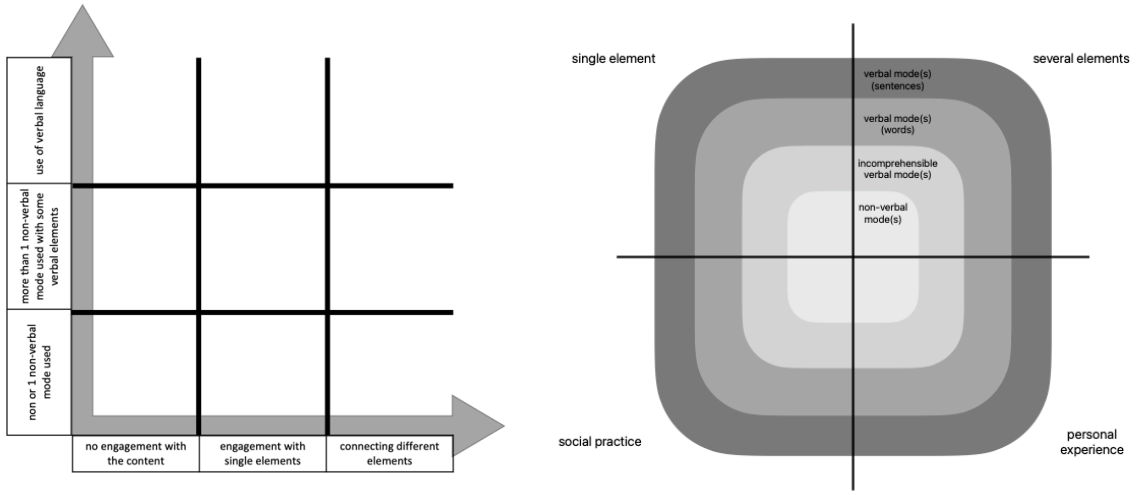

Figure 13: Quadrant models (November 2022 and January 2023)

I will further reflect on the role of visualisations in sub-chapter 6.6.7. For now, I do not wish to comment on the visualisations as such, but on the way in which they reflect the influence of theory on coding. For example, the inclusion of the social practice dimension is clearly derived from the sociocultural theoretical framework.

Triangulation of categories and coding

I described the role of data and method triangulation in my analysis in sub-chapter 6.6.5. I will now provide additional information on how I triangulated my analysis in relation to the codes and categories that I described in the previous sections. Two aspects were important in this regard: the constant oscillation between coding and theory; and the discussing of coding with other researchers.

Firstly, coding is essentially a quest of finding appropriate terms to describe aspects of the data. In fact, the choice of terms and concepts can be challenging, as one needs to find terms that represent the data appropriately. To achieve this, constantly reconsulting existing literature can be helpful. At times, I was intrigued by different aspects of the data, but lacked the words to define them. Other researchers have described similar experiences. For example, during the analysis of children's literary responses, Sipe and Ghiso (2004) identified several occasions during which children made humorous remarks, or had conversations that were seemingly "off-task" (p.480). While the researchers realised that these instances were relevant for their analysis, they did not know how to fit them into their existing coding system. Ultimately, they found the term "carnivalesque" (Sipe & Ghiso, 2004, p. 480) in a literary text of Bakthin. This term fit their observations in many ways and was, thereby, included in their coding system. Likewise, I observed the ways in which children referred to adults' behaviour in literacy events during play situations, but I was unsatisfied with my initial description of this behaviour as "enacting literacy events", or "imitating adults' behaviour". More precisely, I wished to find a term that would emphasise children's creativity and agency. Through my exploration of literature, I discovered Corsaro's concept of "interpretive reproduction" (1992). I adopted this term, because it acknowledged both the origin of children's behaviour in their observations of adults and, at the same time, children's creative appropriation of practices. This example shows how I improved my coding process, by relating my observations to previous literature

Secondly, the exchange with other researchers was an important part of triangulating my coding. Apart from the regular exchanges with the members of the COMPARE team, I presented parts of my analysis and coding system on different occasions. I participated in

research colloquia at the Universities of Luxembourg and Hamburg, and took part in several academic courses. During these courses, professors and fellow PhD students were present and commented on my analysis. These discussions have contributed to the development of my analysis in a number of ways. Firstly, they drew my attention to possible misconceptions or misinterpretation on my part. For example, the visualisation of the different types of children's engagement with books – which I presented above – was discussed and consequently, I understood my conceptualisation of early literacy meaning-making and the shortcomings of different types of visualisations better (see sub-chapter 6.6.7). Secondly, the exchanges enriched existing perspectives on the data and helped me to identify potentially relevant sources. For example, the presentations at the research colloquium at the University of Hamburg led me to explore the German texts, such as the conceptualisation of literacy from Koch and Oesterreicher (1985). Finally, I tested the quadrant model of children's engagement with literacy with the help of a student assistant. After introducing her to the model and explaining its different features, we both consulted a number of videos and grouped them according to the different dimensions of the model. Then, we compared our coding and our (different) interpretations of the data. This *reversed* coding helped me to reflect on the affordances and limitations of the quadrant model. Furthermore, such research practices inspired by "intercoder reliability" (Mayring et al., 2005, p. 12) increase the validity of research results.

6.6.7 Reflection of the coding process

In the following section, I will reflect on two important aspects of my coding process. Firstly, I will elaborate on the ways in which the different digital tools that I have used to code (i.e. Excel and Nvivo) have influenced my analytical process. Secondly, I will explain to what extent my use of different visualisations of categories, has shaped my understanding of early literacy meaning-making, as well as the development of my findings.

While the use of Excel tables has helped me to process larger amounts of data while focussing on overarching elements, analysing data in Nvivo has helped me to better understand individual situations. For example, as I coded in the one-to-one interactions around books in Excel, I was able to see that these interactions were rare and context-depended. At *Air,* there were almost no one-to-one interactions between children and educators. On the other hand, these situations frequently took place during library visits at *Water.* While this reality was important for my findings regarding the contexts of early literacy meaning-making (see Chapter 7), it did not help me to understand the ways in which children and educators co-constructed meaning in these situations. In order to understand this, I conducted a consequential analysis of individual

interactions using Nvivo. Here, I could analyse the ways in which interactions unfolded and the different strategies and responses of educators in children. For example, through this analysis, I was able to identify the relevance of connections for early literacy meaning-making and the different types of connections made by educators and children (see Chapter 10). Therefore, the combination of different methods and tools of analysis contributed to the richness of my findings and can be considered a strength of my study.

Nevertheless, the use of analytical tools also bears the possibility of certain risks and failures. While the coding process was guided by underlying questions, the affordances of the tools at use guided my process and tempted me to get lost in less relevant details. For example, when I first explored the Nvivo software, I made the mistake of starting to code before having established an overarching view of the data. I focussed on situations involving the focus child Lia from *Earth.* As I will describe in sub-chapter 8.4.1, Lia was particularly interested in letters. Hence, my inductive coding represented this aspect. Consequently, I simultaneously explored literature on emergent literacy skills and reading development (e.g. Teale et al., 1987). I coded aspects such as spelling, directionality, or letter recognition. While the aspect of emergent literacy development is generally important in the context of this study, a detailed analysis of individual skills was not. Therefore, my coding at the time did not help me to address my research questions. This experience helped me to understand the importance of returning and refocussing on guiding questions while coding.

For a long time, my analysis was driven by the question: what is early literacy meaning-making and how can it be defined or operationalised? While the aim of the thesis is not to develop a new theory of early literacy meaning-making or measure early literacy meaning-making in any way, this question was crucial for the development of my own understanding. First of all, this helped me to grasp my own conceptualisation of children's early literacy meaning-making, and secondly, it was important to understand when and how children's meaning-making becomes observable. By analysing children's engagement with literacy, I made use of different forms of visualisations. These visualisations represent my understanding of children's literacy engagement at different moments throughout the analysis process. They supported me in further developing my own conceptualisation of early literacy meaning making and moving from individual aspects (codes) to a more overarching perspective. In the following section, I will present some of these visualisations to illustrate the ways in which they represent my evolving understanding of early literacy meaning-making. I do not aim to justify or explain the content of the visualisations, but only to reflect on their overall structure and how this relates to my

conceptualisation of meaning making. The first visualisation represents different types of children's engagement with books (see Figure 14).

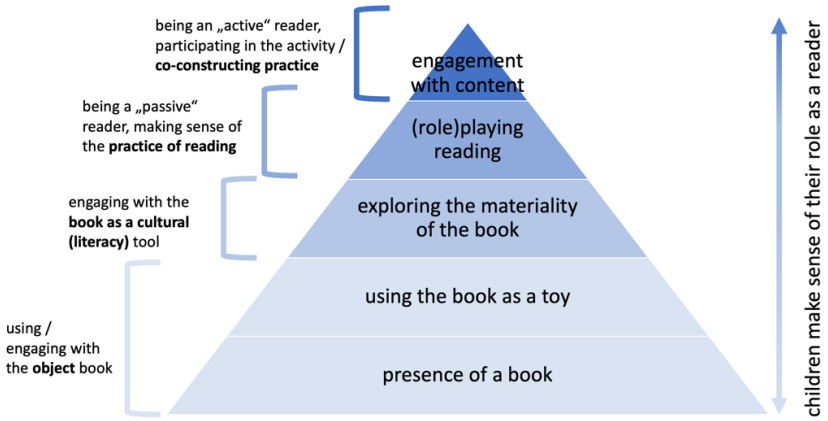

Figure 14: Pyramid visualisation of children's engagement with books (October 2022)

I used a pyramid shape to illustrate the progression from one type of use to another. This revealed that my conceptualisation of early literacy was connected to the idea of development. The representation suggests that children's way of engaging with books starts with the type at the bottom and continues developing until it reaches the top of the pyramid. This may, in part, be due to the children belonging to different age groups (ranging from two to four). To test this hunch, I conducted a further step of analysis. However, this revealed that there was no correspondence between the types of children's engagement with books and their age. While the representation contains aspects that remain relevant in my study, such as the material aspect of literacy tools, or children's active engagement, the way in which I connected the different ideas changed. To distance myself from the idea of progressive development in children's ways of engaging with books, I experimented with another type of visualisation in the form of a

flowchart (see Figure 15). Furthermore, compared to the pyramid visualisation, I tried to include other types of literacy in addition to books.

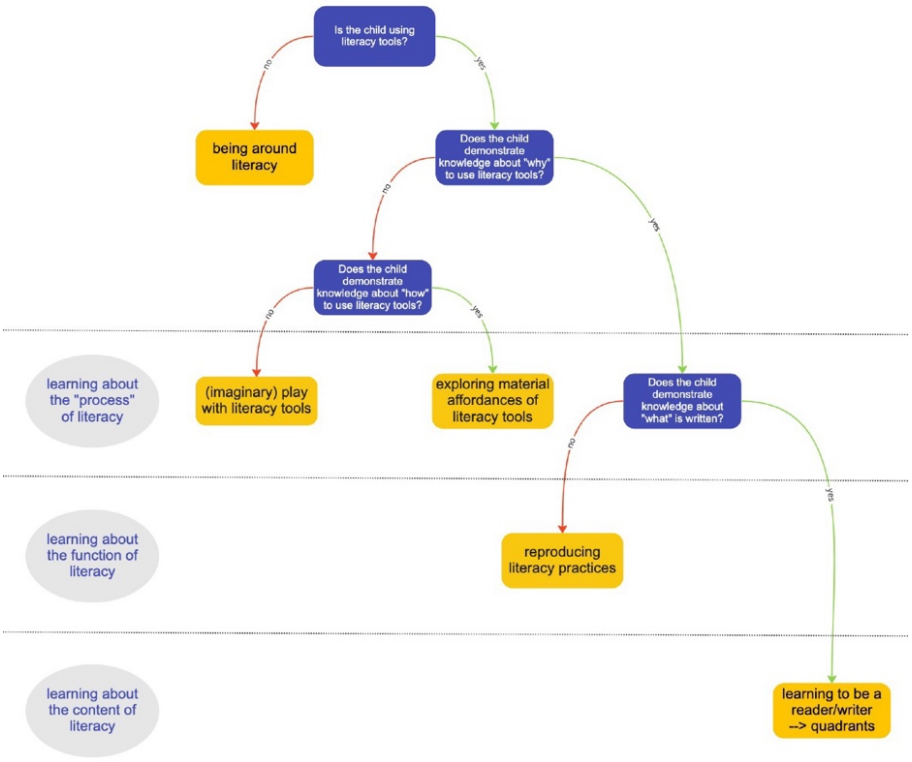

Figure 15: Flowchart visualisation of children's engagement with book (December 2022)

This visualisation is based on different questions that guided my analysis and the categorisation of children's engagement with books into different types. For each question, I formulated two possible answers (yes or no) and detailed the consequences of either answer. The flowchart can be read as an analytical tool that helps to attribute children's engagement with books into different categories. While I did not further develop this visualisation, it already shows how the idea of different levels of meaning-making (see Chapter 9) emerged. In fact, one might say that "learning about the function of literacy" developed into the idea of making meaning about literacy practices, and "learning about the content of literacy" developed into the level of making meaning of words and concepts in relation to literacy.

To conclude this reflective section, I wish to comment on the importance of *writing* in qualitative analysis. The process of writing was a crucial step in my analysis. Turning one's codes and categories into plain text is like making a bouquet of flowers: while the categories and codes represent individual flowers, the findings as they are told in this monograph represent the whole bouquet. Picking flowers (i.e. selecting data) and organising one's selection (i.e.

categories and coding), are systematic processes that can be made visible to the reader. By contrast, assembling the bouquet of flowers (i.e. writing up findings) is a more dynamic and intuitive practice, making it difficult to trace.

6.7 Research Ethics

In the final section of my methodology chapter I will address ethical considerations. When working with vulnerable groups of participants, such as the young children in this study, ethical considerations are of the utmost importance. I will provide information on the aspect of procedural ethics, as well as ethics in practice.

As educational research involves direct work with people, and in this case children, questions related to research ethics are inevitable and must be addressed. Researchers tend to explicitly reflect on research ethics prior to the data collection, but these should be considered throughout the whole research process. Different moments in the research process require different ethical considerations. Guillemin and Gillam (2016), therefore, distinguishe between two dimensions of ethics, namely *procedural ethics* and *ethics in practice.* While the former refers to more standardised procedures, such as receiving ethical approval or informed consent from participants, the latter is concerned with "everyday ethical issues that arise in the doing of research" (p. 263). The following description of the ethical considerations in the case of my research is structured according to these two dimensions.

6.7.1 Procedural ethics

Procedural ethics refer to the standardised procedures that researchers undertake at the earliest stages of a research endeavour. These procedures include gaining approval from a research ethics committee (Guillemin & Gillam, 2016), ensuring compliance with the respective data protection rules (Hopf, 2004), and receiving informed consent or assent (Harcourt & Conroy, 2005; Patton & Winter, 2023), from the study participants. I will now explain how this study complied with all three requirements above, as dictated by procedural ethics.

The completion of an application form for a research ethics committee is essential. The aim of this procedure is to protect the basic rights and safety of the research participants and ensure that participating in the study is in no way harmful to them (Guillemin & Gillam, 2016). As my PhD is embedded in the research project COMPARE, the ethical clearance for COMPARE covers my PhD. Since I only started working on the project and on my PhD after the project had already started, I was not part of this procedure. Ethical clearance had already been received

in January 2020, prior to my employment at the University of Luxembourg (ERP-19-050) (see Appendix A4.1). Most of the ethical considerations that we, as a research team, implemented had been anticipated by the project leader, Prof. Claudine Kirsch. Other aspects, especially regarding ethics in practice (see sub-chapter 6.7.2), reflect my own choices and thoughts[17]. In the application for ethical approval, questions of data protection and informed consent were discussed. I will now further elaborate on these aspects.

General Data Protection Regulation (GDPR) refers to the ways in which the personal data of individuals or institutions is handled (see Appendix A4.2). The term personal data refers to every kind of data that is linked to individuals' personal, social, or cultural identity, such as names, addresses, or biological data. Personal data should only be collected purposefully and processed in a way that prevents the identification of individuals. To achieve this, principles of confidentiality and anonymity need to be respected (Hopf, 2004). Firstly, in my research, this entailed the use of pseudonyms for the settings and participants. Secondly, whenever I shared data with others (e.g. in the context of courses at the university, conferences or exchanges with colleagues), I anonymised the data as much as possible (e.g. by pixelating or blurring images). Furthermore, student workers who assisted with transcriptions were briefed and had to sign confidentiality agreements. As Hopf (2004) explains, complying with the requirement of anonymity is especially challenging in qualitative studies, as the data unavoidably contains more overt information about the participants, compared the data to in quantitative studies. Pseudonymisation may, at times, be an insufficient measure in preventing the identification of research participants. The context of Luxembourg is especially sensitive in this regard. Considering the small size and population of the country, chances of recognising familiar people or places are high. This is why, within the research team, we decided to alter some of the focus children's personal information in our publications. More precisely, we changed two children's home languages to protect their anonymity. These children had such specific language backgrounds that, in combination with other information about their crèche, they would easily have been recognisable and identifiable. Finally, I took several data protection measures when storing the data. After each cycle of data collection, I uploaded the recorded videos and photographs to the university's secured server, before deleting any copies from mobile devices, such as the camcorder. The same is true for the digital copies of my fieldnotes. I kept the physical originals in a locked compartment of my office desk.

[17] To reflect the difference between the choices that were made within the research team and my individual choices, I will use the personal pronouns *we* or *I*.

The third aspect of procedural ethics is the informed consent of participants. Informed consent assures that the research participants understand the aims and procedures of the study and their role in it (Guillemin & Gillam, 2016). Based on this, they can then freely decide if they wish to participate or not. There are two characteristics of consent, that must be upheld: consent needs be *informed* and *written.* The managers and *référents pédagogiques* of the participating crèches were directly informed during their participation in COMPARE's professional development course (see sub-chapter 5.4). All other practitioners received written information about the project and its aims. Parents also received written information about the project, the methods of data collection and processing, and their rights as participants (see Appendix A4.3). Additionally, at *Water*, the COMPARE team assisted at a parent event, during which we provided information and addressed parents' questions and concerns. Furthermore, the parents of the focus children, received written information about the additional data that would be collected from them and from their children. Based on this information, the parents could decide whether or not they wanted to sign the consent form. Although parents signed the consent forms, their signature was not binding. At any moment of the research and without being obliged to provide justification, all parents had the right to withdraw their consent. If parents did not consent to participate in the project, we did not collect any data from their children. Practically, this meant that we did not record these children's activities in our fieldnotes or in the videos.

In Luxembourg, the legal age of consent is fourteen years. Consequently, we were not allowed to collect consent from the participating children. Furthermore, as the children in this study could not read or write, the condition of *written consent,* could not be fulfilled. Therefore, parents gave their consent on behalf of their children. As Harcourt and Conroy (2005) explain, when researching young children, the consenting persons (parents or caretakers), are rarely present when the actual data is collected. However, every participant in any research process "must be given the right to decide and determine whether it is in his or her own best interest to collaborate" (p. 569). Hence, we opted for children's assent. Children who are not legally old enough to give their consent to participate can instead give their assent (Patton & Winter, 2023). It is the researcher's responsibility to negotiate assent and determine the ways in which children express their (dis)agreement. As this was an ongoing process during the data collection, I will provide more detail on how I achieved this in the next section.

6.7.2 Ethics in practice

Ethics in practice refer to the ongoing ethical considerations during everyday research procedures (Guillemin & Gillam, 2016). Therefore, ethics in practice are important during data collection and data analysis.

During the data collection, ethical considerations mostly refer to the way in which the researcher interacts with the field and its members (Oliver, 2003). This entails establishing a relation of respect and trust. In all communication with the educators, parents, and children, I tried to be kind, honest, and open-minded. This is especially important when researching young children. Beyond from the relational aspect, collecting data in an ethical way in early childhood facilities also means adhering to the practices of each setting, in order to disturb their daily life as little as possible. The pedagogical activities and the everyday functioning of the crèches should not change because of my presence in the field. To ensure this, I paid attention to several factors. For example, I chose my position in the room carefully and discreetly, so as not to distract the children from their activities. However, it is impossible to remain invisible and not influence the setting at all. The curious nature of children inevitably led them to react to my presence as a new and unknown person in their environment. In the same way that I observed them, they observed me and asked me questions about the camcorder, my notes, and my personal background. I explained to them that I was interested in learning about their activities and that I was taking videos and notes to remember everything I saw. They were also keen on knowing what my role was as an adult in the crèche. Soon they seemed to realise that I was unlike the educators, as I was not there every day and interacted with them differently. I did not lead activities and I often took the position of a child, sitting on the floor or next to them during story reading, for instance. Some children tried to test me by disobeying the educators or disregarding rules in my presence. Not wanting to interfere with the norms of the settings, I simply reminded them of the rules and limited my direct interaction with the children a during my observations. I estimated that passivity or ignorance from my side would, in the long term, influence the children's behaviour more than my occasional interventions. At times, maintaining the role of the observer also conflicted with other moral principles. For example, on one occasion, I was alone in the room with some of the children, while they were playing in the reading corner. As I observed them, they started to quarrel and eventually began hitting each other. As no other adult was present, I had to intervene and stop the fight. At that moment, I consciously left my role as a researcher to influence the situation. From my perspective, my responsibility as an adult to prevent children from getting hurt, outweighed the need of being the observer. This example illustrates that the boundaries between observer and participant can

be fuzzy (Oliver, 2003) and that ethical considerations always involve pondering different choices.

As I explained earlier, one important aspect of ethics in practice is maintaining children's assent. The dynamic and sometimes spontaneous nature of ECEC settings did not allow me to explicitly ask children for their assent each time I wanted to record an observation. Besides, this would have disturbed the natural occurring interactions in the crèche. Instead, I opted to interpret children's assent by sensitively observing their behaviour. Through their behaviour in different situations, they communicated if they accept to be observed or not. For example, in my presence, children would sometimes hide behind cushions or furniture. This behaviour showed me that they preferred to be alone and undisturbed. In these cases I refrained from following or filming them. In addition to this sensitivity to children's behaviour, I tried to ensure understanding through openness and transparency. Whenever children asked me questions about myself or my actions, I answered and explained truthfully and in a child-appropriate manner. The transparency and communication I ensured with the parents and educators may also have contributed to the children's understanding. As parents and educators are important, trusted people for the children, the children may also have asked them questions in my absence. While I cannot influence how the parents and educators respond to the children's questions or concerns, I made certain that they had the necessary information to provide answers.

Despite the precautions that I took to respect and maintain the authentic daily lives of the crèches, I could not completely avoid influencing the participants behaviour. As Guillemin and Gillam (2016) explain, reflecting "ethically important moments" (p. 262) or dilemmas are a crucial aspect of ethics in practice. In the following section, I will describe one of the most pertinent examples of an ethically important moment in the context of my research. As previously mentioned, the crèche *Water* had an ongoing collaboration with a local library (see sub-chapter 5.5.4). The educators regularly visited the library with a small group of children, to explore and borrow books and bring them back to the crèche. I coordinated my visits to the crèche with the library visits, which usually took place on Fridays. I assumed that visits would take place once a week, but this was not the case. Due to staff shortages, the COVID-19 pandemic, and other organisational issues, there were less visits than initially planned. I thought that I had adapted my visits to the schedule of the library visits, but, in fact, the opposite was true. As I later discovered, the educators wanted to accommodate my needs and planned the library visits according to my visits. Furthermore, as they were aware of my focus on certain children, they prioritised the three focus children, always selecting them to participate in the library visits. I falsely assumed that the educators varied the groups and took other children to

the library in the weeks in between my visits. This misunderstanding was only clarified after several rounds of data collection. My presence in the field had involuntarily led to inequalities among the children and several children were unnecessarily deprived of their library visits. On the other hand, the focus children visited the library more frequently, which may have influenced their interest in books overall. In retrospect, more transparent communication between myself and the educators would have helped to prevent this. Furthermore, I should not have relied on my own assumptions, but should have questioned and clarified them earlier. As I discovered the issue, I addressed it with the educators and encouraged them to not adapt their practices to my presence.

Finally, it was important to me to analyse the collected data in a respectful and benevolent way. As a teacher, I have my own beliefs, personal preferences and opinions; that said, I tried to remain as unbiased as possible during the analysis. Some of the observed literacy practices corresponded more to my own understanding of literacy and to what I regard as a meaningful pedagogical practice, than others (see sub-chapter 12.2.1). However, I tried to avoid any judgement or evaluation of the educators' practices. This conflict between my roles as a former teacher and as a researcher was challenging. Getting to know the educators' perspectives and their backgrounds helped me to better understand their practices and make sense of them in their respective contexts. In my analysis, I tried to be open-minded and benevolent and I continued to question my own interpretations to identify potential biases.

As previously discussed, researching young children comes with specific ethical risks and considerations. MacDonald (2013) writes that there are two main aspects to consider when researching young children. Firstly, the researcher has to ensure recognition and common understanding. For the most part, young children have little to no previous experience with researchers on which they can rely. Ensuring common understanding goes both ways. While I wished that children understood me, I also had to ensure that I understood them as much as possible. By talking to the children and asking them about things I did not fully understand, I tried to avoid misinterpretation and misunderstandings. However, I had to carefully balance these interactions so as not to disrupt the flow of action and inadvertently change the children's behaviour.

Secondly, when researching young children one takes on a social responsibility (MacDonald, 2013). As children can be seen as an underrepresented group in research, the researcher must maintain a benevolent approach. My research gives visibility and a voice to children and, therefore, the way I represent them matters. This is why I chose not to visually document certain situations that I observed – for example, whenever children were in emotional distress (e.g.

crying), or during sensitive moments (e.g. changing the diapers). Filming or photographing such situations would be unethical and disrespectful to the children's dignity and privacy. Furthermore, during the whole research process, especially when analysing and presenting data about the children, I did not criticise their behaviour and recognised their right to not be judged for mistakes.

6.8 Summary

In this chapter I have presented the methodology of my study. My study applies an interpretive research paradigm and uses qualitative methods of data collection to explore children's early literacy meaning-making. I described the ways in which I observed the nine focus children's early literacy practices and documented my observations through videos, photographs, fieldnotes and thick descriptions.

Furthermore, I described the process of my data analysis in great detail. I have shown how I used different tools of preliminary data analysis which have helped me to clarify the focus of my further analysis and allowed me to disentangle the collected data to form different data sets. I outlined the ways in which I further analysed data sets to address specific topics in relation to my research questions. I described the methods of data analysis and how they have informed my analytical process. Finally, I made my coding process transparent and showed how the use of different tools and visualisations during this process has helped me to move closer towards the formulation of my findings. It has become clear that the process of data analysis was a complex, ongoing, and reiterative one.

Finally, I reflected on the ethical considerations which were relevant in the context of my study. I described the measures taken to ensure procedural ethics, such as informed consent, data protection, and ethical clearance. Furthermore, I described my way of ensuring ethical behaviour throughout the research in practice. This involved maintaining children's assent, building relationships of trust with the research participants as well as respecting their integrity and authentic practices. My methodology chapter contributes to the trustworthiness and quality of my study, as it ensures transparency and illustrates my reflexivity. In the next chapter, I will now move on to the findings of this study.

Chapter 7: Factors influencing literacy practices at *Air, Earth* and *Water*

7.1 Introduction

This first chapter of my findings, aims to gain a better understanding of the different contexts and the range of literacy practices in which children experienced literacy in the crèches, *Air, Earth,* and *Water*. Drawing on the data of the literacy events of storytelling and singing, I will show the ways in which the different factors shaped interactions between educators and children, as well as children's engagement. In Chapters 2 and 4, I presented theoretical perspectives on the importance of interactions and engagement for learning and meaning-making. From a pedagogical perspective, high-quality interactions are dialogic and enable participants to co-construct meaning and understanding (e.g. Mercer, 1995; Scott, 1998; Wells, 2009). I described how engagement contains different dimensions, namely cognitive, emotional and behavioural (Shafer & Wanless, 2023). In this chapter, I will describe children's engagement based on the ways in which they expressed interest and emotions, as well as their active participation. I argue that the contextual circumstances of literacy events – in this case space, material, group size and language use – can promote or hinder both high-quality interactions and children's engagement and, thereby, influence children's early literacy meaning-making. I will, firstly, give a quantitative overview of the various circumstances in which literacy was organised in the three crèches. I will then provide a more in-depth analysis of qualitative differences. Furthermore, I will explain what these different circumstances reveal about values underpinning the practices as well as children's and educators roles.

7.2 Quantitative description of reading and singing events

In sub-chapter 6.5.2, I presented literacy events I observed in the three crèches and the amount of video data recorded. The two types of adult-led events that I observed most frequently were shared reading and singing. This corresponds to the quantitative findings of the COMPARE project. In the survey data, 86% of the educators stated that they engaged with children during daily singing activities and over 60% of the educators read or told stories on a daily basis (Kirsch & Aleksić, 2021). Given these frequencies, I will focus on these two types of adult-led literacy events, so as to outline the circumstances of the literacy practices and present the ways

in which they shaped the interactions between educators and children. I will provide overview tables which will allow me to compare the differences between the three crèches.

7.2.1 Shared reading or storytelling[18]

To contextualise the practices of shared reading or storytelling in each of the crèches, I analysed space, material, situation, group size, and language use. In the three crèches, shared story reading or telling took place in different spaces. At *Air,* the reading corner was predominantly used, followed by the psychomotricity room. At *Earth*, the educators mostly used the cabin in the forest. Occasionally, they read books or told stories during excursions to a nearby orchard or on the pathway. As the weather became colder, practitioners also used the "winter-wagon", which the local forester had provided for the crèche so that they could shelter from bad weather. At *Water,* half of the observed events took place during library visits and the other half at the crèche. Here, educators read books in the reading corner or the eating area of the main room. While most of the observed events involved the use of picture books, storytelling at *Earth* also happened without material, and at *Air,* educators also used the Kamishibaï and audio recordings, which they played on the radio or tablet while reading stories. Shared reading or storytelling occurred in different situational contexts. While circle time, parental visits, and pre-nap time were important moments for shared reading at *Air* and *Earth,* library visits and free play situations were relevant at *Water.* Furthermore, at *Air* and *Water,* stories were read or told before eating snacks or lunch. Regarding group size, *Water* was the only crèche in which shared reading or storytelling did not exclusively happen in whole-group activities but, at times, also in small groups or in one-to-one interactions between educator and child. However, it is important to note that the group at *Air* and *Water* comprised between eight and twenty children, while the group at *Earth* was composed of about five to eight children. Finally, the language used during shared reading and storytelling in the three crèches varied. In monolingual events, educators and children only used the dominant language of the crèche. At *Air,* where the dominant language was French, most of the shared reading and storytelling events were monolingual. Bilingual events could occur during parental visits, as parents incorporated their family language into the communication in the crèches (at *Air* and *Earth)* (see also Aleksić et al., 2024 and Kirsch & Bergeron-Morin, 2023). Furthermore, at *Air*, educators used English vocabulary books, systematically translating between English and French. At *Water*, bilingual

[18] I make a distinction here between *reading* the text from a book to a group of children, or talking more freely about a story, with or without using a book.

shared reading or storytelling mostly involved the use of Luxembourgish and German, as is customary in the geographical region of the crèche. Finally, at *Earth* and *Water* educators used two or more languages strategically, to include some of the children's family languages (e.g. French or Portuguese) and enable them to better understand stories.

Table 17: Quantitative analysis of shared reading or storytelling events in the three crèches

	Shared reading or storytelling		
	Air	*Earth*	*Water*
Situational	Circle time (32/42) Before the nap (5) Before eating (3) Visit of a parent (2)	Circle time (7/14) Visit of a parent (5/14) Before the nap (2/14)	Library visit (11/21) Before the nap (6/21) Before eating (3/21) Free play (1/21)
Space	Reading corner (37/42) Psychomotricity room (5/42)	Cabin (10/14) Wagon (2/14) On the pathway (1/14) Orchard (1/14)	Library (11/21) Reading corner (7/21) Eating area (3/21)
Material	Picture book (29/42) Picture book + audio (9/42) Kamishibaï (4/42)	Picture book (13/14) No material (1/13)	Picture book (21/21)
Group size	Whole group (42/42)	Whole group (14/14)	Small group (10/21) Whole group (7/21) One-to-one (4/21)
Language use	Monolingual (30/42) Bilingual (12/42)	Multilingual (6/14) Bilingual (5/14) Monolingual (3/14)	Bilingual (11/21) Multilingual (7/21) Monolingual (3/21)

Table 16 provides a quantitative description of this analysis. These quantitative differences provide some insight into the crèches' practices of shared reading and storytelling. The numbers in the table are based on the video recordings. They indicate the total amount of video data analysed per crèche (i.e 42 videos at *Air,* 14 videos at *Earth,* and 21 videos at *Water)* and the proportion of these videos per specific circumstances. Therefore, the numbers do not correspond to the actual numbers of the situations I observed. Rather, they aim to give an approximate overview of the prevalence of certain aspects in the data. However, the real number of observed practices is higher, as these were also documented in my fieldnotes.

7.2.2 Singing or listening to songs

Singing or listening to songs was the second most frequently recorded adult-led literacy practice in the three participating crèches. However, it was observed on a daily basis in the three crèches and overall more frequently than shared reading or storytelling. This gap between observed and documented events is due to the focus of the project COMPARE on literacy and the prominence

of songs with simple and non-literary lyrics (e.g. “Baby Shark”). Similar to the shared reading and storytelling events, I analysed the aspects of space, material, situation, group size and language use. Table 17 provides a quantitative overview of each of these aspects in the three crèches. Compared to the practice of reading or telling stories, singing and listening to songs seemed to be a more spontaneous literacy activity in all three crèches. This was illustrated in several ways. Firstly, singing or listening to songs generally occurred in more varied spaces and situations everywhere. As the table shows, singing happened inside and outside of the crèches. Secondly, most of the events did not involve any material, which made it easier for educators to spontaneously engage children in singing or listening to songs. While most of the singing activities involved all the children, I also observed smaller group or one-to-one interactions at *Earth* and *Water*. These usually occurred when the children were getting dressed or were on their way to the forest or the library. Finally, most events involved singing songs in only one language, although there were some examples of multilingual events. Bilingual and multilingual events designate situations in which one or more languages *other* than the dominant languages of the crèche were used.

Table 18: Quantitative analysis of singing events in the three crèches

Singing or listening to songs			
	Air	*Earth*	*Water*
Situation	Circle time (7/30) Eating (6/30) Visit of musician (6/30) Free play (5/30) Waiting (5/30) Visit of parent (1/30)	Circle time (16/38) Walking (16/38) Getting dressed (2/38) Free play (1/38) Celebration (1/38) Eating (1/38) Waiting (1/38)	Eating (11/31) Circle time (7/31) Free play (6/31) Waiting (4/31) Shared reading (2/31) Excursion (1/31)
Space	Psychomotricity room (22/30) Reading area (6/30) Eating area (2/30)	On the pathway (17/38) Cabin (10/38) Orchard (4/38) Forest (3/38) Nap area (2/38) Garage (2/38)	Eating area (24/31) Library (2/31) Bus stop (2/31) Corridor (2/31) Parc (1/31)
Material	No material (15/30) Tablet or CD (9/30) Instruments (6/30)	No material (36/38) Tablet (1/38) Prop for dance (1/38)	No material (30/31) Toy computer (1/31)
Group size	Whole group (30/30)	Whole group (36/38) One-to-one (2/38)	Whole group (27/31) Small group (2/31) One-to-one (2/31)
Language use	Monolingual (22/30) Bilingual (6/30) Multilingual (2/30)	Monolingual (27/30) Bilingual (8/38) Multilingual (3/38)	Monolingual (17/31) Bilingual (13/31) Multilingual (1/31)

7.3 The influence of different factors on interactions and engagement

The presentation of circumstances in which storytelling and singing events occurred in the three crèches indicated differences. I will now move on to a more qualitative analysis of these circumstances to address the question: "What difference does difference make?" (Dyson, 1997, p. 2). To what extent does it matter, that the circumstances of literacy events were different, and how does this influence the ways in which educators and children interact and engage with literacy? I will provide contrasting examples from the three crèches to illustrate how space, material, group size and language use influenced literacy events. While I previously mentioned differences in regard to the situational contexts, I will not elaborate on this aspect further, as it did not appear to influence the interactions and children's engagement. It is important to note that my claim is not that the described circumstances *caused* the interactions and directly led to children's engagement in the respective situation. Rather, I wish to show to what extent how far different contextual circumstances can enable or hinder certain types of interactions and engagement during literacy events. While I am aware that space, material, group size and language use are interconnected, I will separate these dimensions in the following sub-chapters to focus on specific aspects and clearly describe the ways in which they have shaped the interactions and children's engagement in each of the situations.

7.3.1 Space

In the previous sub-chapter, I showed that shared reading events at *Air* and *Water* mostly took place in the reading corners and, specifically for *Water,* at the library. At *Earth,* most shared reading events took place in different outdoor spaces. The spaces in which singing or listening events took place were overall more varied.

Figure 17: Circular seating arrangement during shared reading (Earth, April 2021)

Figure 16: Circular seating arrangement during shared reading (Water, January 2021)

These spaces shaped the interactions between the participants as well as the ways in which children were enabled to actively participate. Spatial aspects, such as physical distance or proximity, sound, or surrounding objects, can create or prevent opportunities for different (inter)actions. As seen below, spaces influence the ways in which educators and children are positioned in relation to each other, which, in turn, affects children's view of the book, the possibility for eye contact, and the room available for movement or gestures. Furthermore, seating arrangements convey meaning as they may represent the educators' understanding of the children's roles or other underlying values. For example, sitting together in a circle (see Figures 16 and 17), gives the impression of a sense of community and equality between children and adults. On the other hand, sitting opposite each other (see Figures 18 and 19) indicates a performer-audience and power relationship conveying distance between children and adults.

Figure 19: Frontal seating arrangement in the psychomotricity room (Air, December 2020)

Figure 18: Frontal seating arrangement in the circle time area (Air, May 2021)

While one cannot assume a direct link between the positions of educators and children and their interactions, different spaces afford different opportunities. For example, sitting in a circle enables children to look at each other and notice others' reactions. This can potentially facilitate verbal and non-verbal communication, for example through touch.

In the following section, I will show two examples of shared reading events at *Earth,* to illustrate to what extent the spatial dispositions influenced the adult-child interactions, as well as children's engagement. Both situations took place in different outdoor spaces and involved the use of a picture book. I will refer back to other relevant circumstances later. In the first shared reading event in October 2020, the educator Ms Dominique read a picture book about a little mouse living in a hollow apple to a group of children in the cabin in the forest (see Figure 20).

Figure 20: Shared reading of the story of the little apple mouse (Earth, October 2020)

The book matched the crèche's current theme: apples. Earlier that week, all children had visited the local orchard to gather apples cooked apple jam at the crèche. They had also read the book about the "Apelmäischen" *(little apple mouse)*. As Figure 20 shows, the situation took place in the winter cabin that consisted of three walls and a canopy under which the group sat. The floor was covered with dirt and gravel. As the camera perspective shows, I was sitting in the circle with the group. I positioned myself opposite to Ms Dominique so as to have a clear view of the book and the focus children Etienne (sitting left to Ms Dominique) and Niklas (the second child from the right). Gloria, one of the children, is not visible in Figure 20, as she sat between me and Ms Daria (in the left frame of the picture). Because of this, the circle seemed to be split on the left and right sides of Ms Dominique who frequently turned the book from left to right to allow all the children to see the pictures while she was telling the story. The children in this large circle frequently asked Ms Dominique to turn the small book, whenever she faced the other side. The following excerpt shows that the interaction appeared to be split into two parts as Ms Dominique switched between the two sides of the circle by turning the book from left to right. The small number of children allowed Ms Daria to focus on Etienne, who was sitting next to her. This impression was reinforced by the language use of the educators (see sub-chapter 7.3.4), who switched between Luxembourgish and French to include the French-speaking child Etienne, thereby separating languages.

Line	Speaker	Original	Translation
1	Ms Dominique	Huet si sech wei gedoen?	*Is it hurt?*
2	Ygor	Nee	*No*
3	Etienne	À Etienne	*To Etienne*
4	Ms Dominique	(weist dem Tim d'Buch) Tim kuck emol hued se sech wei gedoen?	*(shows the book to Tim) Tim look here is it hurt?*
5	Tim	Nee	*No*
6	Etienne	À Etienne	*To Etienne*

7	Ms Dominique	Nee si ass an d'Gras gefall gell (dréit d'Buch bei den Etienne)	*No it fell into the grass right (turns the book towards Etienne)*
8	Ms Daria	Elle est tombée dans l'herbe Tu vois?	*It has fallen into the grass* *You see?*
9	Niklas	E Käfer war	*E beetle was*
10	Ms Dominique	(kuckt an d'Buch and dréit sech Richtung Niklas) Oh do ass och nach e Käfer ganz richteg do um Blat sëtzt nach e Käfer	*(looks into the book) Oh there is also a beetle yes exactly there on the leaf there is a beetle*
11	Niklas	Dee krabbelt	*It crawls*
12	Ms Dominique	(weist dem Etienne d'Buch) Regarde un scarabée	*(shows the book to Etienne) Look a beetle*
13	Etienne	Oh non *bum*	*Oh no *bum**
14	Ms Daria	Et la souris elle a fait *bum*	*And the mouse has made *bum**
15	Ms Dominique	*Bum*	**Bum**
16	Ms Daria	Elle est tombée	*It has fallen*
17	Etienne	Oh non (hieft Äerm)	*Oh no (lifts arms)*

Excerpt 10: From transcript of observation on the 30th of October 2020 (Earth)

The interaction in lines 1 to 7, involved the children sitting on the right side. Ms Dominique spoke Luxembourgish while facing the children on the right. Etienne asked to be shown the book in lines 3 and 6. As Ms Dominique turned towards him, Ms Daria repeated what had previously been said in French, although in a less complex way and asked Etienne if he could see. Niklas referred to the beetle he had spotted in the picture, which lead Ms Dominique to turn the book back to face him. After a short exchange (lines 9 to 11), she turned back to Etienne and repeated parts of the story in French, which resulted in Etienne speaking about the mouse that had fallen down in lines 13 to 17. The excerpt shows how Ms Dominique adapted her posture and the way she displayed the book to the children's contributions. As Ms Dominique explained to me later on, Etienne had been particularly active in this situation, which led her and Ms Daria to interact with him even more (Fieldnotes October 2020, Earth). As a result, they took more time to react to Etienne's utterances and to repeat aspects of the story in French. While the excerpt illustrates the two parallel interactions, it also shows that the children actively participated in the storytelling. Ms Dominique moderated the interactions by asking questions and building on children's utterances as the story went on. In this sense, the circular seating arrangement represents the joint character of the storytelling situation.

Figure 21: Shared reading of the story of the frog family (Earth, June 2021)

In the second example, Ms Joana was reading a book of a family of frogs on a country path (see Figure 21). In this situation, the seating arrangement was influenced by the weather and the location of the path. Owing to the sun, Ms Joana encouraged the children to sit in a row in the shady grass underneath a tree, while she sat on the path in front of them. Compared to the previous situation, this setting conveys the impression of frontality. The educator Ms Joana was positioned as the main storyteller, while the children sat in front of her, like an audience in front of a performer. As the following excerpt shows, Ms Joana was the most active person in the situation and led the storytelling. The children participated by way of brief interjections, which Ms Joana commented on, before continuing to tell the story.

Line	Speaker	Original	Translation
1	Ms Joana	Kuck a wat mengt dir wat deen hei wëll maachen mat de Fräschen?	*Look and what do you think that he wants to do with the frogs?*
2	Gloria	Iessen	*Eating*
3	Ms Joana	Jo dee Bussard seet en ass mega hongresch an dee gesäit lauter kleng Fräschen an déi wéillt en elo gäeren iessen *mhhh*	*Yes the buzzard says he is very hungry and he sees many small frogs and now he wants to eat them *mhhh**
4	Ygor	Jo (wéi e Brëllen)	*Yes (like a roar)*
5	Ms Joana	An wat mëscht hien? *Schnapp* fängt hien sech de Papa Fräsch an de Papa Fräsch ass guer net frou (panikéiert Stëmm) Looss mech lass looss mech lass ech wëll net dass de mech fänks (wedelt mat den Äerm)	*An what does he do? *Schnapp* he catches the daddy frog and the daddy frog is not happy (panicking voice) let me go let me go I don't want to be caught by you (shakes her arms)*
6	Gloria	E depois vomitar	*And afterwards puking*
7	Ms Joana	Mengs de hie misst katzen? Ech weess et net mee de Papa Fräsch ass guer net frou an d'Mama Fräsch seet (verstellt Stëmm) oh nee oh nee Kanner se	*Do you think he will need to puke? I don't know but daddy frog is not happy at all and mommy frog says (changes voices) oh no oh no kids they will take*

		huelen eis de Papa ewesch kuck dee Bussard hëlt eis de Papa ewesch	*daddy away look the buzzard is taking daddy away*
8	Gloria	Ela diz papá	*She says daddy*
9	Ms Joana	An d'Mama Fräsch kritt eng Idee	*And mommy frog has got an idea*

Excerpt 11: From transcript of observation on the 2nd of June 2021 (Earth)

Although Ms Joana spoke most in this interaction, she also involved the children, for example by asking questions (line 1 and 5) and by making the storytelling more engaging through her voice (lines 5 and 7) and gestures (line 5). Gloria participated by commenting in Luxembourgish (line 2) and Portuguese (lines 6 and 8). Ms Joana, stuck to Luxembourgish in her answers, despite also being fluent in Portuguese. Later in the story, she also had a brief exchange in Portuguese with Gloria who claimed that the mother frog had long hair and was wearing make-up (see Kirsch & Bergeron-Morin, 2023). Contrary to the previous situation, Ms Joana did not create a continuous parallel interaction by switching languages to translate for Gloria. This short excerpt does not reflect the typical practice of shared reading at *Earth,* which was more dialogic. The comparison of these two examples is not meant to infer causality between the spaces and the ways in which educators and children interacted. However, the differences in the participants' seating arrangements during shared reading mirrored the different approaches to storytelling. While the first example represents a more dialogic way of jointly *telling* the story, the second excerpt illustrates shared *reading* and involves more input from the adult. However, it is important to note that the excerpt only shows a short part of the total situation, which lasted about fifteen minutes in total. Ms Joana may have adapted her way of reading the picture book to the weather or the fact that the children did not know the story of the frog family as well as the apple mouse story.

Besides interacting differently in the two examples, the participants also reacted to the different circumstances of the environment in both situations. In the first situation, one of the older children, Ygor, started to lose interest and become agitated. Towards the end, he laid down on the ground, dug around in the dirt and played with gravel. Ms Dominique intervened so that his behaviour would not distract other children. This example shows, that the space, more precisely the gravel on the ground, allowed Ygor to engage in another activity. From the adult perspective, this can be seen as a potential distraction. In fact, on many occasions throughout the year, the educators from *Earth* reminded the children not to play with the gravel on the ground. This was partly for hygienic reasons and, partly to keep their attention focussed on the ongoing pedagogical activity. In the second example, the children also reacted to their environment. As the pathway was on a slightly elevated plane, they could see the surrounding fields. Some

children noticed a tractor which led to a short conversation about tractors, an, thus, interrupted the reading activity. In these examples, the children's interaction with their environment was not related to literacy. However, I observed many situations where the children and educators connected literacy to their environment and, in this way, made meaning of literacy-related aspects. For example, in a storytelling situation about migratory birds in winter, it was mentioned that birds have to fly South because they cannot find food on the ground anymore. Ms Joana explained and illustrated this by tapping the frozen ground in the cabin. In Chapter 10, I will elaborate on this and provide further examples of connections, which support children's early literacy meaning-making.

7.3.2 Material

In the previous sub-chapter, I have given two examples from *Earth* where Ms Dominique and Ms Joana used picture books and mentioned that the size of the book may have influenced the interactions. I will present other examples that show the ways in which materials shaped the adult-child interactions as well as children's engagement during literacy events. As I explained in sub-chapter 7.2.1, shared reading predominantly involved the use of picture books and, at *Air,* the use of audio recordings. Therefore, I selected the following examples. In the first example, the educator from *Air*, Ms Amandine, used a picture book to tell the story of Little Red Riding Hood. In the second example, she used another book in combination with a CD. Putting aside the differences brought about by the addition of an audio recording, the examples show that the two picture books had different affordances for storytelling.

In contrast to Ms Dominique, who held the book so that children could see the pictures and told the story together with them, in the following example, Ms Amandine read directly from the book, and therefore had it turned towards herself. After each page, she turned the book towards the children, showed them the pictures and engaged them in a short interaction about what had just happened in the story. The following excerpt illustrates one such interactional sequence, which took place during the shared reading of the Little Red Riding Hood story.

Line	Speaker	Original	Translation
1	Ms Amandine	(regarde la page) Car des bucherons coupèrent du bois non loin de là. Il demanda seulement à la petite fille où elle allait (tourne le livre vers les enfants) C'est qui là?	*(looks at the page) Because some woodworkers were cutting wood not far from there. He only asked the little girl where she was going (turns book towards the children)* *Who is this?*

2	Several children	Le loup	*The wolf*
3	Ms Amandine	Qu'est-ce qu'il veut?	*What does he want?*
4	Adrien	Il veut manger le petit chaperon rouge	*He wants to eat the little red riding hood*
5	Ms Amandine	Okay super Et le petit chaperon rouge va où?	*Okay super* *And where is the little red riding hood going?*
6	Antonia	Elle va apporter un petit peu de galette	*She goes to bring a little bit of cake and…*
7	Adrien	Et un petit peu de beurre	*…and a little bit of butter*
8	Ms Amandine	Très bien les bébés super À qui?	*Very good babies* *To whom?*
9	Antonia	À la grand-mère	*To the grandmother*
10	Ms Amandine	Très bien	*Very good*
11	Justine	Grand-mère	*Grandmother*
12	Antonia	La grand-mère est malade	*The grandmother is ill*
13	Ms Amandine	Oui elle est malade (retourne le livre vers soi et regarde la page) le petit chaperon rouge ne savait pas qu'il est dangereux de parler à un loup	*Yes she is ill (turns the book back towards herself and looks at the page) the little red riding hood did not know that it was dangerous to talk to a wolf*

Excerpt 12: From transcript of observation on the 14th of October 2020 (Air)

Ms Amandine engaged the children through a series of closed questions (lines 1, 3, 5 and 8). Her questions related to the content of the story and appeared to test the children's understanding of the story. Ms Amandine validated the children's answers by praising them (line 5 and 8) or by confirming their answers (line 13). However, she seemed to validate all kinds of answers. For example, she accepted Antonia's and Adrien's answers in line 6 and 7, although they did not really answer her question "où?" (*where?).* Furthermore, she did not give feedback on children's ways of expressing themselves, for example, by expanding utterances of providing additional input. The children engaged by answering the questions (lines 2, 4, 6 and 9), elaborating on the answers of peers (lines 7 and 12), or repeating after each other (line 10). The children's answers showcased their knowledge of the story. As the story had already been read to them several times before, they were familiar with the text. For example, they detailed about what Little Red Riding Hood brought to the grand-mother, using similar wording to the book. After the children answered the questions to Ms Amandine's satisfaction, she continued to read out loud. While this way of reading books, was typical at *Air,* the time accorded to interactions between pages in this excerpt as well as the length of children's utterances were unusually long.

In contrast to the previously described examples from *Earth*, the ways in which educators used picture books differed in terms of the depth and the length of the interactions, testifying both quality and underlying learning aims. While Ms Amandine seemed to focus on text comprehension, Ms Dominique seemed to foreground joint storytelling by building on children's perspectives. Ms Amandine closely followed the text from the book, whereas Ms Dominique accepted deviations from the text based on children's suggestions. For example, when Niklas mentioned the beetle in the picture, Ms Dominique acknowledged this, despite this element not playing a role in the original story.

In the example of the Little Red Riding Hood story, Ms Amandine guided and controlled the interaction. She afforded the children the time to verbally engage and decided when to continue reading the next page. By contrast, the following example shows how the use of different materials influenced the rhythm of the interaction and the ways in which children engaged with the story. Here, Ms Amandine was using a 'Cat and Mouse' (Husar & Méhée, 2011) book, which belonged to a collection of English vocabulary learning materials. Each book represented a specific lexical field and contained a CD, which could be played while looking at the pages. At *Air,* the educators used the 'Cat and Mouse' books almost daily during their circle time routine. The following excerpt on the theme of clothing items shows a typical interactions during this type of literacy event. While holding the book, Ms Amandine was letting the matching audio play. Her choice of placing the CD player across the room, did not allow her to stop the recording in between the story. The audio contained a dialogue between the cat and the mouse from the book, background noise matching the context of the story, and a sound effect (i.e. *Ding*) indicating when to turn to the next page.

Line	Speaker	Original	Translation
1	CD	*Ding*	** Ding **
2	Ms Amandine	(tourne la page)	*(turns the page)*
3	CD	Hey cat look at this t-shirt	*Hey cat look at this t-shirt*
4	Ms Amandine	Regarde ce t-shirt	*Look at this shirt*
5	CD	Wow it's great	*Wow it's great*
6	Ms Amandine	Wow il est bien	*Wow it's great*
7	CD	Do you like it?	*Do you like it?*
8	Ms Amandine	Tu l'aimes bien?	*Do you like it?*
9	CD	Oh yes I like it let's buy it	*Oh yes I like it let's buy it*
10	Ms Amandine	Oh oui je l'aime bien achetons-le	*Oh yes I like it let's buy it*
11	CD	*son de la caisse*	**sound of a cash register**
12	Mona	Moi je l'aime bien aussi	*I like it too*
13	CD	* Ding *	** Ding **
14	Ms Amandine	(tourney la page) assieds-toi sur tes fesses mon chat (tournée vers un enfant qui s'est levé)	*(turns the page) sit down on your bum my cat (turned towards a child who got up)*

15	CD	Hey cat look at this shirt	*Hey cat look at this shirt*
16	Ms Amandine	Regarde cette chemise	*Look at this shirt*
17	CD	Wow it's cool	*Wow it's cool*
18	Ms Amandine	Wow elle est cool	*Wow it's cool*
19	CD	Do you like it?	*Do you like it?*
20	Ms Amandine	Tu l'aimes bien?	*Do you like it?*
21	Sancha	(tourney vers Mona) et toi?	*(turns towards Mona) and you?*
22	CD	I like it very much	*I like it very much*
23	Ms Amandine	Je l'aime beaucoup	*I like it a lot*
24	Sancha	J'aime beaucoup	*I like a lot*
25	CD	Let's buy it	*Let's buy it*
26	Ms Amandine	Achetons-la (à Sancha) *chhhhut*	*Let's buy it (tu Sancha) *chhhut**

Excerpt 13: From transcript of observation on the 24th of November 2020 (Air)

The interactions as well as children's opportunities to engage in this situation were fundamentally different from the previously described examples. Ms Amandine followed the rhythm of interaction and behaviour as predefined by the audio recording from the CD. She translated the text from the book and CD into French (e.g. lines 4, 6, 8 and 10) and turned the pages after the signal (lines 2 and 14). Furthermore, Ms Amandine prevented children from moving around or intervening while the CD was playing (lines14 and 26). The ongoing audio recording did not leave time for questions and answers, as it was the case in the previously described examples. Whilst the aim of the activity seemed to be English vocabulary learning, it remains questionable whether Ms Amandine's systematic translation supported or hindered this. In fact, children may not have had any motivation to listen to the English words from the CD, as they knew that their educator would provide a translation. The children's role in this situation seemed to be limited to listening attentively. While most of the children remained quiet, some commented on the content of the book (line 12), asked other children for their opinion (line 21) or repeated after Ms Amandine (line 24). However, none of these interjections were taken up by Ms Amandine to engage children in a conversation. Overall, the use of the CD controlled and limited the ways in which the educator and the children interacted as well as the opportunities for active participation and engagement. This suggests, that the 'Cat and Mouse' material was not conceived to be used in shared reading events, but rather for individual activities. In fact, the *ding* sound and the repetitive structure of the book indicate that the material can be used by children on their own to train their English vocabulary through repetition. As Ms Amandine fills the short moments of silence of the CD with translations, she does not draw on this affordance of the material.

These two examples from *Air* illustrate the influence of the chosen material on interactions and engagement. While the material aspect alone is not decisive, materials used in pedagogical

activities have different affordances and limitations that can either enable or prevent high-quality interactions and children's engagement.

7.3.3. Group size

In this sub-chapter, I will focus on the ways in which differently sized groups can influence interactions and children's engagement. As I showed in sub-chapter 7.2.2, most shared reading and singing activities involved all the children in the group. Depending on the setting, this meant that about eight to twenty-five children participated. Only very rarely did children have the opportunity to encounter literacy in smaller groups or in one-to-one interactions with educators, leading me to ask the question of how group size influences interactions and engagement. As I will demonstrate using two examples from *Water,* I see more potential for high-quality interactions and for supporting children's engagement within smaller groups.
The following examples revolve around shared reading events of the picture book 'I don't want to go to bed!' (Ross, 2017). The book tells the story of a little princess, whose parents are desperately trying to get her to go to bed. However, the little princess finds different reasons for delaying her sleep. At one moment in the story she loudly calls out to her father, the king, because her teddy bear wants to have a glass of water (see Figure 22).

Figure 22: Page of the Little Princess book (Ross, 2017)

This picture in the book, seemed to be of particular interest to the children. The following two excerpts are from two different situations in which Ms Henrike and Mr Paul used the book during shared reading events. The first situation took place in September 2020, during a visit to the local library. Here Ms Henrike read the book to a small group of four children (see Figure 23). The second situation, from March 2021 took place at the crèche with Mr Paul. The latter

contrasts with the former in that it involved the whole group, which consisted of nine children that day. In the following section, I will show to what extent being part of a smaller group enabled children to engage more actively with the book and its content.

Figure 23: Shared reading of the story of the little princess (Water, October 2020)

Ms Henrike turned to the page of the book, that shows the illustration of the little princess screaming. The following excerpt starts when one of the children, Mara, described what she saw in the picture.

Line	Speaker	Original	Translation
1	Mara	Oh oh er schreit	*Oh oh he screams*
2	Ms Henrike	Da schreit die Prinzessin	*The princess screams*
3	Luisa	Papa (kuckt laachend op d'éducatrice)	*Papa (looks smilingly at the educator)*
4	Mara	Und was sagt er?	*And what does he say?*
5	Ms Henrike	Was sie sagt? Soll ich mal lesen? (weist op den Text)	*What she says? Should I read it? (points at the text)*
6	Mara	Mhm (bestätegend)	*Mhm (affirmative)*
7	Ms Henrike	Sie brüllt (jäitzt) Papaaa! Macht ihr das auch manchmal?	*She screams (screams) Papaaa! Do you also do that sometimes?*
8	Joyce	Nee	*No*
9	Tobias	(rëselt de Kapp)	*(shakes head no)*
10	Ms Henrike	Nee niemals gell (laacht)	*No never right (laughs)*
11	Joyce	Ich liebe einfach nur meinen Papa (deit eng Ëmaarmung un)	*I just love my daddy (imitates a hug)*
12	Ms Henrike	Das ist gut der Papa ist lieb gell da kann man auch gut mit dem Papa kuscheln	*That is good your daddy is nice right and you can nicely cuddle with your daddy*
13	Mara	Das ist der Papa hier (weist op d'Bild)	*This is the daddy here (points at the picture)*
14	Luisa	Boca (weist op d'Bild)	*Mouth (points at the picture)*
15	Ms Henrike	Jo genau dann ist der Papa da	*Yes right then the daddy is there*
16	Mara	Und was ist denn das? (weist op d'Bild)	*And what is this? (points at the picture)*

17	Ms Henrike	Das ist das Zäpfchen das hast du auch hinten im Hals das ist da ein bisschen komisch gezeichnet gell	*That is the uvula you also have that at the back of your throat it is painted a bit weird here right*
18	Luisa	(Fiert mam Fanger a säi Mond)	*(puts her finger in her mouth)*
19	Mara	Jo und das ist jetzt in den Bauch gemacht (fiert mam Fanger a säi Mond)	*Yes and it is now put in my belly (puts her finger in her mouth)*
20	Ms Henrike	In den Bauch hast du das gemacht?	*You put this in your belly?*
21	Mara	*Mhm* (bestätegt)	**Mhm* (affirmative)*
22	Ms Henrike	Oh ich hoffe nicht ich glaube das ist noch in deinem Hals drin	*Oh I hope not I believe this is still in your throat*
23	Mara	Nee	*No*
24	Ms Henrike	Nee ist weg? Oh je dann müssen wir mal kucken nachher (weist op d'Buch) so und was passiert was will die Prinzessin vom Papa?	*No is it gone? Oh dear than we have to look for it later (points at the book) so what happens now what does the princess want from daddy?*
25	Tobias	Kuck bei mir (weist mam Fanger a säi Mond) ich hab auch noch das da (weist op d'Buch)	*Look with me (points his finger at his opened mouth)I also still have this there (points at the book)*
26	Ms Henrike	Du hast das noch das ist gut gell ich glaube das brauchst du auch noch	*You still have it? That is good right I believe that you still need it*

Excerpt 14: From transcript of observation on the 16th of October 2020 (Water)

Ms Henrike enabled all four children to actively participate in the storytelling situation. She elaborated on children's utterances (2, 10, 15, and 26), asked (lines 5, 7, 20 and 24) and answered questions (lines 7 and 17), and commented on their remarks (lines 12, 22, 24 and 26). Furthermore, she consistently pointed to the pictures to illustrate what she was talking about. The children expressed their engagement with the story in different ways: they commented on the pictures (lines 1, 3, 13 and 14), asked (lines 4 and 16) and answered questions (lines 6, 8, 9, and 21), and connected the story to themselves (lines 11, 18, 19 and 25). Like Ms Henrike, they also pointed to pictures and used non-verbal features of communication such as gaze (line 3), gestures (line 11), or sounds (lines 6 and 21). In line 14, the focus child, Luisa, uses her family language Portuguese in combination with pointing, to label an element from the picture.

The small group size allowed the participants to sit closely together, with an equal view of the book. This facilitated the interaction as it enabled the children to see the pictures in the book at all times and to point at them, as well as see Ms Henrike pointing. Furthermore, Ms Henrike was able to take the time necessary to react to the children's utterances and thus to adapt her way of telling the story. For example, at the end of the excerpt she tried to draw the children's attention to the next part of the story by pointing at the picture and asking the children what would happen next. However, Tobias referred back to the uvula and Ms Henrike followed his interest. This enabled the children to engage with this new concept and learn about an unknown body part by way of the story. The uvula seemed to be particularly intriguing for the children.

Months later, as Mr Paul read the same book, however, as the following excerpt shows, his reaction and the resulting interaction surrounding the uvula were different. This is, amongst other reasons, due to the larger group size. Mr Paul was sitting on a chair opposite the children, who were sitting on the floor (see Figure 24). This positioning created more distance between the children and Mr Paul, compromising the children's view of the book. Mr Paul seemed to have two different aims in this situation, and, at times, these conflicted. On the one hand, he wanted to tell the story in an engaging way and to encourage the children to actively participate. On the other hand, he had to maintain order, avoid that children got up to come closer to the book and ensure that all children could see.

Figure 24: Shared reading of the story of the little princess (Water, March 2021)

Mr Paul used the book in a different way than Ms Henrike. He first read from the page out loud with the book facing towards him. Then, he turned the book towards the children and started a short conversation with them. This approach is similar to what I have described in the previous example with Ms Amandine. The following excerpt starts when Mr Paul turned to the page with the screaming princess and began reading aloud from the book.

Line	Speaker	Original	Translation
1	Mr Paul	(dréint d'Säit ëm) Okay komm mir kucken (liest vir a rifft) Papaaa! (mëscht däischter Stëmm) Du wëlls elo nach e Glas Waasser (normal Stëmm) huet de Kinnek gefrot (hell Stëmm) nee (normal Stëmm) sot di kléng Prinzessin de Gilbert awer (dréint d'Buch bei d'Kanner) Kuck do (rifft nach eng Kéier a weist op d'Bild) Papaaa!	*(turns to the next page) Okay let's take a look (screams) Papaaa! (deeper voice) Now you want a glass of water (normal voice) asks the King (high-pitched voice) nee (normal voice) said the little princess but Gilbert does (turns the book towards the children) look there (screams and points at the picture) Papaaa!*

2	Luisa	(rifft och) Papaaa!	*(screams) Papaaa!*
3	Mr Paul	(rifft nach eng Kéier) Papaaa!	*(screams) Papaaa!*
4	Irina	An wat ass hannen am Mond?	*And what is in the back of the mouth?*
5	Mr Paul	(weist op d'Bild) Dat do?	*(points at the picture) this here?*
6	Irina	Jo	*Yes*
7	Mr Paul	Dat hutt dir alleguerten dat hu mir allerguerten (weist mam Fanger a säi Mond) wa mir de Mond ganz wait opmaachen hu mir dat doten alleguer	*You all have that we all have that (points at his mouth) if we open the mouth widely we all have that*
8	Luisa	Jo futti	*Yes broken*
9	Mr Paul	(laacht) nee dat ass net futti	*(laughs) no it's not broken*
10	Matteo	(rifft) Papaaa!	*(screams) Papaaa!*
11	Luisa	Nee do (weist mam Fanger a säin Hals)	*No here (points at her throat)*
12	Mr Paul	Nee nee	*No no*
13	Irina	Ech wëll weisen	*I want to show*
14	Matteo	(rifft) Papaaa! Papaaa!	*(screams) Papaaa! Papaaa!*
15	Irina	(Steet op, geet no fir a weist mam Fanger an d'Buch)	*(gets up, walk to the front and points at the picture in the book)*
16	Matteo	(rifft) Papaaa!	*(screams) Papaaa!*
17	Luisa	Weis weis (steet och op a geet no fir)	*Show show (gets up and walks to the front)*
18	Mr Paul	Jo da sëtzt iech nach eng Kéier dohin déi aner gesinn näischt	*Yes now sit down again the others can't see*
19	Matteo	Ech gesi net	*I don't see*

Excerpt 15: From transcript of observation on the 12th of March 2021 (Water)

After this exchange, the two girls eventually returned to their seats and Mr Paul continued to read the story. Compared to the previous situation, not all of the children actively participated in the storytelling situation. Only three of the nine children who were present verbally interacted with Mr Paul. They enacted moments from the story (lines 2, 10, 14 and 16), asked questions (line 4), contributed their own understanding (line 8 and 11) and expressed the desire to be active (lines 13, 15 and 17). Mr Paul used several strategies to make the shared reading situation enjoyable for the children. He imitated different voices as he read out the text (line 1) and ensured that all the children could see the pictures (line 18). Furthermore, he tried to support the children's engagement by answering their questions (line 7) and responding to their utterances (line 3, 9 and 12).

However, compared to the previous situation, he did not take the time to build on the children's expressed understanding of the uvula. Hence, from this interaction it remains unclear what Luisa meant when she said that the uvula was "futti" (*broken*) (line 8). Furthermore, in response to Irina's question about the uvula, Mr Paul offered a vague explanation and did not name the body part. At the end of the excerpt Luisa and Irina stood up to move closer to the book, which indicated their interest in the book as well as and their dissatisfaction with the seating

arrangement. This shifted the focus of the interaction from the content of the book to the positioning of the educators and the children.

The difference in group size, is reflected in the ways the educators interacted with the children. While Ms Henrike took time to react to children's utterances and interests, Mr Paul limited the discussion so as to exclude elements that were not essential to the story, to keep order in the larger group and maintain the flow of the storytelling. Furthermore, being part of a smaller or larger group influenced the extent to which children were able to engage with the book. At the library, the four children could see the pictures in the book at all times and were closer together. In this way, it was easier for them to communicate with Ms Henrike and the others through gestures, gaze and speech. By contrast, at the crèche, the children were further away from the book, which made it more difficult for them to express themselves. While I do not claim that it is impossible to maintain a high quality of interaction and engagement within larger groups, I acknowledge that it might be easier for educators to achieve this with fewer children.

7.3.4 Language use

In the previous sub-chapters, I showed that the educators of the three crèches used multiple languages during literacy events. At the same time, it has become clear that the ways in which educators used languages were different. Ms Dominique from *Earth*, switched between Luxembourgish and French while reading the story of the little apple mouse. By switching to French she valued the language background of Etienne and enabled him to actively participate in the storytelling. Similarly, in the second example centred around the story about the frog family, Gloria contributed to the storytelling by using her family language Portuguese in addition to Luxembourgish. While Ms Joana did not systematically switch to Portuguese in her answers, she acknowledged Gloria's utterances, thereby valuing her multilingual repertoire. These examples illustrate how the use of several languages were used to promote story comprehension and their engagement. The functional role of *language as a communicative tool* seemed to prevail. Nevertheless, I have also given examples of other practices. For example, the use of the "Cat and Mouse" material at *Air,* highlighted a focus on *formal language learning*. Here, the children were taught English vocabulary in a repetitive and one-sided way. During the shared reading activity, there was no intention of encouraging the children to participate active through talk. Instead, the children's role was to listen. Rather than developing speaking skills, they practised listening skills. These examples show to what extent language use within literacy events can influence the ways in which children participate and engage.

I will now compare three more examples of musical literacy events from *Air, Earth* and *Water*. All three examples are multilingual and relate to the aims of the plurilingual education policy in Luxembourg (MENJE & SNJ, 2021), as presented in sub-chapter 5.3.3. In the examples from *Air* and *Earth,* the educators included the children's family languages through singing. While the educators at *Air* used the internet and a tablet to play songs, those at *Earth* collaborated with the parents to familiarise themselves with songs in the children's family languages. The example from *Water* shows how the educators familiarised the children with French during their circle time routine. Through these examples, I wish to show that the educators' language use within literacy events reveals underlying values. These values shape the literacy practices into which children are socialised at the three crèches.

The first example from *Air* relates to a practice which emerged a few months after the beginning of the data collection. I suspect that it resulted, in part, from the number of children, which had increased from about ten children in September 2020 to almost twenty in February 2021. While the educators separated the children into two groups for some of their pedagogical activities, they also organised literacy events during which all children were together. The following vignette illustrates such an event. It is one example of a musical activity, that I observed on several occasions in the second half of the data collection.

Vignette 1: Listening to songs in multiple languages at *Air*

> *The children are sitting in a line against the walls, in the corner of the psychomotricity room. Ms Morgane and Ms Fabienne are sitting on the floor in front of them with the tablet and the speakers. They play songs in some of the children's family languages. The educators choose nursery songs in Romanian ("Oac Oac"), Spanish ("Estrellita dónde estás"), Italian ("Batti Batti") and French ("Pirouette cacahouète"). During the songs, most children remain quiet. Some bob their heads, clap, or mouth the lyrics. The educators observe the children and comment on their reactions to see if they seem to recognise the songs or not. After each song they have a short conversation with the children. For example, they ask them with whom they speak the language or if they have ever travelled to their country of origin. Some children reply timidly. As the educators discuss which songs to play next, they seem to favour languages that are spoken by several children. The educators refer to this as "congregations". They mention that one of the children speaks Hebrew with his mom, but decide to play a song in English ("Baby shark") instead, as this language is spoken by other children as well. When they asked who else speaks English at home, one child enthusiastically confirms. Ms Fabienne corrects her and says: "Mais non, tu n'es pas Anglais" (But no, you are not English). At one point, Ms Fabienne starts to take individual children to the bathroom to change their nappies, while Ms Morgane stays with the rest of the children.*

The educators seemed to be using the songs as a tool for understanding more about the children's knowledge of their own family languages. They observed the children's reactions to see if they recognised the songs or were able to sing along. The way in which educators included the family languages in this activity grouped the children according to their common language backgrounds. As this was one of the rare occasions on which children heard their family languages inside of the crèche, the children seemed confused and even uncomfortable when suddenly addressed on the basis of language. While the educators named the languages and made some links to individual children's personal experiences, they did not further contextualise the songs. Therefore, the conversation remained superficial and there was no engagement with the lyrics or the meaning of the songs. Furthermore, children's participation in this activity was limited. Although some children seemed to be familiar with some of the songs and could sing along, the majority remained quiet. Their role appeared to be to listen to the music and be immersed in the different languages.

While the educators used a variety of songs to represent one language in the above-mentioned example, the educators from *Earth* used one song, that exists in several languages in the following example. This aspect contributed to the ways in which children could engage with the song and also with the different family languages.

The example relates to a series of activities, that took place over several weeks in the beginning of the data collection. The educators, in collaboration with the parents of the children, used the song "Head, Shoulders, Knees and Toes" to include children's family languages. All parents sang the song in their respective language, recorded it and sent the video to the educators. At the crèche, the educators regularly played the videos on the tablet during circle time and sang the song together with the children. While the educators were multilingual and spoke Luxembourgish, German, English, French, and Portuguese, there were other languages that they did not know. For example, they had to learn the lyrics of the song in Icelandic and Chinese. Children participated by singing along, mostly in the languages they already knew but they eventually also tried to sing along in other languages. Most of the time, the children seemed to enjoy the activity, and after a while, they started to spontaneously sing the song while getting dressed or in other daily situations. Two aspects seemed to be relevant in fostering the children's engagement in this example. Firstly, the activity was collaborative, in that both the educators and all the parents were included. This seemed to motivate the children and encourage engagement. Children smiled whenever they saw the video of their parents and would often ask to sing the song in a specific language. For example, Niklas and Gloria spontaneously started to sing the song in French, Portuguese and Icelandic while they were getting ready to take a

nap. They addressed other children who were present, such as Lia and said: “An elo deng Sprooch” (*And now your language*)(Observation from *Earth*, December 2020). Secondly, the song was used in combination with matching gestures. As the educators and children sang the song, they stood up and moved, thereby touching the different body parts mentioned in the song. In this way, children were enabled to participate, even though they did not speak all of the languages. Usually, the song was sung several times in the same language, with increasing speed for each repetition. Keeping up the movements with the speed of the song created an additional challenge, which children seemed to enjoy. Contrary to the example from *Air,* the educators from *Earth* included all of the children’s family languages. This was possible as all parents had sent in videos made at home of themselves or their children singing the song in their family language. While both examples evolve around the use of children’s family languages, the educators had very different approaches, revealing underlying values. The educators at *Air* seemed to test the children’s reactions when hearing their family language in the crèche. Furthermore, they gave the impression that language background determines whether or not the children belonged to specific groups. By contrast, the educators at *Earth* created a community, that included all children, parents and educators. They created an enjoyable context in which the children could engage with the different languages and connect them to gestures, body parts, and most importantly their families. The use of gestures in relation to body parts was a recurrent aspect in literacy events that involved singing. Indeed, in the last example from *Water,* gestures were also important.

At *Water,* the daily circle time routine always took place in the morning, before the children ate lunch or a snack. While one of the educators prepared the meal, another one stayed with the children and moderated the activity. The following vignette presents a typical circle time routine at *Water.*

Vignette 2: Circle time at *Water*

> *For the morning routine at Water the educator and children sit down at the tables in the main room. One child is asked to fetch one of two puppets, which are stored in a little cardboard house on the shelf. The children know that one of the puppets speaks French and the other speaks Luxembourgish. Depending on which puppet the child chooses, the song of the morning routine is sung in one or the other language. The educator impersonates the hand puppet and addresses the children in the respective language. He or she asks the children how their day is going, how they have slept, or what they have done over the weekend. Some children might answer the question or talk about other things they wish to share. Afterwards, each child is greeted in turn by the educator who sings: “Moie Moie … bass du do?” or “Bonjour, Bonjour … es-tu là?” (Hello, Hello … are you there?). The child is then supposed to answer “Jo, jo kuck hei ech sinn do” or*

> *"Oui, oui regarde je suis là" (Yes, yes look I am here). Most of the time, children sing softly and timidly and the educator whispers. Sometimes, educators encourage children to pick a body part, which the educator then names in the language of the song. As the educator and children sing, they clap their body on the chosen part rhythmically. After the round of greetings, the hand puppet is stored away, and the educator initiates the next activity.*

This example shows, how the educators incorporated French into their circle time routine by using hand puppets. Each puppet represented the use of either French or Luxembourgish during circle time. However, as the children did not understand French, the educator acted as a facilitator and translator in the situation. While the circle time at *Water* included similar elements to the other two crèches – such as the individual greeting of children, talking about one's experiences, and singing – the aspect of bilingualism was unique. In fact, as a result of their participation in the COMPARE project, the educators decided to change their circle time routine and consciously include French over a period of several weeks to familiarise children with French, thereby fulfilling the requirements of the *éducation plurilingue.* As the children were already familiar with the routine, they were able to participate, despite not understanding French. Like the educators at *Earth,* the educators at *Water* used gestures and included children's body parts when singing, to allow children to participate non-verbally. Furthermore, the use of the hand puppet increased the playfulness of the activity and may have made it more engaging for the children.

7.4 Summary

In this chapter, I have analysed the ways in which different contextual circumstances in which the literacy events were embedded appeared to have influenced the interactions between children and educators, as well as children's engagement. I have summarised the circumstances of the two most frequently observed adult-led literacy practices: shared reading or storytelling and singing or listening to songs. I showed that the literacy practices in the three crèches varied. For example, language and literacy were conceived as communicative tools, as seen in the examples from *Earth* and *Water.* On the other hand, the educators at *Air* seemed to perceive language and literacy as learning objectives. Furthermore, literacy events in the three crèches ranged from scholastic activities and formal literacy events (e.g. 'Cat and Mouse') to more informal literacy events (e.g. 'Head, Shoulders, Knees and Toes'). Hence, children encountered literacy under very different circumstances.

Furthermore, I have provided examples that illustrate the ways in which specific contextual aspects can support or hinder high-quality interactions and children's engagement. Firstly, the

spaces in which literacy events took place influenced how participants sat together and communicated. Secondly, the material used during literacy events has different affordances and limitations, in regards to interactions and engagement. As I have shown in the comparison of two shared reading situations from *Air*, the use of a CD inhibited qualitative interactions and children's engagement because it prescribed a rigid rhythm of interaction. On the other hand, picture books have the potential to allow for more flexibility and adaptation to the children's utterances. Thirdly, I have described the ways in which different group sizes influenced shared reading situations at *Water*. Here, I concluded that smaller groups facilitated high-quality interactions and children's engagement. With a smaller number of participating children, it was easier for the educator to build on children's utterances and to give further explanations. Additionally, proximity between children and the educator facilitated non-verbal communication, for example through pointing or touch. Finally, I have shown to what extent the language use within literacy events revealed underlying practices and values. While open and inclusive practices created a positive experience for children, a tokenistic use of family languages seemed to make them feel less comfortable. Furthermore, in the examples it seemed that playfulness, repetition, and gestures enabled children's active participation in the singing events. While the examples I showed in sub-chapter 7.3.4 related to language use in planned literacy events, the examples from *Earth* also illustrate the ways in which practitioners spontaneously translanguaged to facilitate children's understanding. The educators at *Earth* strategically used children's family languages and gestures to support children's understanding, whereas the educators at *Water* used flexibly used languages in a less reflected way. By contrast, the educators at *Air* only rarely used languages other than French in literacy-related interactions with children. This reveals differences in the educators' pedagogical stances. In sub-chapter 8.4.2 I will provide further examples that show the ways in which the inclusion of children's family languages contributed to early literacy meaning-making.

While I have presented the different circumstances that shape literacy events separately in this chapter, these aspects are interrelated and mutually shape each other. For example, the spaces in which literacy takes place may influence the educators' organisational choice regarding group size. At *Water,* the educators only took a small number of children to the library. At *Air,* the large size of the psychomotricity room allowed to have literacy events with a higher number of children. Likewise, group size may influence the educators' choice of material. For example, the educators at *Earth* would probably not have chosen to read a small-sized book like the 'little apple mouse' with a larger group of children, because this would have physically limited the children's view on the book.

Chapter 8: Conditions for early literacy meaning-making

8.1 Introduction

This first part of the findings was based on adult-planned activities around literacy. It provides a pedagogical perspective on the organisation of literacy in early childhood education settings. I focussed on adult-planned literacy events, such as shared reading or singing to describe the ways in which different circumstances led to different types of interactions. In the following, I will also refer to more spontaneous events, as well as peer interactions, which are equally relevant for children's early literacy meaning-making. Furthermore, I have shown that the children's engagement may be fostered or hindered by circumstantial factors. I will now present examples which show in what ways high-quality interactions and children's engagement can contribute to children's early literacy meaning-making. Meaning-making can occur if children are engaged in a situation and if they are enabled to understand it (see Chapter 4). More precisely, I could observe the children's early literacy meaning-making under three conditions: (1) if the literacy events were *authentic*, (2) if children's perspectives were *valued,* and (3) if *mutual understanding* was fostered. I will now provide further explanation of what these three aspects entail using key-moments from my data. Again, I present the conditions for early literacy meaning-making in a structured and separated way, although the different aspects are interconnected. While I focus on individual aspects in the presentation of my examples, I will also relate the different conditions to each other in my explanations.

8.2 Authentic literacy events

From a learning perspective, one can say that authentic situations are comprehensible, relate to real-life experiences and are not staged. In the context of the three crèches, I found that there were two elements that can potentially render a learning situation authentic: firstly, when the aim or function of the literacy event was comprehensible for the child and, secondly, when the literacy event was aligned with the context in which it took place. These two aspects support children in understanding and making meaning of and within literacy events.

8.2.1 Aim and function of literacy events are comprehensible for the child

I will now present three examples. The first two situations stem from the crèche *Air* and show how children used literacy-related material, without the presence of an educator. In the first situation, Antonia and Justine are playing a game together, which aims to train children to relate letters to the initial sounds of words. However, the children's way of using the material shows that they did not make sense of this and, therefore, focussed on another aspect. In the second situation, Antonia is using another material to re-enact a familiar story. The material supports her storytelling and enables her to be involved in the re-creation of the story. While the two examples from *Air* illustrate how meaningfulness can be fostered through pedagogical material, the last example from *Earth* shows that this can also be achieved when the use of literacy is linked to a real-life problem. Here, an educator is writing a letter to the forester, together with a group of children. In the letter, they ask the forester to solve the drainage issue in their cabin in the woods. The children participate by imagining and suggesting different solutions, which the educator includes in the letter. These examples show, that authentic situations can occur in different spaces, and through the use of different materials. Furthermore, children's autonomous engagement with literacy, as well as their engagement in educator-led situations, can be meaningful.

"Et ça c'est quelle couleur?" *(What colour is this?)*

In sub-chapter 7.3.2 I have argued that educational materials have different affordances of fostering meaningful interactions and children's engagement. The following example of a peer interaction at *Air* supports this claim as the interaction is shaped by the material at use. During free play, Antonia and Justine used one of the literacy trays to play. As I had previously observed how the educators used the material with other children, I understood the intended way of using it. The material consisted of a game in which cards were to be matched together in pairs. Each pair consisted of a picture of an object (around the theme of autumn) and a letter. Under each of the images was the respective noun, written in French. The text was written in capital letters and the initial letter was coloured. The letters on the second card of the pair represented the initial letters of the words and were colour-coded in the same way. For example, one pair of cards was the picture of a squirrel (in French: *écureuil*), together with the red letter "É" (see Figure 25). As seen in the picture, the educator pointed at the initial letter of the word and encouraged the child to look at the colour of the letter, to identify the correct pair.

Figure 25: Educator uses card matching game with a child (Air, October 2020)

Antonia and Justine, had also seen how the educator used the material with another child. As the two girls played the game together, Justine took on the role of the educator and asked Antonia – who took on the role of the child – to label the colours of the letters. The following excerpt shows how Justine repeatedly asked Antonia the same question in French: "Ça c'est quelle couleur?" (*What colour is this?)*. While the aspect of *colours* was previously used by the educator to scaffold the child's task of matching words and letters, this aim was not clear to Justine and Antonia. Instead of labelling the colours of the (initial) letters, they named the colours of objects in the pictures. This created misunderstandings and confusion, as the following excerpt shows.

Line	Speaker	Original	Translation
1	*Justine*	ça c'est quelle couleur ça ? (tient les cartes, face à Antonia, indique la première carte portant la lettre verte C)	*What colour is this?* (holds pile of cards up, facing Antonia, points at first card with the green letter C)
2	*Antonia*	vert	*green*
3	*Justine*	(met la carte avec le C vert sur la table) ça c'est quelle couleur? (indique la prochaine carte avec l'image d'une feuille verte)	*(puts the card with the green C on the table) what colour is this? (points at the next card with a picture of a green leaf)*
4	*Antonia*	vert j'ai déja dit	*green, I have already said it*
5	*Justine*	ça c'est les deux verts (met la carte avec la feuille verte à côté de la carte avec le C vert)	*These are the two greens (puts the card with the green leaf next to the card with the green C on the table)*
6	*Antonia*	oui c'est les mêmes non regarde là il y a le jaune donc ce n'est pas le même (indique la lettre initiale du mot feuille écrit en jaune en dessous de l'image) donc là il y a le jaune donc c'est les mêmes (met la carte avec l'image de la feuille à côté de la carte avec la lettre F et indique les deux F jaunes)	*Yes they are the same* *No look there is yellow so this is not the same (points at yellow initial letter F written under the picture)* *So this is the yellow so these are the same (puts the cartd with the picture of the leaf next to the card with the yellow F and points at the two yellow Fs)*
7	*Justine*	ça c'est quelle couleur? (montre la carte avec la lettre É en rouge)	*What colour is this? (holds up the card with a red letter É)*

8	*Antonia*	rouge	*Red*
9	*Justine*	rouge (met la dernière carte de la pile avec l'image du gland et la lettre G marquée en bleu sur la table)	*Red (puts the last card of the pile with the picture of an acorn and the initial letter G written in blue on the table)*
10	*Antonia*	Oui rouge Non ça c'est le bleu (inidique la lettre initiale bleue)	*Yes red* *No this is blue (points at the blue initial letter)*
11	*Justine*	si je le mets ici (replace la carte avec le gland à l'autre côté de la table)	*Yes I put it here (slides card with the acorn to the other side of the table*

Excerpt 16: From transcript of observation on the 15th of October 2020 (Air)

While Justine and Antonia are engaged and interpretively reproduce (Corsaro, 1992) the adult practice of asking children to label colours, they cannot make sense of the literacy-related aim of the material on their own. In lines 6 and 10 Antonia notices that the way in which they talk about the colours, does not help them to form the pairs, as is the intention. Colours may be a recurring and important aspect in children's daily experiences, but they are not a relevant characteristic of letters. In this situation, Antonia and Justine would have needed further guidance from an educator. For example, the educator could have explained to them which colours are relevant when identifying the pairs, or that letters are not characterised by their colours but by their shape.

Figure 26: Children use card matching game (Air, October 2020)

However, the presence of an educator is not always needed for children to make meaning of and within literacy events. In the following situation, Antonia was using a different type of literacy all by herself. As I will explain, the aim of the literacy event in the next situation was clearer. Therefore, this situation was authentic and allowed Antonia to be involved and make meaning.

Antonia retells the story of the animal doctor

During free play, Antonia was using material in relation to the book of the animal doctor (Escoffier & Maudet, 2021). Antonia's previous knowledge of the story and the affordances of the material enabled her to retell the story in her own way. To better understand the situation, it is necessary to first understand how the story is told in the book. Here, the doctor examines several animals who have come to him with different health issues. For example, the crocodile complains about a toothache and the elephant has a stuffy nose. The doctor consults the animals and tells them to avoid certain harmful behaviour (e.g. eat less sugar, don't eat gum with your trunk). Slowly, the waiting room of the doctor empties and only the wolf and the sheep remain. The wolf enters the doctor's office and tells him about his stomach ache. As the doctor leans into the wolf's mouth to examine him, he is eaten by the wolf. The wolf, then puts on the doctor's medical coat and calls the sheep in for consultation. As figure 27 shows, the book contains colourful illustrations of the doctor's waiting room and the consultations of the different animals. The only text is in the form of speech bubbles and the story follows a repetitive structure with recurring elements (e.g. "suivant" "*next").* The educators made use of these features of the book in the material they offered children during free play. For each of the characters in the book, they prepared a printed sheet with the corresponding illustration from the book and the name of the animal, as well as the word "docteur" (*doctor)* in French. Furthermore, the material included different figurines of the characters. All these aspects contributed to the authenticity of the literacy event. Antonia understood, that she could use the material to retell the story, as figure 28 shows.

Figure 27: Three pages from the animal doctor book (Escoffier & Maudet, 2021)

Figure 28: Child uses book and figurines to re-tell story (Air, October 2020)

Furthermore, the material enabled Antonia to be involved in the literacy event and construct her own version of the story. By creatively using the figurines and the book, Antonia expressed her understanding of the story, and adapted it to the material affordances. This is shown in the following vignette.

Vignette 3: Antonia retells the story of the animal doctor

> *Antonia starts by laying out the name sheets and places the corresponding figurines on top. As the figurine of the wolf is missing, she puts the wolf-sheet away. Then she opens the book on the first page, moves the crocodile-figurine next to the doctor-figurine and says:"T'as mal aux dents?" (Do your teeth hurt?). Then, she presses on the crocodile's belly which makes a squeaking sound. Antonia smiles and tells me: "Regardes il tousse" (Look he's coughing). She points at the crocodile in the book and repeats that he is ill and coughing. Then, she notices that the animals in the waiting room are reading books and she points at the books and labels their colours. Antonia turns back to the figurines and says: "Suivant, dit le docteur" (Next, says the doctor). As she re-enacts how the doctor looks into the crocodile's mouth, she ends up stuffing the doctor figurine into the crocodile's mouth. She smiles and tells me: "Regardes il l'a mangé" (Look he has eaten him). After that, she turns to the end of the book, to show the page on which the doctor is eaten by the wolf and says: "Il dit qu'il a mal au ventre" (He says that his belly hurts). Then, she puts the doctor figurine into the crocodile's mouth and presses on its belly, which causes the doctor figurine to fall out of the mouth. She smiles and says: "Regarde il tousse avec le docteur" (Look he coughs with the doctor). She repeats these actions several times. Then she points at the figurine of the sheep and says: "Et après il va manger lui" (And afterwards he will eat him).*

Similar to the previously described interaction with Justine, Antonia reproduced the familiar practice of labelling colours in the context of storytelling. However, she did not focus on this aspect, but rather on the relationship between the material and the story. Antonia's exploration of the material enticed her to creatively change the story from the book and tell her own version. The way in which she used the material shows that she is familiar with the course of the original

story. She cited passages from the book, such as “Suivant!” (*Next!),* and knew that the doctor is eaten at one point in the story. Furthermore, she understood that the figurines represent the characters from the book and that they play specific roles in the story. Consequently, she used the doctor figurine to examine the other animals and stated that the sheep will be eaten next. However, the figurines can also be used to play with and, thereby, discover new meanings. In this way, in Antonia’s version of the story, the doctor is eaten and later coughed out by the crocodile, instead of the wolf. Through the material and its affordances, Antonia was involved in the situation and contributed her own interpretation of the story. The situation became authentic, as she relied on her previous knowledge of the book, the repetitive structure of the story, and the material at hand. Compared to the previous situation of the letter-card game, Antonia was here enabled to understand the literacy event on her own. The material could be used in a flexible way, which allowed her to use her imagination and develop her own rules in a playful way. By contrast, the material described in the previous situation between Antonia and Justine was less versatile.

The two situations from *Air* show how material aspects can influence the meaningfulness and authenticity of a literacy event. To strengthen my argument that children’s early literacy meaning-making requires authentic literacy events with comprehensible aims, I will now provide a last showcase example. This next situation took place at *Earth* and shows how the educators created an authentic literacy event by solving real-life issues through literacy. While the examples from *Air* have highlighted the importance of literacy-related material, the next example emphasises the importance of the space in which literacy takes place.

A letter to the forester

In February 2021, the cabin in the forest, which the educators and children from *Earth* used for many of their activities was flooded. After a long and rainy winter, muddy water seeped out of the ground and ran down the close-by slope. This prevented the group from using the cabin as usual. For example, the children could not sit down on cushions on the floor for circle time, as they were accustomed to doing, and could not play in the cabin anymore. The starting point of the literacy event, therefore was a problem with directly impacted the children’s daily activities and, hence, was highly meaningful to them. The educators decided to write a letter to the forester to ask him for help and included the children in the writing process. For two consecutive days, the educators took a small group of children to the cabin, showed them the water and explained the problem. Then, they asked the children to think of possible ways in which the forester could evacuate the water from the cabin and prevent more water from coming in. The

children came up with several ideas, for example building a dam, or digging a tunnel. They explained by relating their suggestions to the surroundings, for example by moving around, pointing, and gesturing. Furthermore, the children suggested ways that the educator could include their suggestions and phrase them in the letter. For example, they said that the educator could write: "Léiwe Fierschter, kannst du eis wëg eng Bréck bauen?" (*Dear forester, could you please build us a bridge?)* (*Earth,* February, 2021).

This situation is a prime example of children's participation in a literacy event. The children actively contributed to shaping their social environment and solving a real-life problem. Furthermore, they experienced the social practice of writing a letter in an authentic way. The aim of the literacy event was clear, because the children were in the space that was referred to in the letter. Moreover, they co-constructed the formulation of the letter together with the educator and saw how their words and ideas were expressed in the form of text. Not only does this example illustrate how the authenticity of a literacy event contributes to children's meaning-making of literacy, but it also connects to the next aspect: the embeddedness of literacy. The letter to the forester was strongly embedded in the spatial context in which it took place. By contrast, the first situation between Justine and Antonia was only embedded in an abstract way (i.e. the theme of the picture corresponded to the season of the year). The literacy event centred around the doctor story, also contained some level of embeddedness, because it was connected to Antonia's previous knowledge of the story. I will now present a series of literacy events, that were strongly embedded in their respective contexts through links with previous events.

8.2.2 Literacy events align with their context

In this part, I will not present isolated literacy events, but a series of follow-up literacy events. By connecting several events and embedding them in their respective contexts, the educators managed to increase the authenticity of the literacy events, because children could relate literacy to their previous experiences.

Follow-up activities centred around the story of "The Red Thread"

Quite suitably, these activities were all connected to the book 'Der Rote Faden' (*The Red Thread*) (Balpe & Tharlet, 2014). In this story, the little dwarf Oli chases a red thread from his scarf after it was blown away by the wind. The thread lands next to a bird, who says that he could use it to build a nest. In return, the bird gives Oli two of his feathers. As Oli continues his

way along a small pond, he meets an ant. The ant wants to cross the pond but does not know how to. Oli helps the ant by building him a raft with a sail made from the two feathers. In return, the ant gives Oli two seeds. The story continues in this way. Oli meets an animal and helps them, then he receives something in return, which he uses to help the next animal and so on. In April and May 2021, this story was used for a series of follow-up activities at *Earth*. The content of the story is the first aspect that contributes to the embeddedness of the learning situations. As the story revolves around different animals from the forest, it matches the forest-based learning environment at *Earth*. The educators used different kinds of activities, such as reading or role playing, and different material, such as a book or objects from the story. First, the educators read the book out loud to the children on several occasions. Gradually, the children became familiar with the story, and were more involved in the activities. Eventually, the educators encouraged the children to re-enact the story using role play. Furthermore, they let older children, such as Niklas, retell the story to the group while using the book. In one of the activities that I observed, one educator co-told the story together with the children, using plush animals and other material, such as feathers (see Figure 29).

Figure 29: Material for follow-up activity about the red thread story (Earth, May 2021)

The continuous engagement with the red thread story in these described follow-up activities shows that the story was aligned to the context in which it was used. Follow-up activities are not just repetitions; they also help children to build a holistic understanding of a story. As the educators explained to me, through their continuous engagement with the story, the children started to anticipate narrative elements and reflect on the motivations of the different characters. They also related to the story on a more personal level. For example, some children expressed their preference for different moments in the story. They particularly liked it when Oli met the hedgehog mother and gave her the seeds he had received from the ant, to feed her hedgehog

babies. These examples show, that the children were enabled to make personal sense of the story, because it became meaningful to them. In the series of events, the embeddedness is not just visible in the pedagogical choice of organising follow-up activities, but also in individual situations. For example, when re-enacting the story using role play in the forest or at the crèche, they related it to the features of the different spaces. Hence, in the forest the children chose to recreate the scene in which Oli meets the ant, next to a hole in the ground, as this could represent the pond. At the crèche, the children chose the bench as a good place for the bird to sit on, as it was similar to a tree branch. Likewise, as Niklas told the story of the red thread to the rest of the group, he embedded it in the context of the forest. As he recounted Oli's encounter with the bird, he pointed at the crown of the tree and said: "De Villche wunnt do" *(The bird lives there)* (see Figure 30). Similarly, as the educator, Ms Dominique, re-told the story together with the children, she encouraged them to listen to the wind. In doing so, she related the wind in the beginning of the story, to the wind in the children's current environment. In sub-chapter 7.3.1, I have shown that the spaces of literacy events shape the interactions and children's ways of engaging. The situations around the story of the red thread confirm this. For example, Niklas relates characters from the book to elements of his environment as he tells the story.

Figure 30: Child relates story to the environment (Earth, May 2021)

This example from *Earth* shows that several factors, such as the organisation of pedagogical events, the content of the books, or the spatial and material aspects, can create embedded literacy events.

In this sub-chapter I have argued that children need authentic learning situations to make meaning of early literacy. Literacy events are authentic if the aim of the event is clear, whether it be through appropriate material, situational, or spatial contexts. Furthermore, authenticity

arises if the literacy event is embedded within the context of the crèche or other learning activities. In the next sub-chapter, I will provide examples that demonstrate my second claim in relation to the conditions of meaning-making, which is that children's perspectives should be included in literacy events.

8.3 Including children's perspectives

During my time in the field, I observed that educators employed two main approaches when attempting to include children's perspectives during early literacy events. Including children's personal backgrounds and, including children's ways of understanding. In the following section, I will present examples of both of these approaches. In the first example, Niklas is invited to share his experiences from a family holiday. An opportunity for learning about literacy emerges from the way in which Niklas responds to the inclusion of his perspective. To show that both educators and children can include each other's backgrounds to co-create meaning, I will provide a second example from another crèche. Here, Antonia and Cécilia shared family experiences with each other, to make sense of the concept of *fireworks*. Afterwards, I will present an example that illustrates the importance of including children's ways of understanding literacy. In this situation – which revolves around a name tag on Etienne's hat – the educator, Ms Joana, integrates Etienne's way of understanding, to foster Etienne's meaning-making in relation to print.

8.3.1 Children's personal backgrounds are included

Niklas' vacation album

This situation from *Earth* is the result of the educators' continued collaboration with parents and their efforts to include children's personal backgrounds in their practices. In February 2021, Niklas spent a family vacation in his father's home country: Iceland. Upon his return to the crèche, he brought a vacation album, which his mother had prepared. The album included photos, as well as sticky notes with some additional information written in Luxembourgish. The educators encouraged Niklas to show the album to the other children and to tell them about his holidays during circle time (see Figure 31). As the following vignette shows, Niklas acted as the storyteller and was empowered by the educators to lead the situation. The way in which he used the photo album to interact with the other children reveals his understanding of the practice of shared reading or storytelling.

Vignette 4: Niklas' vacation album

Niklas is sitting in front of the other children and is holding the album in his hands. As Ms Joana explains that they will now talk about Niklas' vacation, he tells her to be quiet and listen, because he will read first. Ms Joana is surprised and chuckles, but she lets Niklas have his way. Niklas looks at the album and talks in Icelandic, using a narrative tone of voice. Then, he turns the opened album towards the other children and asks them to describe what they can see in the picture. As the children do not answer at first, Ms Joana leans forward, looks at the picture and answers the question. Niklas confirms, turns the album towards himself, and continues to "read" the next page in the same way as before. After each page, he turns the album towards the children and asks them questions about the pictures. Whenever Ms Joana wants to assist him or take a closer look at the album, Niklas refuses and tells her: "Ech liesen" (I am reading). At one point, Ms Joana asks Niklas what he is doing in one of the pictures. As Niklas does not answer at first, Ms Joana suggests that she could read what his mother has written on the sticky note next to the picture. At first, Niklas says that he should read it, because it is in Icelandic. Ms Joana points at another note and tells him that this one is in Luxembourgish and Niklas accepts that she reads it. In the note, the mother has written that the picture shows the house's basement where they store different kinds of jam. Niklas responds by naming fruits in Icelandic. Ms Joana tries to repeat the words and says that Niklas has to teach her, because she does not know Icelandic.

Figure 31: Child tells the others about his family vacation (Earth, March 2021)

In this situation, Ms Joana's role is crucial for the inclusion of the child's personal background is central to the literacy event: firstly, she valued Niklas' family background and offered time and space to talk about his vacation; secondly, she encouraged Niklas to be the active leader of the situation; and, thirdly, Ms Joana reacted sensibly to Niklas' way of expressing his

understanding and thereby supported him. For example, when he falsely claimed that only he could read the note, she offered to read another one. Instead of undermining his leading role and correcting him, she respected and empowered him as an emergent reader. Furthermore, in what followed Ms Joana positioned herself as a language learner as Niklas taught her a few words in his family language. This shows that Ms Joana not only *included* the child's family background, but also *valued* it. By contrast, I observed situations in which educators included family languages, but did not seem to value them. For example, as I have described in sub-chapter 7.3.4, the educators at *Air* regularly played songs in the children's family languages over the speakers. However, instead of engaging the children in meaningful conversations, they observed children's reactions, to see if they could understand and recognise the songs. Similarly, educators at *Water,* who could not speak Portuguese, included words in French or Spanish when looking at books together with Luisa, a child whose family language was Portuguese. These examples show a sense of ignorance, or even condescension from the educators towards the children's backgrounds, especially when compared to the way in which Niklas' background was valued in the situation with the vacation album. Furthermore, Niklas was accorded time and space to make sense of the text on the sticky notes. He realised that, although the album was about Iceland, the text does not need to be in Icelandic as well. Furthermore, he learned about the difference between text and pictures. While he could easily talk about the content of the pictures, reading the text required different skills and knowledge. By contrast, in the other situations with Luisa and the children at *Air* the differences between languages were not addressed and, therefore, children were not enabled to make sense of them. The inclusion of children's family backgrounds is, however, not only due to the educators. As the next example shows, the children's family backgrounds can also be beneficial for early literacy meaning-making in peer interactions.

Antonia and Cécilia talk about fireworks

In this example from *Air,* Antonia and Cécilia are looking at a book together. By relating words to their experiences and building on their common language Italian, they collaboratively develop the meaning of the word "feux d'artifice" *(fireworks).* This event took place in January 2021, not long after New Year celebrations. As Antonia was looking at a book, Cécilia approached her and glanced into the book as well. She noticed something in the picture that caught her attention and pointed at it. The following vignette describes the interaction between the two girls.

Vignette 5: Antonia's and Cécilia's conversation about fireworks.

> *Antonia looks and says:"Oui, c'est quelque chose qui fait boum" (Yes, it's something that goes boom). Cécilia confirms by repeating the sentence. Antonia pauses for a moment and then tells Cécilia:"Tu sais, dans la maison de mamie et papi j'ai vue quelque chose qui fait boum" (You know, at grandma's and grandpa's house I saw something that goes boom). She hugs the opened book to her chest while saying this. Antonia adds: "En Italien ça s'appelle una botta" (In Italian it's called a bang). Cécilia bounces excitedly on her feet and says: "Oui, tu sais Antonia mon Papa a vu des feux d'artifice et nous aussi on a vu des feux d'artifice" (Yes, you know Antonia my daddy has seen fireworks and we also saw fireworks). Antonia smiles and replies: "Nous aussi !" (Us too !). Cécilia asks: "Dans la maison de papa et maman ?" (At daddy and mommy's house ?) and Antonia replies : « Non, dans la maison de papi et mamie » (No at grandpa and grandma's house). Cécilia adds : "Et moi j'ai fêté chez papi et mamie" (And I celebrated with grandma and grandpa).*

In this situation, the inclusion of children's personal backgrounds happened in a peer interaction. The picture in the book, their common knowledge of Italian, and their experiences in the context of their families led them to co-construct the meaning of the concept 'fireworks'. At first, they referred to the element in the picture by imitating the sound it makes. Then, Antonia mentioned the Italian term "una botta" *(a bang).* Antonia may have switched to Italian because she lacked the word in French or because she knew that Cécilia also speaks Italian. The term "botta" is not a direct translation of fireworks, but it is related. It is also possibly, that the element from the picture that the two children are talking about is not a precise depiction of a firework display, but something that looks similar. The conversation continued, and both children exchanged what they had recently witnessed and where. As it was the beginning of January, they were most probably talking about fireworks in the context of New Year's Eve celebrations. Cécilia contributed the French term "feux d'artifice" *(fireworks)*, while Antonia related the word to her personal experiences and memories, which Cécilia picked up on. Both aspects contribute to children's learning and understanding of words and concepts. As this example shows, the children build on the common aspects of each other's personal backgrounds to co-construct meaning. In comparison to the situation with Niklas and the vacation album, the inclusion and valuing of personal backgrounds comes from the children, and not from the educators. Furthermore, while Niklas made meaning of literacy-related concepts and practices, Antonia and Cécilia made meaning of a word. In Chapter 9 I will further elaborate on this aspect and explain that children's early literacy meaning-making can be seen on different levels: the

tools, concepts, and practices. As the two girls listened to each other and were engaged in the conversation, they mutually valued their knowledge and family experiences. However, I have also observed the opposite. For example, while singing the "Head, Shoulders, Knees and Toes" song at *Earth*, some children competed over which languages to use or expressed discontent when they sang the song in certain languages. Ygor once loudly started to sing "Cabeça" (*head)* in Portuguese as the educator talked about singing the song in Icelandic. Niklas turned to Ygor and shouted: "Nee, meng Sprooch!" (*No, my language!*). Ygor reacted by pushing Niklas away and hitting him. The educators explained that they would use all languages and emphasised the importance of using language instead of violence for conflict resolution (*Earth,* October 2020). This example illustrates three important aspects. Firstly, it shows that children did not simply copy adult-behaviour, but expressed their own opinions and perspectives. While the educators had valuing and inclusive approaches to multilingualism, children did not automatically follow their model. Secondly, the educators' reaction to the children's conflict highlights that they accorded high value to open and transparent communication with the children. They did not simply impose their own rules, but explain them to the children and want them to understand why the rules matter. Thirdly, they encouraged children to talk to each other, emphasizing the communicative function of language. From a pedagogical perspective, these perspectives can be leveraged to promote common understanding and support children's (language) learning. The following section illustrates, how an educator included a child's way of understanding, to foster early literacy meaning-making.

8.3.2 Children's ways of understanding are included

The name tag on Etienne's hat

On a walk to the forest, Etienne took off his hat and noticed the name tag on the back of it. As is common among siblings, Etienne was wearing the hat of his older brother Louis, and so, the name tag read LOUIS VILLE instead of ETIENNE VILLE. At first, Etienne seemed to think that his name was written on the name tag. He showed it to Ms Joana, pointed at it and repeatedly said that it was his name: "Ça meng Numm" *(This my name)*, using both features of his family language French and the main language of the crèche Luxembourgish. The educator, Ms Joana, read out the name of Etienne's brother Louis and Etienne agreed that the hat had previously belonged to his brother. However, he continued to say that his name was written on the name tag. The following interaction occurred.

Line	Participant	Original	Translation
1	*Etienne*	écrit Etienne oh ça Etienne (weist op d'Schëld)	*written Etienne oh this Etienne (points at the name tag)*
2	*Ms Joana*	ça c'est Etienne? (iwwerrascht)	*this is Etienne? (surprised)*
3	*Etienne*	*mhm* (affirmative Intonatioun)	**mhm* (affirmative intonation)*
4	*Ms Joana*	où c'est Etienne? tout ça?	*where is Etienne?* *all this?*
5	*Etienne*	*mhm* ça Etienne tout ça (mëscht eng kreesend Beweegung mam Fanger ronderëm d'Schëld)	**mhm* this Etienne all this (makes circular finger movement around the name tag)*
6	*Ms Joana*	tout ça?	*all this?*
7	*Etienne*	*mhm* (affirmative Intonatioun)	**mhm* (affirmative intonation)*
8	*Ms Joana*	t'es sûr? Laisse-moi regarder une fois je vais te montrer une chose (hëlt säin Handy eraus)	*are you sure? Let me take a look I will show you something (takes out her phone)*

Excerpt 17: From transcript of observation on the 2nd of June 2021 (Earth)

The excerpt shows how the educator persistently asked Etienne to clarify what he meant in order to uncover the root of his misunderstanding, using his family language French. Ms Joana seemed determined to understand Etienne's perspective. At first, Etienne pointed at the whole label and stated that it had his name written on it. Ms Joana then asked him to indicate more precisely *where* it was written. Given the children's practice of referring to the initial letters of their names as "ech" (*me*) or "mäi Numm" (*my name*), she probably assumed that Etienne was referring to the letter E in the surname VILLE. By making a circular movement with his finger around the whole label, Etienne answered Ms Joana's question and it became clear that he wrongly assumed that his name was written on the name tag. As Ms Joana realised Etienne's misunderstanding, she wanted to help him understand why he was wrong. She took out her mobile phone and typed Etienne's name in capital letters using a note-taking application. While typing, she sounded out each letter of the name. Then she showed the screen to Etienne and held it next to the name tag. She encouraged Etienne to compare the text written on the phone and the text from the name tag and asked him if it was the same. Etienne looked at the name tag and at the screen and hesitantly confirmed. Again, Ms Joana asked him to clarify. Etienne relied on the letter that he already knew best, the E, and counted it both on the screen of the phone and on the name tag. On the name tag, he identified one E whereas he counted four on the phone screen. Ms Joana followed his reasoning and further supported him in comparing the two names. In this way, Etienne was enabled to understand that, in fact, the name tag did not contain his name, but the name of his brother. Ms Joana's way of adapting her approach to Etienne's perspective, instead of imposing her own, supported his meaning-making of the text. She enabled Etienne to come to the right conclusion in his own way and in his own time. Ms

Joana and Etienne's interaction shows that the inclusion of the child's way of understanding can support early literacy meaning-making. More precisely, by adapting her explanations to Etienne's current state of understanding, Ms Joana as managed to scaffold (Wood et al., 1976) his learning process and thereby supported him in reaching his ZPD (Vygotsky, 1978). The examples from Ms Joana at *Earth,* as outlined above, illustrate how the inclusion of children's perspectives can foster early literacy meaning-making. In the next section, I will present my last claim regarding the conditions of early literacy meaning-making: literacy events should foster mutual understanding.

8.4 Fostering mutual understanding

If educators are interested in children's perspectives and value them in activities and interactions, they can create learning situations that are meaningful to the children. This also applies to the above-mentioned example of the letter to the forester, and the follow-up activities centred around the book "The Red Thread", where children became increasingly included in storytelling activities. The vacation album and the name tag situation, were examples of interactions, in which the children's perspectives were included and valued. As the pedagogical practice of organising follow-up activities shows, recurring and long-term engagement with children contributes to early literacy meaning-making. I will now provide another example of educators fostering understanding by sustaining a child's interest in letters. Afterwards, I will focus on the role of family languages in fostering understanding.

8.4.1 Fostering understanding by sustaining children's interest

Lia learns about letters over the course of the year

In this section, I will use a series of observations from *Earth*, to show how a child's interest in letters was supported and, thereby, sustained by the educators. This sustained interest led the child to develop emergent literacy skills. More precisely, Lia learned about the letters and spelling, and demonstrated phonological awareness in several activities throughout my time in the field. Table 18 summarises the observed literacy events, and the ways in which Lia engaged with letters. Lia encountered different types of writing (i.e. letter-shaped candles, handwriting, print) in various situations. Furthermore, she engaged with the letters of her own name, of her peers' names and of other words. As the names have emotional value, they may have been especially engaging.

Table 19: Literacy events sustaining child's interest in letters throughout the year (Earth)

Date	Literacy event	Lia's engagement with letters
October 2020	*Writing labels for jam jars*	Spells and sounds out her own name, relates shape and sound of letter,
December 2020	*Letter-shaped candles for the advent ritual*	Relates letters to initial sounds of familiar names, compares and counts letters, spells own name
February 2021	*Names written on the water bottles*	Recognises writing of her own name, compares to writing of Gloria's name
March 2021	*Letter-shaped candles for the birthday celebration*	Sounds out Niklas' name and counts letters together with Ms Joana

I will now provide more details about the observed literacy events and on Lia's engagement with letters in each of these events, in chronological order. My aim here is not to evaluate Lia's development of emergent literacy skills, but to highlight to what extent Lia's interest in letters was sustained over time and how this supported her meaning-making.

In October 2021, the educator, Ms Dominique, and the children cooked apple jam together on a fire in the forest. They filled the jam into jars, which the children could take home at the end of the day. As the children took a nap in the afternoon, Ms Dominique started to prepare labels for the jam jars. On each jar, Ms Dominique wrote the date, the word "Apelgebeess" *(apple jam)* in Luxembourgish, and the name of the respective child. As Lia was not resting or sleeping like the other children, she watched Ms Dominique and started to talk to her. Ms Dominique included Lia in the writing process, by letting her chose the colour of the pen, and deciding what to write on the label. Lia expressed her interest by asking questions about writing and stating that she also wanted to write. When Ms Dominique wrote Lia's name on the label, the following exchange took place.

Line	Speaker	Original	Translation
	Lia	Mäin Numm ass ronn an do och L I A (buchstawéiert säi Numm)	*My name is round and there also L I A (spells out letters of the name)*
	Ms Dominique	L jo L I A (buchstawéiert de Numm) ass däi Numm ne	*L yes L I A (spells out letters of the name) is your name right*
	Lia	Och	*Also*
	Ms Dominique	Lia	*Lia*
	Lia	An den A	*And the A*
	Ms Dominique	Den A hannen ass den A (weist op säin ronne Mond beim A) esou ronn wéi däi Mond ne A (zitt Toun an d'Längt) L I A (zitt Téin vum Numm an d'Längt)	*The A at the end is the A (points at her round mouth as she pronounces the A sound) round like your mouth right A (sounds out letter) L I A (sounds out name)*
	Lia	(fiert mam Fanger iwwert säi Mond)	*(moves finger over her mouth)*
	Ms Dominique	Fir ass den L	*In the beginning is the L*

Lia	L	*L*
Ms Dominique	L I (kombinéiert d'Téin)	*L I (blends sounds)*
Lia	L I	*L I*
Ms Dominique	A	*A*
Lia	A	*A*
Ms Dominique	Dann hu mir Lia	*Then we have Lia*

Excerpt 18: From transcript of observation on the 29th of October 2020 (Earth)

The excerpt shows that Lia contributed her knowledge about the letters of her name and Ms Dominique built on this by sounding out the letters as she wrote. For example, Ms Dominique used Lia's remark about the "roundness of her name" to relate it to the round shape of the lowercase letter a, as well as the shape made by the mouth when sounding out the letter.

In December 2020, the crèche organised daily parental visits to celebrate the Advent season. To welcome the parents, the educators decorated the cabin in the forest with festive paper stars and lights. Furthermore, they used letter-shaped candles to write the word *welcome* in the family language of each visiting parent. As these events were recurring, the children encountered the word welcome in many different languages and were this exposed to many different letters.

From Lia's engagement with the letter candles, several exchanges between the children, the educators, and the parents spontaneously emerged. For example, on the 17th December, Lia pointed out an L-shaped candle to the visiting mother and told her that this is "vu mengem Numm" *(from my name)*. This led the mother to take a closer look at the candles and talk about the letters with Lia. Furthermore, Lia related letters to the initial sounds of the names of her family members. For example, she noticed the letter B and related it to the name of her father, Bob, and the letter M to the name of her sister, Maike, and the word *Mama*. The educators, parents, and other children also participated and engaged with the letter-shaped candles. For example, Ms Dominique asked the children to identify similar letters. At first, the children pointed out letters that had the same colour. Then, Ms Dominique encouraged them to compare the letters' shapes, instead of their colours. This led the children to realise that the letters V and U are different, because one is pointed, while the other is rounded. I will further elaborate on this interaction in sub-chapter 9.3.

In February 2021, Lia again expressed her interest in letters in a peer interaction with her friend Gloria. During free play in the forest, the two girls examined their water bottles and the names that were printed on them. When I approached them, they showed me their water bottles, pointed out the print, and told me that these were their names (see Figure 33).

Figure 32: Children show me the names on their water bottles (Earth, February 2021)

Finally, in March 2021, the letter-shaped candles were again used as the group celebrated Niklas' birthday in the forest. The educator, Ms Joana, had baked four muffins. The children collected moss, sticks, and pebbles from the forest to decorate a small table. As Ms Joana arranged the candles, which spelled Niklas' name, on the table, she pronounced the sound of each letter and blended them together. Lia and the other children sounded out the name together with Ms Joana. They also counted the letters together.

These examples show, how Lia engaged with letters on various occasions over a period of several months. All of the literacy events described above were informal (Sénéchal & LeFevre, 2014), which means that educators did not aim to teach children letter knowledge and emergent literacy skills. Instead, the educators included letters authentically in their practices, and created spontaneous learning opportunities by reacting to children's interests. During the member-check interview with the educators from *Earth,* they confirmed that they generally aim to be sensitive to children's interests and to foster understanding. Regarding Lia, they told me that she frequently expressed her interest in letters, to which the educators responded positively. In turn, other children also expressed interest, and a certain dynamic developed. Overall, they found that children seemed particularly interested in letters and writing throughout the fieldwork, compared to other years. During the interview, the educators reflected on this. They suspected that they were either more aware of the children's interest in letters, due to the project, or that their way of building on children's interest had increased their print awareness.

The story of Lia's interest in letters and how it was sustained by the educators over time shows that Lia continuously engaged with letters and understood that letters carry meaning. She, therefore, made meaning of literacy and its function. For Lia, this meant that she developed emergent literacy skills (Whitehurst & Lonigan, 1998): phonological awareness and letter knowledge. Furthermore, Lia's interest in letters and the educators response to it also created

learning opportunities for other children. For example, the situation with the letter-shaped candles was initiated by Lia, but later on encouraged other children to engage as well. As I have shown, sustained interest fostered mutual understanding in these situations. I will now focus on the aspect of languages and how this promotes mutual understanding between children and educators.

8.4.2 Fostering mutual understanding by using family languages

In sub-chapter 7.3.4, I have described the ways in which language use can support or hinder children's engagement in literacy events. So far, in this chapter I have not yet focussed explicitly on the language use of the participants, although multiple language were involved. From this point of view several examples stand out. While some examples of situations took place exclusively in the dominant languages of the crèches (e.g. the letter to the forester, or the interaction around the letter-card game), others included the children's family languages. For example, in the situation with Niklas' vacation album, he taught the educator a few words in Icelandic. Similarly, Antonia used Italian to foster mutual understanding about fireworks in the interaction with Cécilia. Finally, Ms Joana did not use the crèche's main language, Luxembourgish, but Etienne's family language French, when she discussed the name tag on his hat. This language switch can be seen as a pedagogical choice, made to foster common understanding and support the child in their early literacy meaning-making. During my time in the field, I frequently observed the educators from *Earth* and *Water* switching to the children's family languages, to foster mutual understanding. At *Air,* such instances were very rare. The following examples from *Water* show how the educator, Ms Isabela, uses Portuguese and German, to engage children in shared reading situations and foster their understandings of the book.

Luisa learns about swimming fins

The first example is a story reading activity, which took place in January 2021 at *Water.* In this situation, Ms Isabela read a book called 'Das Meer ist tief und riesengroß!' *(The ocean is deep and vast)* (Rupp, 2017), to a group of children, including Portuguese-speaking Luisa. As was common in *Water,* Ms Isabela read the original German text from the book out loud and gave additional explanations to the children in Luxembourgish. As the following excerpt shows, she also used Portuguese when addressing Luisa. In this situation, Ms Isabela explained what

swimming fins are. In her explanation, she *translanguaged* (e.g. García & Wei, 2014 or García & Otheguy, 2019), by using features of Luxembourgish, Portuguese, and gestures.

Line	Speaker	Original	Translation
	Ms Isabela	Dat ass de Kinnik vum Mier gell? Kuck an hatt verstoppt sech well hat well net gesi ginn nao é Luisa? É o Rei do Mar e está aqui ela está a esconder-se não é a sereia ela não é sereia Solle mer weiderkucken?	*This is the King of the Sea right? Look and she is hiding because she doesn't want to be seen isn't that right Luisa? It is the King of the Sea and here she is hiding this is not a mermaid she is not a mermaid. Shall we continue?*
	Luisa	O que é isso?	*What is this?*
	Ms Isabela	O quê?	*What?*
	Luisa	(weist op eppes um Bild)	*(points at something in the picture)*
	Ms Isabela	Isto? Dat sinn Schwammflossen ech weess net wéi dat isto metes nos pezinhos e depois fazes assim (weist Beweegung mat de Been) e tu nadas muito rápido	*This? These are swimming fins I don't know what this you put these on your feet and then you do like this (imitates swimming movement with the legs) and you swim very fast*
	Luisa	Assim? (mëscht di selwescht Beweegung mat de Been)	*Like this? (imitates the same movements with her legs)*
	Ms Isabela	Jo genau gell weider? (liest weider vir) Hoppla da hat die kleine Schildkröte ihr Köpfchen verloren	*Yes exactly okay continue? (continues to read) Oops the little turtle has lost her head*

Excerpt 19: From transcript of observation on the 27th of January 2021 (Water)

The excerpt illustrates how Ms Isabela's flexible use of her entire semiotic repertoire fostered common understanding between her and Luisa. Through the use of their family language, Portuguese, and the gestures, Luisa was enabled to understand what swimming fins are and appropriated the meaning of the term by repeating the corresponding gestures. As such, the educator's language choice and use of gestures has contributed to Luisa's meaning-making in this situation. Luisa's way of interacting with Ms Isabela in this situation, illustrates the holistic way in which children learn in interaction (see sub-chapter 4.3). In the next example, from March 2021, Ms Isabela was looking at a book together with Tobias and Luisa at the library.

Tobias engages with the book about the Sandman

This situation is different from the previous one, as there are only two children, instead of a larger group. Therefore, Ms Isabela's way of interacting with the children is different (see sub-chapter 7.3.3). She did not read the text from the book, but, rather, engaged the children in a conversation about the book. The story is about the Sandman, and how different animals go to

sleep at night. As the following excerpt shows, Ms Isabela initially used Luxembourgish, to talk about the pictures in the book.

Line	Speaker	Original	Translation
1	*Ms Isabela*	An da soen se all gutt nuescht Äddi boa noite A wéi maache mir wa mir schlofen?	*And then they all say good night bye* *good night* *And how are we making when we are sleeping?*
2	*Luisa*	*Schnaarchgeräischer*	** snoring sounds**
3	*Tobias*	* Schnaargeräischer*	**snoring sounds**
4	*Ms Isabela*	*Schnaargeräischer* mëscht d'Luisa och esou?	** snoring sounds** *does Luisa also do this?*
5	*Luisa*	Jo	*Yes*
6	*Ms Isabela*	An den Tobias och	*And Tobias as well?*
7	*Tobias*	(wénkt jo mam Kapp)	*(nods)*
8	*Ms Isabela*	Schnaarchs du och? (kuckt op den Tobias)	*Are you also snoring?(looks at Tobias)*
9	*Tobias*	(wénkt jo mam Kapp)	*(nods)*

Excerpt 20: From transcript of observation on the 11th of March 2021 (Water)

Ms Isabela asked questions, trying to include both Luisa and Tobias in the conversation. While Tobias seemed to understand and follow the conversation, he only engaged non-verbally. For example, he answered Ms Isabela's questions by making sounds (line 3) and nodding his head (line 7). Over the course of the interaction, he contributed single words in his family language German. This may have enticed Ms Isabela to switch from Luxembourgish to German. As the following excerpt from a later moment in the situation shows, Tobias now interacted differently with Isabela. He used short sentences in German and shared his own perspective of the story, instead of just reacting to Ms Isabela's questions.

Line	Speaker	Original	Translation
1	*Ms Isabela*	So kleine Vögelchen kuck mal auf dem Baum schlafen die Vögelchen	*Little birds look the birds are sleeping on the tree*
2	*Tobias*	Und hier auch (zeigt auf das Bild im Buch)	*And here as well (points at the picture in the book)*
3	*Ms Isabela*	Ja und da auch Und wer schläft noch? Die Katze ne	*Yes and here as well* *And who else is sleeping? The cat right*
4	*Tobias*	Zwei Katzen	*Two cats*
5	*Ms Isabela*	Ja aber die hier schläft und die hier nicht also da muss das Sandmännchen den Sand nehmen und so machen (macht Handbeweung als würde sie Sand verstreuen) und dann pickst das ein bisschen in den Augen und dann werden wir müde und schlafen	*Yes but this one is sleeping and that one isn't, here the sandman needs to take the sand and do like this (imitates scattering sand with her hand) and then it stings a little in the eyes and then we get really tired and we sleep*

6	*Tobias*	Picksen	*Stinging*

Excerpt 21: From transcript of observation on the 11th of March 2021 (Water)

This excerpt shows that the inclusion of Tobias' family language, German, increased his engagement in the situation. While he only reacted to Ms Isabela's questions non-vocally at the beginning of the situation, he later spoke short sentences to share his own perspective (line 2), elaborate on what Ms Isabela said (line 4) and repeated words after her (line 6). The switch from Luxembourgish to German, thus, contributed to his engagement and supported him into making meaning of the book. In this situation, and in the situation centred on the book about the ocean, Ms Isabela adapted her language use to the needs of individual children: Luisa and Tobias, respectively. While this increased these two children's opportunities for early literacy meaning-making, it may have achieved the opposite for the other children who were present. For example, in the second example, Luisa, initially engaged in the conversation about the Sandman book. Later on, she disengaged and started to look at books on her own. While I can only speculate on the reasons behind her behaviour in this situation, it is generally evident that children can rarely engage in a conversation if it is mostly in a language that they do not understand. Naturally, educators used children's family languages more often, if they were fluent in those languages. For example, the three educators with a Portuguese language background, Ms Joana and Ms Daria from *Earth* and Ms Isabela from *Water,* frequently spoke Portuguese to specific children. Besides the dominant languages of the crèches, two other family languages were included in this way: French and German. However, not all educators made use of their own languages. For example, Ms Morgane from *Air* spoke Italian but rarely used this language with the children of the crèche. This finding reflects the results of the COMPARE questionnaires, which showed that some family languages were marginalized in crèches (Kirsch & Aleksić, 2021). While I see the use of children's family languages as a way of fostering early literacy meaning-making, it is only *one* way. As the examples show, non-vocal modes of communication, such as gesture and pointing, also contributed to the co-construction of mutual understanding while remaining inclusive. For example, Ms Isabela used gestures to illustrate the meaning of the word *swimming fins*, and Luisa and Tobias used snoring sounds to answer Ms Isabela's question. Likewise, the use of pointing in the situation about the name tag on Etienne's hat, was essential in establishing mutual understanding between Etienne and Ms Joana. Therefore, I advocate for the use of family languages and non-vocal modes of communication in a strategic and pedagogically reflective manner (see Kirsch & Mortini, 2021).

8.5 Summary

In this section, I presented the conditions of early literacy meaning-making. I have argued that children need authentic learning situations, the inclusion of their perspectives and shared understanding to be engaged in literacy events. This contributes to their meaning-making of early literacy. I showed that authentic literacy events are defined by clear aims and embeddedness. Moreover, children's perspectives may be included by relating literacy events to the children's personal background or the children's ways of understanding literacy. Finally, children were enabled to understand if their interest were sustained, or through the use of their family languages. Furthermore, in this subchapter I presented several literacy events in which children made meaning in interaction with their peers. These examples support my argument, that literacy meaning-making is possible from an early age on and happens in a range of different situations and social constellations. Moreover, I outlined the ways in which adults can support children's literacy-related learning through high quality interactions. In the following section, I will now also provide examples during which children expressed meaning-making alone and in interaction with literacy-related material.

Chapter 9: Levels of early literacy meaning-making

9.1 Introduction

In the first two findings chapters, I presented different circumstances and how they shaped adult-child interactions and children's engagement as well as different conditions for supporting early literacy meaning-making. It has become clear that young children are able to make meaning of literacy in a range of different situations. Furthermore, literacy practices varied across contexts. I will now examine the children's perspective more in depths, by including examples in which children make meaning of literacy on their own and in interaction with literacy-related material. As I described in Chapter 4, early literacy meaning-making can be defined as a co-constructive learning process, which is shaped by the sociocultural context in which it takes place. My examination of children's behaviour in situations of early literacy meaning-making has led me to further develop this conceptualisation, by considering different levels of meaning. As I will explain in the following sections, children's early literacy meaning-making involves meaning-making on the levels of tools, concepts and practices. Firstly, children develop print awareness by realising that literacy tools carry and convey meaning differently than other objects. For example, as Lia and Gloria showed me the print of their names on the water bottles, they seemed to have understood that the print carries a specific meaning. Secondly, I will show that early literacy meaning-making involves learning about literacy concepts, as well as linguistic concepts. As I demonstrated in the example of the little princess story, the children explored the meaning of the word *uvula* in interaction with the book and the educator Ms Henrike. Finally, children come to learn about the meaning of norms, values, and expectations regarding literacy. This relates to the third level: meaning-making of literacy practices. For example, as Antonia and Justine used the letter game, they reproduced the educators' practice of asking closed questions in a repetitive way. In the following sub-chapters, I will present more examples to illustrate the three levels of early literacy meaning-making. Thereby, I argue that both elements of a skills- and practice-based approach should be considered, to gain a holistic perspective on early literacy meaning-making.

9.2 Children learn that literacy tools carry meaning

As children engage with literacy through books or other literacy tools in their environment, they discover that pictures, symbols, signs, and text have a different meaning-making potential than

non-literacy related objects. Unlike non-literacy related objects, written language or other signs contain in a double layer of symbolism (see Chapter 2). They represent words or concepts, which in turn, represent reality. However, the initial meaning of reality is conserved and accessible to the person who *reads* it. Literacy tools are, therefore, tools of communication, rather than mere visualisation. Furthermore, they convey a specific meaning that does not change in relation to the context. Children may encounter pictures, symbols and signs in different situations of their daily lives. During everyday interactions and in pedagogical activities, educators may use different strategies to show children that literacy tools carry meaning. Like Ms Henrike, who pointed at the text in the book about the little princess, educators may explicitly mention that the story they read is written in the text of the book. Furthermore, they may draw the children's attention to environmental print and explain its meaning. For example, on a walk in the forest the group at *Earth* came across some forest workers who were felling down a tree. A triangular sign with an exclamation mark and the word "Holzfällung" *(Wood felling)* in capital letters caught the children attention and they asked the educators about it (see Figure 34). The educator explained the sign to the children, referring to the shape of the sign and the term "Dreieck" *(triangle)* by counting the three corners. Furthermore, she explained the meaning of the exclamation point by comparing it's shape to the pointed index finger, which means "oppassen" *(watch out)*. She also moved her finger over the word under the sign and explained that the word indicates why one needs to be careful (i.e. because there is a wood felling going on). She pointed at the forest workers, which the children then observed for a while. This situation shows, that the educator reacted to children's interest in signs in their environment and explained their meanings in an age-appropriate way.

Figure 33: Educator explains environmental print (Earth, October 2020)

These examples of high quality interactions with adults, are important first steps into discovering the meaning of literacy and can support the children's early literacy meaning-making on the first level of print awareness. In the following situations, children engaged with literacy on their own by building on their previous experiences and interactions with adults, to make meaning of literacy tools.

Etienne is engaging with the pictures in the animal vocabulary book

In the first example, three-year-old Etienne was looking at a book before naptime at *Earth*. He was sitting on his bed, wearing his pyjamas, with a pacifier in his mouth. His gaze was directed at the open book on his lap. The book, 'Mein Bilderwörterbuch, Tiere der Wildnis' (*My Animal Dictionary, Animals of the Wild)* (Bampton, 2000), contains pictures of animals in different living environments (e.g. the jungle, the arctic, or the desert) on each page. The outer frames of each page contain smaller pictures of the animals represented in the middle picture with their German names written underneath. The following vignette describes Etienne's interaction with the book.

Vignette 6: Etienne is using the animal vocabulary book

> *Etienne is looking closely at the pages and repeatedly points with his index finger at the pictures. After a while, he turns to the next page, moves his gaze over the page and starts to point again. At times he points, lifts his finger, and lets it hover over the book, as if he was searching for something. He seems to be pointing at different pictures of the same animals, for example elephants, consecutively. Repeatedly, he points at the small pictures of animals in the frame and then at the corresponding animals in the bigger picture.*

In this example, Etienne focussed on the pictures of the book and expressed his engagement non-vocally, through his gaze and by pointing. His gaze indicated that he was looking attentively at the pictures and searching for specific elements, which he then pointed at. In fact, Etienne turned his use of the book into a game-like activity, in the same way as one could use a hidden object book. By pointing, he matched pairs or groups of animals together, like the elephants. As the title of the book indicates, it is a vocabulary book about wild animals. Hence, the book inherently implies the expectation of labelling and learning vocabulary related to animals. Although the pages also contain written words, Etienne was not yet able to access their meaning. Instead, he used the pictures. The pointing shows that Etienne was not just looking at the pictures, but drawing meaning from them by relating similar elements to one another. The example shows that Etienne had learned that the pictures of a book carry meaning and can be

interacted with. His way of using the pictures on the book does not necessarily correspond to the educators' practice of telling stories. While the educators at *Earth* also frequently pointed at pictures or text, they encouraged children to think about the meaning of the story as a whole. On the other hand, Etienne focussed on labelling individual elements. In his independent way of using the book, he could be relating to his experience at home. In fact, in the COMPARE project, we have collected videos of parent-child interactions around books at home. Here, Etienne's mother pointed at the pictures and encouraged him to name the animals in the book. Knowing this may have influenced my interpretation of the previously described situation at the crèche.

Joyce develops a story about a unicorn based on the pictures of a book

In another example, one of the older children at Water also made meaning of the pictures in a book. In comparison to Etienne, four-year-old Joyce expressed herself verbally and more or less fluently. She mainly used German to tell her story, with some elements of her family language Luxembourgish (underlined in vignette). While looking at a book during one of the library visits, she used the pictures of a book about a unicorn, to construct her own version of the story.

Vignette 7: Joyce is using the unicorn book at the library

> *Before opening the book on the first page, she entitles it by saying:"Ein Einhorntag" (A unicorn day). She then turns the pages of the book, one after the other and says a sentence for each page. On the first page, there is a picture of a unicorn standing in a meadow. Joyce says: „Einhorn ist ganz allein an die wëll ihre Mama" (Unicorn is all alone and she wants her mommy). She turns to the next page, which has a picture of a goat. Joyce says: "Das ist ihre Mama, die ist schon da" (This is her mommy, she is already there). The next picture shows the unicorn and the goat together with other animals. Joyce says: "Ah das ist doch ein Einhorn, die hat kein-" (Ah this is a unicorn, she has no-). Joyce wants to continue, but she has already turned to the next and last page of the book. She ends her story by saying: "Ende"(The end).*

In this situation, Joyce created her own version of the unicorn story by creatively building on the pictures in the book. She combined different elements from the pictures (e.g. unicorn and goat) to form a coherent story. The way in which Joyce connected the different elements from the pictures was a creative and playful one. For example, developing a fictive and mother-daughter relationship between the unicorn and the goat demonstrates her use of imagination. Joyce moved beyond labelling, not only in terms of the language she used but also in terms of

the content of her story. The elements of the pictures became characters, with a background (e.g. maternal relationship between goat and unicorn) and a storyline (e.g. the unicorn is looking for her mother). The abrupt ending indicates that Joyce could have continued to develop her story, but she chose to adapt it to the length of the book. Therefore, Joyce was using the book in a creative and functional way, although her story might be different from the one in the book. This shows that literacy tools, such as books, develop their meaning in interaction with their reader. Furthermore, the abrupt ending of her story shows, that Joyce already knew that books end on the last page. While she had not yet developed the narrative competences to construct a complete story arch, she used some complex language and narrative features, such as entitling her story and verbalizing the ending. This indicates that she understood that the language used in books and storytelling is different from the language that is used in everyday conversations.

9.3 Children make meaning of concepts through literacy

The second level of early literacy meaning-making refers to children's development of concepts. Firstly, through their engagement with literacy, children make semantic meaning of language (Zittoun & Brinkman, 2012), or in other words, they develop understanding of concepts and increase their vocabulary. In sub-chapter 4.4.1, I presented the theoretical view of children's concept-formation. In this sub-chapter, I will now provide empirical evidence for this process. For example, I have already illustrated the ways in which Antonia and Cécilia co-constructively engaged with the concept of fireworks by building on their previous experiences and family backgrounds. Secondly, children appropriate knowledge and understanding of print concepts, such as directionality or differences between pictures and letters (see sub-chapter 3.4.3). In the example of the name tag on Etienne's hat, the interaction with Ms Joana enabled him to understand that the composition of *all* letters of a word determine the word's meaning. Both concepts in relation to oral and written language are part of children's early literacy meaning-making. In the next example, I will show how Luisa learns about the meaning of concepts in an interaction with Ms Paul. The use of multiple vocal and non-vocal modes of communication, support her meaning-making of concepts in this situation.

Luisa learns about the concept nose

Luisa was looking at a book together with the educator, Mr Paul, in the library. They used a book with illustrations of different body parts and associated activities. While looking at one of

the pictures in the book, Luisa noticed the illustration of the nose and drew Mr Paul's attention to it, as the following excerpt shows.

Line	Speaker	Original	Translation
1	*Luisa*	(weist op d'Bild vun der Nues am Buch)	*(points at the picture of the nose in the book)*
2	*Mr Paul*	Jo d'Nues firwat ass déi?	*Yes the nose what is it for?*
3	*Luisa*	(zitt d'Schëlleren erop)	*(shrugs shoulders)*
4	*Mr Paul*	Maach sou (schnoffelt mat der Nues)	*Do like this (sniffs nose)*
5	*Luisa*	Da pa fazer assim (schnoffelt och)	*You can do like this (sniffs as well)*
6	*Mr Paul*	Jo genau dofir ass se gutt	*Yes exactly that's what it's good for*
7	*Luisa*	*Hatchi*	**Hatchi**
8	*Mr Paul*	*Hatchi* jo genau dat ass och d'Nues jo dann muss du ee Nuesschnappech hunn	**Hatchi* yes exactly that's the nose as well yes then you have to take a napkin*
9	*Luisa*	(mëscht wéi wann et d'Nues geif botzen)	*(imitates blowing her nose)*
10	*Mr Paul*	Jo genau An do kuck (weist op d'Bild vum Kaka am Buch) dat ass *phuuu* (hält sech d'Nues zou)	*Yes indeed* *And here look (points at the picture of the poop in the book) this is *phuuu* (pinches his nose)*
11	*Luisa*	*phuuu*	**phuuu**
12	*Mr Paul*	Dat sténkt	*It stinks*
13	*Luisa*	Popo	*Bum*

Excerpt 22: From transcript of observation on the 28th of January 2021 (Water)

When Luisa pointed at the picture of the nose (line 1), Mr Paul labelled it and asked about the functions of this organ (line 2). At first, Luisa, indicated that she did not know what the nose is for by shrugging her shoulders (line 3). Mr Paul then showed her that the nose can be used to sniff or smell things, and encouraged her to try it with her own nose (line 4). Luisa repeated his action and commented in Portuguese, referring back to Mr Paul's question (line 5). After Mr Paul confirmed (line 6), she alluded to another way of using the nose, by imitating the noise of a sneeze (line 7). Again, Mr Paul confirmed and elaborated by saying that she would need a tissue for that (line 8). Luisa re-enacted the way in which she would use a tissue by imitating the gesture and sound (line 9). Then, Mr Paul drew her attention to another element of the picture, which he related to the nose. He pointed at the picture of the poo, making an appalled sound and pinching his nose (line 10). After Luisa repeated the sound (line 11), he provided a description of the poo, by saying that is smells badly (line 12). Luisa mentioned the bum (line 13), thereby connecting the poo to another part of the body.

The excerpt shows how Mr Paul supported Luisa in making meaning of the concept nose. He evoked different functions of the nose, labelled or described related aspects and elements from the pictures, and illustrated meaning non-verbally, by using sounds or gestures. Luisa, in turn, used different features of her semiotic repertoire, like Portuguese and German, body language,

gestures, and sounds, to express her knowledge about the nose. She picked up on M. Paul's explanations, but also mentioned new elements, like sneezing. The situation illustrates that learning about a concept, in this case nose, entails more than mere labelling of words or pictures. During the interaction with her educator, Luisa experienced the different functions of the nose and heard other related words, such as "Nuesschappech" *(tissue),* or "sténkt" *(stinks)*. However, Mr Paul did not systematically provide labels for other things that Luisa alluded to non-verbally. For example, he did not mention the word sneeze or sneezing, but instead repeated Luisa's sound. In terms of language input, the potential of this interaction was, therefore, not fully exploited. The situation between Mr Paul and Luisa is an example of children' meaning-making of concepts in interaction with an adult. Additionally, it also entails the first level of early literacy meaning-making. As Luisa did not only interact with Mr Paul, but also with the pictures in the book and the meaning they conveyed, the situation illustrates her development of print awareness. This supports my argument regarding the need for a holistic approach to understanding early literacy meaning-making. While the first example of this sub-chapter referred to children's meaning-making of linguistic concepts, the following example illustrates meaning-making in relation to print concepts.

Children learn about the concept of letters

In sub-chapter 8.4.1, I have presented different literacy events during which Lia's interest in letters was sustained and supported by the educators from *Earth*. I have mentioned that the educators used letter-shaped candles on several occasions to decorate the surroundings and represent words in different languages. The following excerpt from one of these situations shows, how the children learned that the defining characteristic of letters is their shape, and not their colour. It stems from a situation that took place in December 2020, during the crèche's Advent celebrations. On this particular day, French-speaking Etienne's mother visited the crèche. Accordingly, the educators wrote "Bienvenue" (*Welcome)* in French with letter-shaped candles, which they arranged on a small table in the forest (see Figure 35).

Figure 34: Letter candles spelling „Bienvenue“ (Welcome) (Earth, December 2021)

As the children showed interest in the letters by pointing and gathering around the table, the following conversation between Ms Dominique, three-year-olds Jana and Lia, and two-year-old Etienne took place.

Line	Speaker	Original	Translation
1	*Ms Dominique*	Wou ass dann dee selweschten? Weis mol	*Where is the same one? Show me*
2	*Jana*	(weist op de mauven U an de mauven V	*(points at the purple U and the purple V)*
3	*Lia*	(weist op ee vun de rouden Eeën)	*(points at one of the red Es)*
4	*Ms Dominique*	Do? Ass dat dee selweschten kuck emol (weist op déi zwee mauve Buchstawen)	*There? Is that the same one look (points at the two purple letters*
5	*Lia*	An do och (weist op en aneren rouden E)	*And there as well (points at another red E)*
6	*Ms Dominique*	Ah da kuck emol gutt op dat wierkelch dee selweschten ass (hält jeweils ee Fanger ënnert den U an de V)	*Ah look again if that is really the same (holds one finger under each of the purple letters U and V)*
7	*Lia*	Nee	*No*
8	*Ms Dominique*	Wat ass dann do anescht? Bei deem (weist op den U) a bei deem (weist op den V)	*And what is different? Between this one (points at the U) and this one (points at the V)*
9	*Etienne*	Déck	*Thick*
10	*Ms Dominique*	Mh kuck mol deen (weist op den U) an deen (weist op de V) ass dat déi selwescht Form?	*Mh look at this on (points at the U) and this one (points at the V) is that the same shape?*
11	*Jana*	Dominique deen ass dënn (weist op de V) an deen ass déck (weist op den U)	*Dominique this one is thin (points at the V) and this one is thick (points at the U)*
12	*Ms Dominique*	Jo deen hei deen ass ënnen bësse méi spatz an deen hei ass ënnen bësse méi ronn (fiert der Form vun de Buchstawe mam Fanger no)	*Yes this one is a little pointy at the bottom and this one is a little rounder (follows the shape of the letters with her finger)*
13	*Lia*	An deen doten ass dee selweschten (weist op ee rouden E) an deen doten ass dee selweschten (weist op nach en E) an deen doten ass dee selweschten (weist op deen drëtten E)	*And this one is the same (points at a red E) and this one is the same (points at another red E) and this one is the same (points at the third red E)*
14	*Ms Dominique*	Genau	*Exactly*

Excerpt 23: From transcript of observation on the 15th of December 2020 (Earth)

Ms Dominique asked the children to compare the letters and identify similar ones. Jana and Lia answered by pointing at different letters (lines 2 and 3). While Lia seemed to be on the right track, Jana's answer was based on the common colour of two letters. Colours, however, are not a defining characteristic of letters. Ms Dominique also seemed unsatisfied with Jana's answer, as she encouraged her to look again (line 4). At first, Ms Dominique did not react to Lia's utterances. This shows, that the educator's aim was not to get a correct answer from one of the children, but to support all of them in understanding *why* Jana's initial answer was incorrect. Ms Dominique scaffolded Jana's understanding by asking her to point out the differences between the two letters (line 8), and by mentioning the relevant characteristic of shape (line 10). It seemed to be Etienne's interjection in line 9, that contributed to the way in which Jana formulated her comparison of the two purple letters in line 11. While Etienne and Jana described the letters through adjectives that one would use in a different context (i.e. thick and thin), Ms Dominique provided more adequate terms (i.e. pointy and round) (line12). Finally, Lia repeated her initial answer (line 12), which was validated by Ms Dominique (line 13). In this situation, the children, especially Jana, were enabled to learn about the concept of letters. While other objects may be compared based on their colours, this characteristic is less relevant when comparing letters. Furthermore, Ms Dominique already hinted at another important aspect of letters when she said that the U and the V are round, respectively pointy at the bottom. This shows children, that letters have a top and a bottom, and that their orientation and the perspective from which they are looked at matters. Finally, in this excerpt, it was not only the scaffold provided by Ms Dominique, but also the utterances of other children, in this case Etienne, that supported Jana in developing her understanding.

In this sub-chapter, I have illustrated the ways in which children make meaning of concepts in relation to language and print. In the next sub-chapter, I will move on to the third and last level meaning, which relates to learning about and expressing understanding of literacy practices.

9.4 Children make meaning of literacy practices

While the previous sub-chapter can be linked to the *semantic* level of meaning, described by Zittoun and Brinkman (2012), the present sub-chapter relates to the *pragmatic* level of meaning. In Chapter 7, I have explained that children's literacy-related experiences in the three crèches were varied and represented different underlying literacy practices. These practices shaped the ways in which children were socialised into literacy (see sub-chapter 3.4.1) and how they

perceived their own roles in early literacy learning. During my time in the field, I observed that children expressed meaning-making of early literacy practices in various ways. They re-enacted literacy events, or reproduced adults' behaviour in literacy events during free play or other peer interactions. As explained in sub-chapter 2.3.2, the ways in which children represent and imagine reality in play indicates their understanding. Aspects of events, people, or activities are emphasised by children in play, highlighting their perceptions and perspectives. As this third level of early literacy meaning-making is highly dependent on the literacy practices of the specific context, I will re-iterate these and provide examples from the children's perspectives, for each of the three crèches.

Making meaning of literacy practices at *Air*

At *Air*, literacy practices tended to emphasise the formal aspects of language learning and a skills-based view on literacy. In interactions, adults talked predominantly and controlled children's speech. Furthermore, educators frequently evaluated children's utterances through praise or direct feedback, as the shared reading situations presented in Chapter 7 have illustrated. Literacy events at *Air* were focussed on giving input or immersing children in languages, for example by listening to several songs in different languages. Hence, children's active participation was limited, as they were mostly expected to listen. These literacy practice were also reflected, in the scholastic circle time routine at *Air*, which the following vignette describes.

Vignette 8: Circle time at *Air*

> *Circle time at Air is called "le rituel du matin" (the morning ritual) and it exclusively takes place in French. It starts with a song during which most children join the educator in making the matching gestures and some sing along. The educator then places laminated cards, with the children's names on the floor. One child after the other is called to the front and asked to find the card with their name on it. Most children quickly recognise their names and attach their card to the foreseen space on the pinboard. The educator asks each child "What is the first letter of your name?" and, at times, provides other names or words that begin with the same letter. The child can now choose between different ways of greeting, for example shaking hands, hugging, or high-fiving. They indicate their choice by taping or pointing at the respective pictogram and the educator and child greet each other accordingly. The child sits down and the procedure is repeated with the next one. After that, the educator asks each child a question, for example about their weekend, their mood, or what they had for dinner the day before. After these short individual conversations, the educator picks one child to assist with updating the calendar on the pinboard. With the assistance of the educator, the child puts a small sticker on the calendar to mark the day*

and places an arrow under a line of numbers from one to thirty-one to indicate the date. The date of the day is recited by the educator in French and some children repeat after her. The next part of the morning routine is introduced with another song called "madame/monsieur météo" (Ms or Mr weather). Again, laminated cards with pictures and vocabulary of different weather conditions (e.g. rain, sunshine, snow, wind) are placed on the floor. One child is assigned the role of the weather(wo)man and looks out of the window to identify the card that matches the weather outside. The educator validates or corrects the child's choice. During the whole routine, the educator encourages children to count different things, like the number of the name cards on the floor or the past days of the month. Children are praised for participating and for giving correct answers.

Children frequently re-enacted this routine during free play. In one of these instances, Antonia took on the role of the educator, which was expressed by her position on the chair next to the blackboard. She pointed at the material on the blackboard while playing but never used the material directly (see Figure 36).

Figure 35: Children re-enact the circle time routine (Air, October 2020)

Alma and other children took the role of the children and sat down on the floor, in front of the black board. The children expressed their understanding of the underlying rules of the routine, by challenging them in free play. For example, as they played the part in which children picked a form of greeting by touching the respective pictogram on the board, Alma touched all pictograms. Antonia said in a strict tone of voice: "Non, pas tous, juste un" *(No, not all, just one).* Alma, in turn, got up and touched all the pictograms again. The same interaction was repeated several times and children seemed to enjoy it as they giggled and laughed, thereby mocking the rule they were referring to. In this example, children seemed to make meaning of

the hierarchical roles of themselves and the educators at the crèche. In their free play, they reproduced the educators' role as being the ones who set up the rules and maintain them. At the same time, the children acted agentively, which they were seldomly enabled to do in adult-led activities.

In another situation, Antonia and Cécilia re-enacted the Cat and Mouse activity. In this type of story reading, as I described in Chapter 8, children listened to an audio recording in English, while the educator held up a book and turned the pages. While the use of the CD in this situation afforded a lot of repetition and language input in English, children were rarely encouraged to speak in this type of literacy event. During free play, Antonia once handed a book to Cécilia, who was sitting on the educators' chair in front of the blackboard. Antonia said: "Ça c'est cat and mouse" (*This is cat and mouse),* thereby initiating and framing their role play. Cécilia held the open book, and Antonia sat down on the floor in front of her (see Figure 37). The two girls turned silent and looked at the pages of the book. From time to time, Antonia said: "Tourne la page" *(Turn the page),* which indicated that their role play was still ongoing. Apart from this, the two girls remained silent. Their way of playing, therefore highlights the children's role of listening quietly and the lack of interaction during the 'Cat and Mouse' activity. Furthermore, the two girls picked up on the aspect of turning the page, which was indicated by a sound in the audio recording. This highlights the strong influence of the CD on the timing and structure of the reading situation.

Figure 36: Children re-enact the cat and mouse practice (Air, January 2021)

Finally, children at *Air* also expressed their way of understanding the value and function of literacy explicitly in the way they characterised their own activities. As I observed Antonia, who

was playing with the material of the animal doctor story (see sub-chapter 8.2.1), another child approached me and asked me what Antonia was doing. I replied: "Antonia est en train de jouer l'histoire" *(Antonia is playing the story)*, to which Antonia answered: "Non, je suis en train de travailler" *(No, I am working)*. Through this statement, Antonia impressively expressed her understanding of stories and books as serious activities, contrary to play. This mirrors the literacy practices of the crèche, where literacy is connected to the development of skills and knowledge in a 'serious' way.

Making meaning of literacy practices at *Earth*

At *Earth*, the literacy practices revolved around the values of community, participation and inclusion. The educators consistently linked the literacy activities to the surroundings and to children's previous experiences, whether they be at home or at the crèche. For example, the situation with Niklas' vacation album was based on his family vacation. Furthermore, the educators included children, parents, and other members of the community in their activities and made use of written language authentically This was highlighted by the examples of the letter to the forester, or the 'Head, Shoulders, Knees and Toes' song. At *Earth,* children's perspectives were valued, as educators gave them time to express themselves and made sure to understand what they meant. Interactions between children and adults can, therefore, be characterised as co-constructions of meaning, during which all participants build on each other's utterances to attain shared understanding. The examples involving the letter-shaped candles or the name tag on Etienne's hat have proven this.

As children at *Earth* made meaning of these literacy practices, they mirrored the educators' values and interaction strategies in peer-interactions as well as other child-led activities. In the examples around the story about the 'De Roude Fuedem' (*The Red Thread*), Niklas was encouraged to retell the story. As he told the story, he used similar strategies than the educators during shared reading. He related the story to the surroundings, used verbal and non-verbal modes of communication to illustrate the content of the book, and encouraged the other children to participate. For example, when the main character Oli encountered the bird in the story, Niklas pointed to the trees crowns and said that the birds live up there. He also imitated the wind mentioned in the story, by puffing up his cheeks and making corresponding sounds (see Figure 38). Furthermore, he encouraged the other children to participate by giving input such as: "Dir kennt schonn den Oli, gell?" *(You already know Oli, don't you?)* or "Wat brauch dann d'Jejomes?" *(What does the ant need?)*. As Niklas was the storyteller in this situation, he naturally mirrored the behaviour of other storytellers – namely the educators – that he had

witnessed previously. Thus, he expressed what he had understood to be the practice of shared reading.

Figure 37: Child retells known story (Earth, May 2021)

Similarly, as he was encouraged to talk about his family vacation and present the vacation album, he turned the situation into a storytelling event. He alternated between *reading* the album in his family language and discussing the pictures with his peers in between pages. In this sense, his way of structuring the interaction resembled the way in which Ms Joana read the story of the little frog family to the children, described in Chapter 7.

The examples of Niklas show how children expressed meaning of literacy practices in adult-planned events. Like previously at *Air,* I have also observed this in peer interactions. At *Earth,* children were accorded a lot of time for free play or autonomous book-use before they took a nap. At times, children looked at books together in these situations. For example, in October 2020 I observed three-year-old Gloria and two-year-old Etienne, who were looking at a book together before they took a nap in the forest cabin (see Figure 39). They were sitting in their sleeping bags and were handed books by the educators Ms Daria and Ms Dominique. The following vignette describes their interaction.

Figure 38: Children look at a book together (Earth, October 2020)

Vignette 9: Gloria and Etienne are looking at a book together

> *Gloria and Etienne are sitting in their sleeping bags next to each other, a book about apples and numbers between them. Gloria is holding the book on one side, while Etienne is holding the other. The book shows illustrations of apples and numbers, starting on the first page with one apple and the number 1, on the second page with two apples and the number 2 and so on. Each page contains a rectangular flap and moveable elements at the border. While Etienne is quietly looking at the pages or engaging with the manipulable elements of the book, Gloria seems to be speaking an imagined language. She says things that sounds like: "Asolotolotolo" or "Atasakatala". On each page, Gloria says something or points at the pictures, before turning to the next page. At the end of the book, Gloria closes the last page, claps both her hands on her lap and says "Dolafala".*

Gloria was a Portuguese-speaking child who, at the time of the observation, was fluently communicating in Luxembourgish and Portuguese. Therefore, her way of expressing herself in this situation was intriguing. While I cannot know what Gloria was talking about in what I would call imagined language, I interpret her way of speaking in relation to the language background of Etienne and the educators' practice of translanguaging in shared reading situations. As I have shown in the examples of the 'Little Apple Mouse' story, the educators', at times, strategically included the children's family languages when reading books to them. Gloria could be referring to this in her way of telling a story to Etienne, who speaks another language at home than she. As Gloria does not speak French, she may be imitating the use of another language. Apart from language use, the excerpt shows that the children reproduced the practice of shared reading. They both engaged with the pictures and manipulable elements of the book. Furthermore, they seemed to perceive reading as a joint and social activity.

Making meaning of literacy practices at *Water*

At *Water*, literacy practices were rather informal and child-centred. While shared reading events mostly took place in the library, at the crèche, the educators seemed to prefer to use of songs and fingerplay. Furthermore, interactions between educators and children were characterised by physical closeness, jokes, and talk about children's personalities. The example of Mr Paul and Luisa looking at a book together at the library shows that the interaction was very close to the child. Unlike at *Air* and *Earth*, literacy did not seem to be used specifically to support children's development of emergent literacy skills or language, but rather as a source of entertainment and enjoyment. Additionally, the literacy events at *Water* were more flexible and changed, depending on the educators and the situations in which they took place. Consequently, children's meaning-making of literacy practices was less visible in their peer interactions. However, children's autonomous use of books at *Water*, can be seen as a mirroring of the adults' literacy practices. As I have explained, the educators seemed to relate serious engagement with literacy to the library and foregrounded play and enjoyment at the crèche. At the crèche, when children used books on their own, they often started to look at them, but were soon distracted and, then, engaged in play, quarrels, or fights about the books (see Figure 40). Books remained present, but were often lying on the floor or in between the cushions. It was possible for the children to act in this way, as the educators only seldomly corrected them, maybe as a result of a misinterpretation of child-centred pedagogy (see Chapter 11).

Figure 39: Children play around books (Water, December 2020)

While children at *Water* only rarely engaged with books together with peers, I nevertheless observed a few of these instances. Once, Luisa was telling the story of the little princess, who did not want to go to bed to her friend Lisa and to me. As explained in Chapter 7, this book had previously been read to the children on several occasions. Both girls were lying on the mattress in the cuddle corner with the opened book in front of them. Luisa narrated the story, using utterances in imagined language or mumbling in a narrative tone of voice. Furthermore, she used gestures to enact elements from the story. For example, she signalled me to be silent by shushing and putting her finger in front of her mouth when she looked at a picture of the little princess who was lying in bed (see Figure 41). Luisa's way of telling the story illustrates, that she was not only engaging with the content of the book, but also with the educators' practice of reading books. By imitating a narrative way of speaking and using gestures, she reproduced the typical way of storytelling of adults at *Water*. Her way of expressing herself changed, as she reached the page of the story where the little princess calls out to her father. In previous reading situations, this seemed to be one of the children's favourite moments of the story, as the educators would shout out loudly and encourage the children to do the same. As Luisa now used the book she shouted: "Papaaa!", and repeated this several times before continuing to narrate the story through mumbling. In another picture of the book, there was a spider, hanging from the ceiling. At first, Luisa pointed at the spider, gasped and made a frightened facial expression (i.e. hands in front of her mouth, eyes wide open). This was similar to the ways in which the educators enacted this moment of the story. Then, she started to hum the song of the itsy-bitsy spider and made a crawling movement with her fingers. Luisa's use of the song was new in comparison to the ways in which the educators told the story. Nevertheless, it referenced a nursery rhyme, which the educators and children occasionally sang together. Furthermore, it illustrates the prominence of songs in the literacy practices of *Water*. These moments during which Luisa's oral expression understandably matched the content of the book showed that her way of re-enacting the educators' way of telling stories also enabled her to engage with parts of the content of the book. Finally, Luisa's reference to the itsy-bitsy spider song, expressed her way of connecting the story to her previous experience. In fact, I have observed this strategy of connecting with literacy repeatedly throughout my time in the field. In the following chapter I will, therefore, elaborate on the role of connections in early literacy meaning-making.

Figure 40: Child retells known story (Water, April 2021)

9.5 Summary

In this chapter, I have provided evidence for my claim regarding our understanding of early literacy from a holistic perspective. As shown, the young children in this study developed literacy by making meaning on three different levels: the level of tools, the level of concepts, and the level of practices. While the first level of early literacy meaning-making relates to the emergent literacy skills of print awareness (Brown, 2014), the second level connects to concept-formation (Berger, 2005) and the development of print concepts (Scull et al., 2012). Finally, the third level links back to literacy socialization (Sterponi, 2012). The three levels, therefore, reunite skills- and practice-based views of literacy, thereby supporting my argument. Furthermore, I have shown that children made meaning in relation to the three levels of meaning in various situations and social constellations. The described examples stem from shared or individual reading and writing situations, or other literacy-related events. Children made meaning alone, as well as together with peers and in high-quality interactions with adults. This chapter illustrated the complexity and diversity of learning requirements for young children in relation to early literacy. Finally, it has also demonstrated the active and creative role of children and the ways in which they were able to grasp literacy.

Chapter 10: The role of connections in early literacy meaning-making

10.1 Introduction

In the previous chapter, I described children's early literacy meaning-making as being situated on different levels. While this illustrates the *content* of children's meaning-making in relation to early literacy, I will now focus more on the *process* of meaning-making. Throughout the analysis of literacy events in the three crèches, I have come to understand that an important aspect of children's early literacy meaning-making is the way in which they connect literacy to themselves. Children may evoke such connections themselves, or be encouraged to connect to literacy in different ways by the educators. These connections are part of the high-quality interactions between children and adults that can support early literacy meaning-making. Furthermore, they highlight the active role of the child in meaning-making. I have analysed more in depth, in which ways children and educators establish such relations. I have categorised the different types of connections that I observed and analysed to what extent they contributed to children's early literacy meaning-making. In the following, I will first present my categorisation of different connections, ranging from concrete, over emotional, to abstract. Furthermore, I will outline how this continuum of connections relates to the sociocultural understanding of learning and how adults can use connections strategically to support children's early literacy meaning-making. I argue, that the adults' role in support children's early literacy meaning-making, is to scaffold children's ways of connecting literacy to oneself through increasingly abstract connections.

10.2 Categorisation of different connections

The categorisation of different connections is based on the data gathered in the three crèches. Hence, the connections refer to a specific aspect of two- to four-year old children's engagement with literacy, as well as educators' strategies for supporting these young children. The categorisation is, therefore, not a representative or exhaustive one, but it does illustrates the complexity and variety of the observed interactions. I have identified six categories of connections, that the children drew between literacy and themselves. These connections are made by the children, either on their own or following educators' initiative. Connections can be

expressed verbally, through language or non-vocally, through gestures. They may appear in different kinds of literacy events and involve different kinds of literacy tools. In the following sub-chapters, I will illustrate the six categories of connections, by referring back to previously presented examples and by introducing a few new ones. In each of the sub-chapters, I will provide examples from all three crèches, starting with the educators way of making connections. Thereafter, I will focus on the child-initiated connections, thereby alluding to the socio-constructivist learning theory, which claims that learning takes place on the social plane first, and secondly on the individual one (see Chapter 2).

10.2.1 Connections to the child's body or senses

The first category refers to connections between literacy and the child's body or senses. From previous studies, we know that young children's learning and communication involves a range of semiotic resources, including gestures and body language (see sub-chapter 4.4.3). This is represented in the first category of connections between literacy and the self. Adults may support children's learning and understanding, by referring to their bodies or senses. In all three crèches, the educators frequently used gestures while singing songs. For example, the educators at *Air* used gestures while singing songs during the circle time routing. At *Water,* the circle time song was accompanied by rhythmic tapping on different body parts. Finally, the educators at *Earth* included gestures when they sang the 'Head, Shoulders, Knees, and Toes' song in different languages. In all these examples, the use of gestures made it easier for children to participate, regardless of their oral language development. Furthermore, the gestures were a way of illustrating lyrics and, thereby, potentially supported children's understanding of the songs. Similarly, educators made connections to children's bodies or senses when reading stories. In the shared reading situation between Luisa and Mr Paul at the library, they both related elements from the book to their own bodies. They labelled body parts in the pictures, like the nose, and then pointed at their own ones. At *Air*, Ms Morgane used a similar strategy when looking at a book about the little wolf together with Antonia. As the little wolf took a cold bath and became all pale and blue, Ms Morgane asked Antonia: "Tu as froid aussi?" *(Are you cold too?)*. This question encouraged Antonia to focus her attention on her sensorial perception at the moment and compare it to the experiences of the character in the book. Apart from singing and shared reading situations, this first category of connections was used by educators in other literacy-related events. For example, when Ms Dominique was writing the labels for the jam glasses together with Lia, she spelled out the child's name. As she wrote the letter a, Ms Dominique sounded it out and moved her finger in a circular motion around her lips. Thereby,

she illustrated the round shape of the letter and linked it to its sound and the shape of one's mouth when sounding out the letter. In this example, the connection between literacy and the body serves as a mnemonic bridge supporting Lia's development of alphabet knowledge.

In these examples, children participated by imitating the adults' gestures or by following their approach of communicating through gestures. However, they also often used gestures independently of adults' input to express meaning in literacy events. For example, as Etienne was using the animal vocabulary book by himself, he related the pictures by pointing. Older children or adults would, perhaps have relied merely on gaze or internal speech to connect the pictures. Etienne, however, used pointing to support his internalization process. While Etienne was alone and seemed to use gestures as a scaffold to understanding, in other examples children have communicated meaning by connecting literacy to their bodies in interactions with others. As Niklas told the story of 'The Red Thread', he illustrated the wind in the story by blowing air through his puffed up cheeks. This first category of connections between literacy and the children's bodily and sensorial perception, therefore, seems to increase children's possibilities of participation and to make literacy become more tangible for the children.

10.2.2 Connections to space and objects

The second category of connections relates literacy to the children's immediate surroundings. It entails the use or mention of objects or other aspects of the environment, such as the weather or sounds. As shown in Chapter 7, literacy events were shaped by the spatial and material contexts in which they took place. Furthermore, embedding literacy events in their given context supported children's understanding. The educators at all three crèches related literacy events to their surroundings, whereas this seemed to be most present at *Earth,* where the forest-space was part of the pedagogical approach. A prime example of this, was the literacy event around the letter to the forester. At the cabin, which was flooded after a lot of rainfall in winter, the children imagined ways of evacuating the water and the educators included them in the letter. The educators at *Earth* also frequently referred to plants or animals of the forest, whenever they were mentioned in books or songs and vice versa. For example, as the children discovered the first snowdrops on the way to the forest, the educator sang a song about the flowers, thereby relating the children's environment to literacy. In another situation from *Earth*, Ms Joana told a story of migrant birds on a cold winter morning. She explained that some birds cannot find food if it is too cold outside and tapped the frozen ground beneath her feet to illustrate that the birds cannot dig into the hard surface to find food. Furthermore, as the group of children encountered the woodworkers during a walk in the forest, Ms Dominique

encouraged the children to observe them in order to make sense of the caution-sign. At *Water*, the educators, at times, chose songs based on their surroundings. For example, whenever they visited the library, the educators encouraged the children to sing the song 'the wheels on the bus'. Furthermore, Ms Isabela sang a song about raindrops as she was watching the rain outside of the window together with Luisa and Tobias. The educators at *Air* also included the children's surroundings in their daily circle time. In the weather part of the routing, they sang a song and encouraged one child to go look outside the window to describe the weather of the day.

In the examples that I have shown in the previous chapters, children independently connected literacy to their environments or objects in their surroundings. For example, Antonia from *Air* used figurines of the main characters of the book when re-telling the story of the doctor. As the crocodile figurine was larger than the others, the doctor figurine fit into its wide-opened mouth. Antonia's engagement with this material, hence, has led her to create a new version of the story, in which the doctor was eaten by the crocodile, instead of the wolf. Likewise, as Niklas retold the story of 'The Red Thread', he connected the characters from the book to his surroundings. When he mentioned the birds in the story, he pointed at the trees and told me and the other children that the birds live high up in the threes. Thereby, he related the birds in the book with real birds. This type of connections can, therefore, be seen as a way of making literacy come to life and helping children to link the content of books, rhymes or songs to reality.

10.2.3 Connections to the child's personality, opinions or preferences

The third category of connections relates literacy to the child's personality, opinions, or preferences. Educators and children may make direct comparisons and links between themselves and literacy. This type of connection was frequently used at *Water,* where the educators' emphasised personal relationships and enjoyment during shared reading. Furthermore, at *Earth,* the educators encouraged the children to voice their opinions and discuss in case of disagreements. For example, when Ygor and Niklas had a quarrel about which version of the 'Head, Shoulders, Knees, and Toes' song they wanted to sing next, the educators encouraged them to talk about it and use language instead of violence to resolve their conflict. Similarly, they often asked children about their opinions during storytelling situations. For example, while Ms Dominique told the story of the 'Little Apple Mouse' and how it fell into the grass, she asked Tim if he thought that the mouse got hurt. Furthermore, she encouraged him to reflect and explain his reasoning, letting other children comment. During shared reading, educators of all three crèches compared children to characters or actions of a book, or asked them to state their preferences in relation to elements of the story. At *Air,* Antonia was once

looking at a book about colours and fruits with the educator Ms Amandine, who asked her to name her favourite fruits or indicate if she (dis-)liked their taste. In a similar way, as Ms Dominique was writing the labels for the jam glasses, she asked the children to pick a pen in their favourite colour for the labels on their respective jam glasses. At *Water,* whenever the educators sang songs together with the children, they asked them which songs that they preferred and would like to sing next. Similarly, during circle time, the educators at *Water* let the children choose which of the hand puppets they wanted to use and which body part to include in the song. These examples illustrate how the educators connected literacy events to the children's opinions to increase engagement and enjoyment.

In turn, children also used this strategy. During the shared reading event of one of the 'Cat and Mouse' books, some of the children started to ask about each other's opinions regarding the different clothing items in the book. While this was discouraged by the educator, the example shows that voicing one's opinion was one way for children to express their engagement. In another example from *Air,* Antonia and Justine were playing with the card-matching game about initial letters and pictures. Here, Antonia equalled herself with the initial letter of her name. As she could not see the A on the card handed to her by Justine, she said: "Non, il n'y a pas moi là" *(No, there is no me there).* Lia, at *Earth*, drew a similar connection as she engaged with the letter-shaped candles. As she noticed the letter L, she pointed it out and said: "Vun meng Numm" *(From my name).* However, Lia's and Antonia's ways of connecting letters to themselves was different. Antonia made a direct connection between herself as a person and the letter, whereas Lia connected the letter and her name, which is a representation of herself as a person. Therefore, one can say that Lia's connection involves and additional layer of abstraction. The third category of connections, which relate literacy with individual aspects of children's personalities, opinions, or preferences may be used by educators to promote children's interest in literacy, by including them on a personal and emotional level. Furthermore, it can be seen as a way for children to appropriate literacy by relating it to themselves.

10.2.4 Connections to the child's family members, friends, or peers

The fourth category of connections consists in linking literacy to persons that are close to the children, like their parents, siblings, friends, or peers. For young children, these people of their close social environment are highly significant, even though they are not always present at the crèche. The names of family members and their own names are often among the first words that children learn to say and recognise, as they may see them frequently. Educators often mentioned other people during literacy events. The example of the name tag on Etienne's hat illustrates

that Ms Joana made use of his interest in his own name, as well as in the name of his brother, to support his print awareness and understanding of letters. Similarly, in the situation with Niklas' vacation album, the educators gave him the opportunity to talk about the vacation with his parents and frequently mentioned that his mother had prepared the photos and the text in the album. In this sense, the literacy event became highly meaningful for Niklas. During shared reading events, educators often referred to the children's parents to explain or illustrate the content of books. At the library when the educator, Mr Paul, was looking at a book together with Luisa, he pointed at the picture of a coffee mug and asked Luisa if her mother also liked to drink coffee. At *Earth,* the example of the "Head, Shoulders, Knees, and Toes" song, shows that the educators connected the songs and the different languages to the children's parents. Oftentimes, they did not name the languages but rather referred to them as: "Dem Niklas sengem Papp seng Sprooch" (*Niklas' father's language*) (*Earth,* October, 2020), for example. The educators at *Air,* also related languages to the children's parents. While listening to songs on the tablet, they asked some of the children about the languages they spoke with their parents at home.

Children in all three crèches frequently mentioned their parents, or other family members in relation to literacy. For example, as the children from *Water* were told the story about the little princess at the library, Joyce related the princess' father to her own father and said that she loves him very much. During circle time at *Air*, the educators asked the children to compare the initial letters of their names to other words. Mona often replied that her name started with the same letter as: "Maman" *(Mom).* Similarly, while talking about the letter-shaped candles at *Earth*, the children linked the letters to the their names and the names of family members. In this way, Lia, Etienne, and Jana realised that the names of their fathers all started with the same letter B and demonstrated phonological awareness. These examples show that mentioning the children's parents or other important people of their social environment can be a way of encouraging engagement and enjoyment. Furthermore, as this type of connections often involves talk about absent persons, it can be seen as an entry to decontextualised language, which is relevant in literacy development.

10.2.5 Connections to previous experiences

The fifth category of connections that occurred in early literacy meaning-making relates literacy to children's previous experiences. These experiences from the crèche or from other contexts, such as the home, could consist of other literacy events, or be unrelated to literacy. Connecting current and previous experiences is an important aspect of learning, not only in relation to

literacy. Children relied on their previous experiences and knowledge and applied them to new situations when learning. The connections made to previous experiences are, therefore, an important aspect of early literacy meaning-making. Both children and educators in all three crèches referred to previous experiences in conversations about the content of books, or other literacy events. The organisation of follow-up activities around the story of 'The Red Thread' at *Earth* exemplifies this. Educators frequently asked children to recall the previously told story and re-tell it by using the book, objects, or in role play. During other literacy events, the educators at *Earth* referred to interconnected activities about the same topics. For example, when Ms Dominique was writing the labels for the jam jar with Lia, she reminded her of their previous visit to the orchard, where they collected the apples for the jam. She also asked Lia to remember and name the ingredients they used to cook the jam. At *Water,* the educators also read the same books on several occasions, like for example the book about the little princess. However, they did not refer back to the children's previous experiences with the story. Instead, they connected moments from the story to the children's experiences from home. As the story is about a little princess who does not want to go to bed, the educators asked the children if they ever felt the same when having to go to sleep. Likewise, as Ms Isabela was reading the story of the Sandman together with Tobias, she asked him if he had ever noticed the sand in his eyes in the morning. As he negated, she encouraged him to check his eyes the next morning, thereby enticing him to relate his future experiences with the ongoing literacy event. At *Air,* the educator also asked some of the children if they had ever travelled to their countries of origin, while they were listening to songs in multiple languages on the tablet. These strategies can be seen as a way of increasing the children's attention and engagement in the current learning situation.

Children also independently referred back to their previous experiences during literacy events. In the conversation between Antonia and Cécilia about fireworks, the two girls related the content of the book to their recent experiences. As they saw a picture of an explosion or something similar in the book, they mentioned how they celebrated the New Year with their families and watched the fireworks. The connection to their previous experiences was a meaningful engagement with the content of the book to them and enticed them to talk and make meaning of the concept of fireworks. Similarly, as Luisa was looking at the book about the little princess, she noticed a spider in one of the pictures and started to hum the song of the 'itsy-bitsy spider' and make matching gestures. Thereby, she connected the content of the book to other literacy events at the crèche, during which the song was sung. Unlike Antonia and Cécilia, Luisa expressed the connection she made non-verbally, through humming and gesturing. However, it was clear that she recognised the spider in the picture, which reminded her of the

song about the animal. By explicitly talking about previous activities, educators supported children in making connections between past and present experiences and, thereby, fostered holistic learning. In turn, relating literacy to their previous experiences may have been a way for children to appropriate knowledge and understandings.

10.2.6 Connections to text

All the previously described types of connections referred to links between specific elements, details or features of literacy to more or less specific aspects of the child, their experiences, or the environment. The last category represents a move to a more abstract dimension, through connections with the plot or general meaning of literacy. It entails references to or explanations of narrative aspects of literacy. Hence, this type of connections most frequently happened in relation to stories and books. For example, as books were often read to children repeatedly, educators might ask children what they remembered from the story. They may also have encouraged children to anticipate what would happen in the story, narrate themselves or to reflect about the characters' motivations. As the following excerpt shows, children may also initiate such connections themselves. During a shared reading situation at *Water*, the educator, Ms Ariane read a book about a witch to a group of children. The text of the book contained rhymes, and so Ms Ariane's focus seemed to be on the linguistic aspect of the book. She read out the text and, at times, left out the last words of sentences for the children to complete.

Line	Participant	Original	Translation
1	*Ms Ariane*	(schaut auf die Buchseite) Die Hexe will eine Reise machen drum packt sie ihre Sieben Sachen Hut Zauberstab und Zaubertopf und eine Schleife für den-	*(looks at the book page) The witch wants to go on a journey so she packs her things* *Hat magic wand and magic kettle and a bow for the-*
2	*Joyce & Jakob*	Zopf	*Braid*
3	*Ms Ariane*	(schaut auf die Buchseite) Die Katze hat sie auch dabei zusammen sind sie-	*(looks at the book page) The cat is also coming together they are-*
4	*Joyce & Jakob*	Zwei	*Two*
5	*Ms Ariane*	(schaut auf die Buchseite) Geschwind geschwind bläst der Wind Die Hexe lacht doch lacht sie nicht lange Der Wind hat den Hut und das ist nicht-	*(looks at the book page) Quickly quickly blows the wind* *The with laughs and laughs but not for long* *The wind has taken the hat and that is not-*
6	*Joyce & Jakob*	Gut	*Good*

Excerpt 24: From transcript of observation on the 9th of March 2021 (Water)

As the excerpt shows, Joyce and Jakob both replied to the educator's fill the gap type input. The rhymes in the text allowed the children to anticipate the words in German. After the children's reply, the educators continued to read, maybe as a way of maintaining the flow of the text.

Line	Participant	Original	Translation
1	*Ms Ariane*	(schaut auf die Buchseite) Doch dann ein Schrei (verstellt Stimme) der Besen der Besen er bricht in zwei Der Frosch und die Katze der Vogel und der Hund sie fallen vom Besen hinunter zum Grund Versinken schnell mit Stiel und Stumpf in einem Sumpf (zu den Kindern) die Hexe kann auch nicht mehr richtig fliegen	*(looks at the book page) But then a cry (changes voice) the broom the broom is breaking in two* *The frog and the cat the bird and the dog they fall from the broom down to the ground* *Sinking fast with stick and stump in a moor* *(to the children) the witch also can't really fly anymore*
2	*Loris*	Elo sinn se alleguerte gefall	*Now they have all fallen*
3	*Ms Ariane*	Genau	*Exactly*
4	*Joyce*	Warum denn nicht?	*But why?*
5	*Ms Ariane*	Jo well se ze schwéier waren do ass de Biesem futti gaangen an elo falen se all erof (schaut wieder auf die Buchseite)	*Because they were to heavy and then the broom broke and now they have all fallen down (looks at the book page)*

Excerpt 25: From transcript of observation on the 9th of March 2021 (Water)

In line 2, Loris summarised and translated what Ms Ariane had just read into Luxembourgish. Ms Ariane confirmed (line 3) and Joyce asked a follow-up question (line 4). While Loris referred to the first part of the text (i.e. about the characters falling from the broom), Joyce was asking about the second one (i.e. about the witch who cannot fly anymore). Joyce's questions enticed an engagement with the content of the book on a a more reflective level. While previously, Ms Ariane had focussed on the linguistic aspects of the *text*, by emphasizing the rhymes and sounds of words, Joyce asked about the *story*. Compared to the previous way of reading the book, the children were now not only engaging with the sound of the words, but also with the meaning of the story. Hence, this type of connection encouraged an engagement with the content of the book and, therefore, represents the most complex type of connection, as compared to the previous categories. It was, however, also the type of connection that I have observed least in the data.

10.3 A continuum of connections

In the previous sub-chapter, I described and illustrated six different categories of connections. I suggested that connections were an important part in children's early literacy meaning-making

in all three crèches. Both educators and children made use of different kinds of connections to support or express meaning-making respectively. Furthermore, connections appeared in different types of literacy-related situations and in different social constellations. They appeared in shared reading, singing, or other literacy events as well as in group activities, one-to-one interactions between adults and children, peer interactions and individual activities. Connections were made verbally through talk, or non-verbally through gestures or sounds. Finally, connections could consist in single utterances or moments of interactions as well as overarching themes or approaches. For example, I cited moments in which children mentioned their parents during literacy events. On the other hand, I described series of literacy events, like the follow-up activities around the story of 'The Red Thread', which illustrate the strategic use of connections to foster holistic learning.

While I have presented the categories of connections as being separated from each other, children's meaning-making may involve several types of connections at once. Actions or utterances can have characteristics of different categories of connections at the same time. For example, the situation during which Antonia and Cécilia talked about fireworks and with whom they had watched them was both a connection with the children's previous experiences and with members of their families. The literacy event around the letter to the forester involved, on the one hand, connections between the letter writing and the children's surroundings and, on the other hand, the children were asked to contribute their own suggestions, which can be seen as a way of connection literacy to the children's personal opinions.

While I chose to use the term *connection*, what I described could also be called explanation, comparison, or illustration, depending on the situation. Hence, it seems as if the different types of connections I observed, fulfilled different functions. Connections could be a way of making abstract aspects of literacy become more tangible or relatable. Talking about familiar aspects, such as known people or experiences was a way of increasing children's engagement in literacy events as well as valuing their backgrounds and personalities. Finally, connections could be aimed at increasing children's active participation in interactions.

The different categories of connections I described can be ordered from closest to the child, to furthest away from the child. Or, in other words, some connections are emotional, while others refer to concrete aspects of the physical environment. Finally, there are connections that are more abstract, and require the use of memory, imagination, or reflection. To illustrate the range and increasing level of abstraction in in the different categories of connections, I suggest to represent them on a continuum, from concrete, over emotional to abstract. Figure 42 represents this continuum.

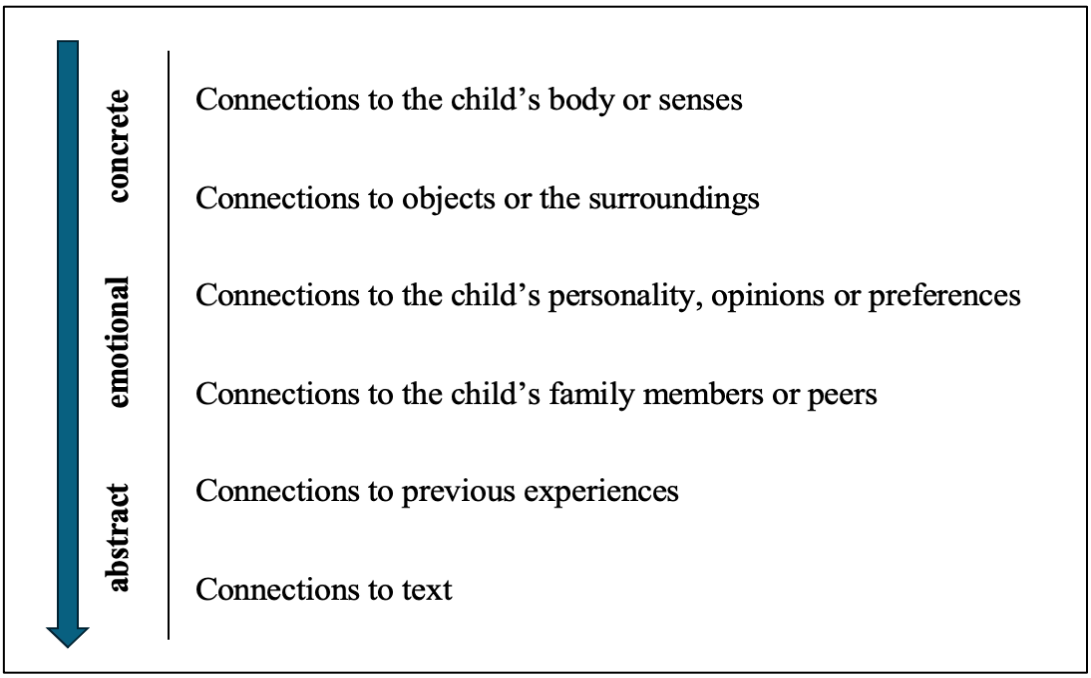

Figure 41: The continuum of connections in early literacy meaning-making

The continuum of connections is in line with the socio-cultural understanding of learning as appropriation. All types of connections relate children to literacy and help them appropriate new knowledge about languages, stories, or signs. Furthermore, the idea of increasing abstraction relates to early literacy meaning-making. Learning about literacy, involves the use of decontextualised language and symbolization, hence, abstract forms of communication. In a way, the continuum of connections illustrates that early literacy meaning-making involves learning to think in increasingly abstract terms. In addition to coming to understand narratives and stories, or learning that letters or other signs represent language, they have also engage with reality in an abstract way.

The connections children and educators made in interaction around literacy were a powerful tool to foster early literacy meaning-making. In this sub-chapter, I described the different types of connections, ranging from concrete, over emotional, to abstract. I will now illustrate the role of different connections in pedagogical activities and interactions. Pedagogically, the continuum of connection can be related to the concept of the ZPD (Vygotsky, 1978). The connections expressed by children indicate the way in which they relate to literacy. If educators wish to engage children in an increasingly abstract and complex way with literacy, they can use interactions strategically. The connections initiated by educators can, hence, be seen as a scaffold for children.

10.4 Using connections to scaffold children's early literacy meaning-making

I argue that educators can support children's early literacy meaning-making through high-quality interactions. This entails that educators adapt their interaction strategies to the children's age and their current state of understanding. In Chapter 2, I have presented the socio-constructive learning theory, which claims that adults can support children's learning by making them act in their ZPD. Furthermore, I have shown that literacy development relates to the use of symbolism and decontextualised language (see Chapter 3). By combining these two ideas with the continuum of connections, I conclude that educators can support children's early literacy meaning-making by adapting the ways in which they connect literacy to the children, in an increasingly abstract way. To illustrate this, I will first provide a counter example, which shows that the educator missed an opportunity to engage children in a high-quality interaction. During a shared reading situation at *Air*, Ms Morgane read a story about going to bed at night to a group of children. One of the children noticed a teddy bear in one of the pictures in the book and pointed it out to the educator. The child told the educator, that whenever he feels scared or has nightmares, he hugs his teddy bear, which makes him feel better. In this way, the child connected the content of the story, to his own experiences. The educator did not have much of a response to this; instead, she asked each of the children about the names of their teddy bears. In this way, she shifted the topic of the conversation to one that was more superficial and uncomplicated, as compared to being scared or having nightmares. For young children, teddy bears can be important reference *persons* and, hence, mentioning the names of the teddy bears can be seen as a connection on an emotional level. By contrast, talking about one's own experiences with nightmares is a more abstract type of connection. Hence, the educator's response did not match the child's interest and way of engaging with the content of the book. This shows that, firstly, she may have underestimated the children's abilities and, secondly, that she did not act in the children's ZPD. Instead of supporting children's engagement with more complex and abstracts aspects of the book, she talked about something that was less challenging. This situation can, therefore, be qualified as a missed opportunity for the educator to encourage children to engage with the content of the book on a more reflective level.

Another, more promising example from *Earth* shows, the ways in which the educator uses increasingly abstract connections to support the children's early literacy meaning-making. This interaction between Ms Dominique and Niklas, took place while the children were getting ready for naptime. Niklas was looking at several books, browsing through the pages at a fast pace.

Ms Dominique observed him and initiated a conversation about how one ought to look at books to understand the meaning of the story. Both Ms Dominique and Niklas made different connections in relation to the book. The following excerpt shows, how the educator gradually moved the conversation away from connections that were close to the child, to connections that were more abstract and further away from him. In this way, she supported Niklas' early literacy meaning-making and helped him to make meaning of the story.

Line	Participant	Original	Translation
1	*Ms Dominique*	Niklas ech fannen dass du awer relativ séier deng Bicher kucks. An dann hues du d'Buch scho gekuckt? Esou séier?	Niklas I think that you are looking relatively fast at your books. And now you have already looked at the book? So fast?
2	*Niklas*	Jo, well ech muss esou séier lafen (onverständlech) drun ginn.	Yes, because I have to run fast (unintelligible) try hard.
3	*Ms Dominique*	*Mhm* Mee kucks du dann d'Geschicht elo? Kucks du d'Geschicht?	*Mhm* But are you looking at the story now? Are you looking at the story?
4	*Niklas*	Jo!	Yes!
5	*Ms Dominique*	Wat ass da geschitt an der Geschicht?	So what is happening in the story?
6	*Niklas*	Dee kuck (wéist op d'Bild am Buch)	This look (points at picture in the book)
7	*Ms Dominique*	Wien ass dann do an der Geschicht?	So who is there in the story?
8	*Niklas*	Den Igel an den Hues	The hedgehog and the hare
9	*Ms Dominique*	Jo, wat maachen déi zwee dann?	Yes, so what are these two doing?

Excerpt 26: From transcript of observation on the 22nd of March 2021 (Earth)

The educator started the conversation by commenting on the child's way of looking at the books. To her, it seemed as if Niklas was not taking enough time to really look at the pictures of the book to make meaning of the story. In line 1, she used the expression "looking at books". In line 3, she formulated herself more precisely, saying "looking at the story". Niklas replied by relating the way he was looking at books to the activity of running fast, which he seemed to associate with making an effort. While in other learning situations it may be appropriate to speed through and "try hard", this is not helpful in understanding the meaning of a book or story. Ms Dominique's next question (line 5) challenged Niklas' approach and encouraged him to narrate the story. Niklas seemed to know that the answer to the question "what happens in the story?" could be found in the picture, and he pointed at one of the characters from the story (line 6). However, Niklas' gesture did not answer Ms Dominique's question, which was formulated in a rather general and open way. Ms Dominique's next question (line 7) was more precise and enabled Niklas to give a more accurate answer (line 8). The interaction continued from there with a focus on the story. At the beginning of the exchange, the connections made

by the participants were close to the child and concrete. They referred to the child's immediate actions (line 1) and bodily perceptions (line 2). Gradually, the educator shifted the conversation onto a more abstract level, by connecting child and book through questions about details from the story (line 7) and the plot (line 9). This excerpt shows how Ms Dominique leads Niklas to understand that engaging with books and stories requires time and attention. Furthermore, the ways in which the educator adapted her questions to the child's replies supported the child in making meaning of the story and the activity of reading.

The example of Ms Dominique and Niklas represents a promising educational practice that can support children's early literacy meaning-making. Looking back at the continuum, in this example the connections throughout the interaction move from a concrete to a more abstract level. Hence, Ms Dominique has scaffolded Niklas' engagement with the book and has supported his early literacy meaning-making through a high-quality interaction.

By contrast, other interactions do not seem to contribute to children's learning in relation to literacy. The following situation occurred at *Air*, while the educator Ms Morgane was looking at a book together with Antonia. In fact, I encouraged the educator to look at a book with Antonia, so that I could observe a one-to-one interaction, which was very rare at *Air*. In the story, the little wolf is walking in the woods, which is the starting point of the excerpt.

Line	Participant	Original	Translation
1	*Antonia*	Là il marche (montre sur l'image du loup dans le livre)	There he walks (points at the picture of the wolf in the book)
2	*Ms Morgane*	Il marche?	He walks?
3	*Antonia*	Oui	Yes
4	*Ms Morgane*	Pour aller où?	To go where?
5	*Antonia*	Pour aller au parc	To go to the park
6	*Ms Morgane*	Pour aller au parc?	To go to the park?
7	*Antonia*	Oui	Yes
8	*Ms Morgane*	Oui On était au parc nous ce matin?	Yes Have we been to the parc this morning?
9	*Antonia*	Oui	Yes
10	*Ms Morgane*	Tu as fait quoi au parc?	What did you do in the park?
11	*Antonia*	Moi j'étais allée dans la balançoire et après j'ai prêté[4]	I went on the swing and then I borrowed[19]
12	*Ms Morgane*	C'est vrai?	Really?
13	*Antonia*	Avec mes parents aussi j'étais allée au parc	With my parents I went to the park too

Excerpt 27: From transcript of observation on the 24th of February 2021 (Air)

[19] The sound of the video is rather clear and Antonia seems to be saying "prêté" ("borrowed") here, although I am unsure what she means. The educator does not ask for clarification, and it does not come up again in the course of the conversation.

At the beginning of the interaction, Antonia described what she saw in the picture. She pointed at the wolf and told Ms Morgane that he was walking. Ms Morgane replied by repeating what Antonia had said in the form of a question. One could speculate that she wanted to make sure she had understood Antonia correctly, or that she wanted to encourage Antonia to further elaborate on what she had said. Antonia confirmed her initial statement and Ms Morgane asked a follow-up question (line 4). Antonia replied and the same pattern of interaction repeated, Ms Morgane reiterated what she had said in the form of a question and Antonia confirmed (line 5 to 7). Then, Ms Morgane referred to their excursion to the park, which had taken place that morning. She linked the detail from the book – the park – to its equivalent in real life. It seemed that Ms Morgane wanted Antonia to tell her about her day at the park. As Antonia's first reply was short (line 9), Ms Morgane asked another follow-up question (line 10). This shifted the co-telling of the story, to a conversation about Antonia's experiences at the park. While talking about the excursion to the park, Antonia was reminded of another time she visited the park with her parents. She told Ms Morgane about it (line 13); as seen at the end of the excerpt. This example shows, how the educator's questions gradually moved the dialogue away from the story and closer to the child. While the child was engaging with the book and the story at the beginning of the interaction (line 1 and 5), the educator guided her into talking about her personal experience towards the end of the excerpt (line 13). At first, the educator asked the child to connect what she could see in the picture (i.e. the wolf is walking) to the plot of the story (i.e. where is he going?). Then, the story is connected to the previous experience of the child (i.e. excursion to the park) and finally, to the child's parents. While this exchange might strengthen the relationship between the educator and the child and promote the child's well-being at the crèche, it does not support her early literacy meaning-making. Instead of leveraging Antonia's skills and previous knowledge, the educator led her to disengage from the story. Furthermore, when focussing on the perspective of language learning, two aspects are important. Firstly, the formulation of Ms Morgane's questions did not encourage Antonia to talk in longer sentences. The questions were closed and/or formulated in an inverted way – "To go where?" instead of "Where is he going?". This limited Antonia, as the questions only allowed her to give a one-word answer, or repeat Ms Morgane's questions by replacing the interrogative word in her answer: "To go to the park". On the other hand, Ms Morgane's open question in line 10, generated a much longer and more elaborate answer from Antonia. This shows that Antonia's language had developed beyond the one-word level and, hence, closed questions did not enable her to act in her ZPD and to formulate longer and more complex sentences. Secondly, Ms Morgane did not inquire further as to Antonia's use of the word "prêté" *(borrowed)* in line

11. The word did not have an obvious meaning in the context of the conversation and it is, therefore, possible that Antonia is not using it appropriately. As children develop languages, misunderstandings are common in conversations. The reactions of their interlocutors enable children to clarify the meanings of words and resolve misconceptions. However, in this situation, Ms Morgane did not react but instead acknowledged Antonia's utterance by asking: "C'est vrai?" *(Really?).* Ms Morgane's reply illustrates a missed opportunity to support Antonia's language development and meaning-making of words and concepts. In contrast to the previous example, the connections used in this situation become more and more concrete. Regarding the educational value of the educators' strategies, one can say that she may have strengthened her personal relationship with the child, but did not support Antonia in her early literacy meaning-making.

While the analyses above have focussed on single instances and interactions, the reflection about how connections can support children's learning can also be extended to include different events and activities over a longer period of time. As I have described, the crèches' literacy practices often involved repeatedly reading the same books, singing the same songs, and discussing the same topics. While some of the educators seemed to vary their way of engaging children with familiar contents, others did not. I observed how the same books were read to the children repeatedly and in very similar ways. At times, educators asked the exact same questions to the children and seemed to expect the same answers. Likewise, the same songs were sung together with children throughout the entire year and in the same ways. While one might expect children to become more and more familiar with this content over time and, thus, contribute more, the opposite seemed to be the case. Children became increasingly passive, as the educators did not sufficiently encourage them to participate. By contrast, other educators adapted their activities as they repeated them, to ensure that children participated in different ways. Furthermore, they gradually withdrew themselves, enabling the children to take the lead. Hence, thinking about the different types of connections that educators can make in early literacy is a useful tool, not only for of reflecting on one's interactions with children, but also for planning and organising pedagogical activities over a longer period of time.

10.5 Summary

In this last chapter of my findings section, I presented the role of connections. I identified different categories of connections, which can be placed on a continuum from concrete, over emotional, to abstract. This increasing abstraction, relates to the ways in which children

gradually learned to think and communicate in abstract or decontextualised ways. Therefore, making increasingly abstract connections is an important step towards understanding the nature of literacy. Connections can be an important strategy for educators to support children's engagement in literacy events and high-quality interactions. Furthermore, children's ways of connecting literacy to themselves highlights their active and creative role in early literacy meaning-making. While educators can support children through connections, it is equally important that they are aware of the ways in which children express themselves about literacy, in order to adapt their strategies accordingly.

Chapter 11: Discussion

11.1 Introduction

In this chapter, I will briefly summarise the main findings according to my three initial research questions. Then, I will discuss the main findings and interpret their significance in relation to the following four themes: the multilingual and multimodal nature of early literacy meaning-making, the role of play, the place of literacy in ECEC, and a pedagogical perspective on early literacy meaning-making. Furthermore, I will explain how my findings have contributed to the formulation of my argument.

My study takes a sociocultural approach to learning, emphasizing the role of language and other semiotic resources for meaning-making. In my thesis, I argue the need for a holistic view of literacy, combining the existing skills- and practice-based perspectives. Furthermore, previous research on literacy has predominantly focussed on school children. By contrast, I argue that young children actively and creatively make meaning of literacy from an early age on. Young children learn about literacy-related concepts, skills and practices when they engage in a range of literacy-related activities alone or with peers and when they are supported through high-quality interactions with adults. Therefore, it is necessary to consider both of literacy-related pedagogical activities, as well as play to understand children's early literacy meaning-making.

11.2 Answering the research questions

This study was guided by the following three research questions:

> 1) Which early literacy events are two-to-four-year old children engaging in and what practices underlie these events?
>
> 2) In which ways are two- to four-year old children making meaning of literacy on their own and together with others?
>
> 3) In which ways are two- to four-year old children interacting with peers and adults when making meaning in reading and writing situation?

In this sub-chapter, I will summarise my findings in relation to these research questions and show how they helped me to build my argument.

11.2.1 RQ1: Literacy events and practices

The first research question relates to the literacy events and practices in which the children from this study participated. I found that children in all three crèches engaged in a range of adult-planned and spontaneous literacy events, that expressed different underlying practices. Furthermore, literacy events happened at various moments of the day and involved children's autonomous use of literacy as well as peer and adult-led interactions in groups of between two and almost twenty children. While there were important qualitative differences, the literacy practices of the three crèches *Air, Earth,* and *Water,* were in line with the quantitative findings of the COMPARE project that showed that literacy practices in Luxembourgish crèches are multilingual and most frequently involve singing, shared reading or storytelling (Kirsch & Aleksić, 2021). Additionally, the quantitative findings of COMPARE also confirmed that there is a lot of variation across ECEC settings in Luxembourg. Previous studies in the ECEC context from Germany, Canada, England, have explored literacy-related activities and behaviour of children between four and six years old (Lengyel, 2008; Streelasky, 2019; Daniels, 2021). Studies about younger children, such as the present one, are rare.

I found that the range of contexts in which literacy events took place shaped adult-child interactions and children's engagement. In my analysis, I focussed on several factors, namely space, material, group size, and language use (see Chapter 7). Firstly, the spaces in which literacy events took place afforded different opportunities for interactions and engagement. In turn, spaces could also limit the children's participation, for example by restricting their possibilities for movement or the view on their peers and on the book. Secondly, educators and children used different kinds of material during literacy events. Material, such as picture books, figurines, or letter-shaped objects had the potential of arousing children's curiosity, thereby creating engagement. Furthermore, literacy-related material potentially limited or facilitated high-quality adult-child interactions, such as the example of the 'Cat and Mouse' books has shown. In this example, it was also striking that the way in which it was used mismatched the intended purpose. Thirdly, my findings illustrate that smaller groups or one-to-one interactions facilitate *all* children's participation and engagement in literacy events, in contrast to large group constellations. However, many adult-planned literacy events involved a high number of children. Finally, my findings show that the educators and children's language use during literacy events are highly important in regard to early literacy meaning-making. I found that a dynamic use of languages and the inclusion of family languages, as well as a positive and open

attitude towards multilingualism could support children's engagement and high-quality interactions, thereby facilitating meaning-making.

11.2.2 RQ2: Young children's ways of making meaning in early literacy events

The second research question relates to the ways in which young children made meaning in literacy events. My findings emphasised the role of children's active participation and engagement, which was expressed in different ways. In adult-led activities, children participated through verbal or non-verbal contributions, for example by asking or answering questions, expressing emotions, making gestures or by stating their ideas and opinions. Similarly, they communicated multimodally in peer interactions, for example during play.

In Chapter 8, I have described several conditions which promoted children's participation and engagement in literacy events, thereby fostering early literacy meaning-making. Firstly, children's participation and engagement were supported by *authentic learning situations*, which involved comprehensive learning aims and embeddedness into a larger context. Secondly, the *inclusion of children's perspectives,* such as the children's personal background's or their ways of understanding literacy, increased children's participation and engagement. Thirdly, early literacy meaning-making occurred when *shared understanding* was fostered, which was achieved by sustaining children's interest and through the use of family languages.

Furthermore, my findings illustrate that children's early literacy meaning-making involved three different levels: print awareness, learning about words and (print) concepts, and making meaning of literacy practices (see Chapter 9). Firstly, children learned that printed signs or language convey specific meanings, which distinguished them from other objects. For example, they learned that the pictures and text in books can be used to tell stories. Secondly, children's early literacy meaning-making involved developing knowledge about words and (print) concepts. By engaging with the content of books or other forms of signs and print, children learned about the meaning of new words and concepts. For example, they realised that the meaning of letters depended on their orientation, but not on their colours. Thirdly, children made meaning in literacy events on the level of practices. They reenacted literacy practices during play or interpretively reproduced adults' behaviour or interactional strategies.

11.2.3 RQ3: Children's ways of interacting with others during early literacy meaning-making

The third research question focussed on the ways in which children interacted with peers or adults when making meaning in literacy events. Following my initial understanding of literacy, I focussed on situations of reading and writing. My findings show that children and educators, made use of various semiotic resources, including children's family languages in meaningful literacy-related interactions. Additionally, children and educators made use of non-vocal modes, such as gestures, facial expressions, gaze, or posture. In line with the sociocultural framework and the understanding of literacy as a situated practice, my findings also show the importance of considering children's interactions with the physical features of their environments, such as literacy-related material and other objects.

The aspect of *connections* stood out from the interactions of children and adults during early literacy meaning-making. In my findings I have defined six types of connections (see Chapter 10). Children and educators made connections between literacy and the (1) child's body or senses, (2) objects or the surroundings, (3) the child's personality, opinions or preferences, (4) the child's family members, friends or peers, (5) the child's previous experiences, and (6) text. These connections can be placed on a continuum from concrete (1 and 2) to emotional (3 and 4) to abstract. Considering that literacy is an abstract or symbolic form of communication, learning to think in abstract terms can be seen as an integral part of children's literacy development. Therefore, my findings also show how adults strategically scaffolded children's early literacy meaning-making in interaction, by adapting to their current understandings and by making increasingly abstract connections.

Finally, an important way in which children expressed meaning-making of literacy practices was by reproducing adults' behaviour. I have shown examples in which children enacted recurring literacy events, such as storytelling or circle time routines during free play. Furthermore, I have found that children reproduced adults' interactional strategies when they were encouraged to lead literacy events. Play and interpretive reproduction are important aspects in children's meaning-making of literacy practices, as they are not imitations of reality, but rather express children's understandings and interpretations of their experiences.

11.3 Discussion of the findings

The children in this study all encountered literacy in different forms during pedagogical activities or everyday life situations. They made meaning of literacy-related concepts, skills and

practices as they engaged in literacy events on their own, as well as together with peers or adults. Nevertheless, the contexts in which children experienced literacy were profoundly different. Furthermore, the ways in which they expressed themselves in interaction, as well as the educators' strategies of supporting literacy development varied. While it seemed that meaning-making was a shared feature of all children's literacy-related learning, as most learning processes, it was shaped by the crèches' contexts and children's individual backgrounds. From an educational perspective, the question about purposeful early literacy practices and promising approaches to support children's early literacy meaning-making arises. In the following, I will elaborate on this by, firstly, discussing children's multimodal ways of expressing and making meaning, with a focus on translanguaging and play. Secondly, I will consider the role of literacy in diverse early childhood education contexts. Thirdly, I will discuss early literacy meaning-making from a pedagogical point of view.

11.3.1 Early literacy meaning-making as a multilingual and multimodal practice

The findings of my study show that children experienced literacy and developed complex understandings in relation to concepts, skills and practices from an early age on. Researchers adopting developmental or psychological perspectives of meaning-making would maybe question or relativise young children's meaning-making abilities. For example, the constructive development theory of Kegan (2009), sees meaning-making of preschool children as limited to sensorial and impulsive exploration of the world. Further, Mezirow's theory of transformative learning (2003) conceptualises meaning-making as a purely adult learning process. These theories seem to understand meaning-making as a deliberate cognitive process of individuals. While the findings of my study, do not allow to make conclusions about children's awareness or consciousness of meaning-making, they emphasise the social and cultural dimension of meaning-making. This perspective does not restrict meaning-making to school children or adults, but recognises young preschool children's capacity to actively and creatively make meaning of complex matters, such as literacy. As the example of Etienne and the name tag on his hat shows, the two-and-a-half-year old child was enabled to understand the complex difference and interrelation between letters and words through his interaction with Ms Joana. This situation is only one example of young children's complex early literacy meaning-making that I have presented in my findings. It shows that Etienne's early literacy meaning-making was based on the use of his whole semiotic repertoire, including features of French and Luxembourgish, gestures, and the use of objects. I will first discuss the role of multiple

languages in children's early literacy meaning-making, before moving on to a discussion about other non-vocal semiotic modes.

The findings of my study illustrate that early literacy meaning-making involved the flexible use of different languages, which can be considered a societal norm in everyday life communication in multilingual Luxembourg (Fehlen, 2002). Therefore, examples from *Earth* and *Water* during which participants switched between Luxembourgish, German, French, and Portuguese, do not surprise. They are in line with the national framework and the *éducation plurilingue* (MENJE & SNJ, 2021), as well as the previous findings of the COMPARE project (Aleksić & Kirsch, 2021; Kirsch & Bergeron-Morin, 2023; Kirsch & Kemp, 2024; Kirsch & Hornberger, 2024).

This idea relates to the concept of translanguaging (Garcia & Wei, 2014), which has been widely used in educational research in multilingual contexts. Translanguaging critically opposes previous views on bi- or multilingualism as being the sum of individual and separated languages. Instead, it considers the ways in which multilinguals leverage their "entire semiotic repertoire in meaning-making" (ibid., p. 69). The role of translanguaging in Luxembourgish ECEC contexts seems to have shifted in the past years and with the introduction of the *éducation plurilingue* in 2017. Ethnographic studies conducted before the change in official language policy documented multilingual practices that foregrounded Luxembourgish as a lingua franca and included children's family languages following a one-person-one-language logic (Honig et al., 2013). Furthermore, monolingual institutional language policies seemed to clash with translingual everyday language practices (Seele, 2015). The introduction of the *éducation plurilingue* can, therefore, be seen as an effort to structure and regulate existing multilingual practices. While translanguaging has become a legitimate practice in Luxembourgish ECEC structures, the need for a pedagogically reflected approach to language use has been emphasised (Kirsch & Seele, 2020).

Whereas the educators at *Earth* and *Water* frequently translanguaged, everyday interactions between educators and children at *Air* were almost exclusively French monolingual. As I did not focus on the reasons for educators' language use, I can only imagine possible explanations for this. Given the initial training and previous professional experiences from France, language practices of the educators at *Air* may reflect a monolingual habitus (Gogolin, 1997). Researchers have addressed this, by stating the need for multilingual education in France and promoting language awareness trainings for practitioners (Hélot & Young, 2006) and collaboration between ECEC and families (Mary & Young, 2017). The educators from *Air also* accommodated many children of cross-border workers or high-ranking international employees, whose future educational path will probably lie in France or in international schools.

As a result, the expectations regarding preparation for later schooling were different in the three crèches. Despite the dominance of French at *Air,* the example of Antonia and Cécilia and their conversation about fireworks shows that children's peer interactions, at times, involved the use of family languages, in this case Italian. Although the children knew that Ms Morgane also spoke Italian, they did not use the shared language in interactions with the educator. By contrast, Luisa at *Water* used features of Portuguese, even when interacting with the educator Mr Paul, who did not speak the language. This may be a result of the overall more dynamic approach to language use at *Water.* These examples show, that the educators' stances and pedagogical designs in regard to translanguaging have influenced the children's use of family languages in peer and adult-child interactions. Previous studies from Luxembourg about children's translanguaging practices show, that children cleverly navigate the complex language practices in their respective ECEC contexts and agentively undermine existing policies (Kirsch & Mortini, 2021; Simoes Lourêiro & Neumann, 2020).

Many educators seemed to include children's family languages spontaneously, if these languages were part of their own linguistic repertoire. While the educators used the child's family language with the aim of promoting inclusion and participation, ill-reflected "home languaging" (Kirsch & Seele, 2020, p. 73) may lead to the exotification or othering of children from non-dominant language backgrounds (Thomauske, 2017). As the examples of singing in children's family languages at *Air* and *Earth* have shown, the children, at times, expressed discomfort or negative attitudes towards other languages. This shows that the use of family languages in ECEC is not only a question of understanding each other, but also relates to emotions and identity. While I have not used the concept of identity in my study, it is important to acknowledge this dimension of early literacy meaning-making. In a study of ten three-year-old preschool children in a Chinese-English family literacy programme in the U.S., Wagner (2020) has combined the perspectives of language use, literacy, and the development of children's identities as readers. He looked at the languages used in texts and talk during shared reading situations and the ways in which children expressed and developed their identities as readers. By comparing approaches (e.g. Chinese text and talk vs Chinese text and Chinese-English talk), the author found that the emergent bilingual children responded differently to adults' input, depending on the languages at use. For example, children asked more or fewer questions about the stories or expressed their language preferences, thereby acting rather as listeners, or as co-readers. The author concludes that children need both monolingual and multilingual experiences that are purposefully planned in order to develop their full potential as emergent multilingual readers.

Until now, I have foregrounded the role of talk and linguistic resources in children's communication and meaning-making. However, the concept of translanguaging also includes other semiotic resources, such as gestures, facial expressions or the use of objects. Other researchers have also emphasised the importance of multimodality in young children's ways of making meaning (Bezemer & Kress, 2016). Especially when studying younger children, it is essential to take into account non-vocal modes of communication. While I did not aim to evaluate children's communicative modes or compare the ways in which younger and older children expressed meaning, it is apparent in the data that there were age-related differences. The three-to-four-year-olds Niklas, Lia, Joyce, Antonia and Cécilia tended to speak more and in longer sentences. Furthermore, they showed more use of decontextualised or narrative language features, which is in line with previous developmental research (Andresen, 2011). On the other hand, the two-to-three-year-olds Etienne, Luisa, Tobias, and Justine seemed to use more gestures and speak shorter sentences or single words. However, this perceived difference could also be due to the adults' ways of interacting with the children. The educators, as well as myself, may have been more attentive to younger children's embodied modes of meaning-making, as they were essential to understand the children, whereas older children managed better to make themselves understood through talk. Apart from age, the context of communication has been found to influence children's use of different semiotic modes. For example, Flewitt (2005) has compared adult-child interactions in the home and preschool context in consideration of children's whole semiotic repertoire. She concludes that children communicated and made meaning in both contexts, although they *talked* less in preschool than at home. Her findings highlight the importance of taking into account non-vocal modes of communication when researching children's meaning-making.

In relation to literacies, García and Kleifgen (2019) have emphasised that the translanguaging approach allows to move from a purely language-based approach to a more holistic view of learning and communication as it includes a person's way of talking, behaving, and interacting with objects within social processes. In this sense, literacy, or more precisely *multiliteracies* (see sub-chapter 11.3.3) can be seen as a bridge between the language-based approaches to multilingualism and the social-semiotics perspective of multimodality. Taking a holistic view of children as multisemiotic meaning-makers also entails the consideration of children's play, which I will discuss in the following sub-chapter.

11.3.2 The role of play in children's early literacy meaning-making

Initially, I did not expect to address play in my study. The inductive approach and the focus on the children's perspective have led me to recognise the relevance of play for children's learning and, more precisely early literacy meaning-making. However, qualifying a situation as *play* seems to be in the eye of the beholder. While I considered Antonia's use of the figurines in relation to the animal doctor story as play, Antonia herself disagreed and said that she was working. At the same time, I first interpreted children's independent use of books as emergent reading, because of my personal connotations with books. Looking back at Joyce's unicorn story or the way in which Etienne used the animal vocabulary book, one could also say that the children were using the pictures of the books in a playful way. Against my expectations, many situations of playful engagement with literacy did not necessarily involve peer interactions and did not take place during designated free play moments. Instead, children playfully used literacy-related material on their own, or role played literacy events, such as circle time and shared reading, for example as they got ready to take a nap.

While the links between literacy and play have been theoretically described (Dyson, 1990), empirical studies that connect these two important areas of early childhood are rare. Bateman (2018) has identified ventriloquism – or the children's act of projecting their voice to an object used in play – as an important aspect in children's development of narrative and metalinguistic competences. This study involved primary school children, whose play differs from the one of the younger children in my study. The development of stories and the use of imaginary objects, as described by Bateman (2018) is a characteristic of more complex forms of play, which only appear after the age of four (Andresen, 2011). Nevertheless, the children in my study also demonstrated early narrative competences when they (re-)told stories using books or other material. For example, Antonia retold the story of the animal doctor usings pictograms and figurines, and Joyce created her own version of the unicorn story, based on the pictures in a book. These examples show the ways in which children developed and expressed emergent literacy skills during play.

On the other hand, my findings show that children explicitly referred to their literacy-related experiences during play. For example, I have shown how Antonia and Cécilia re-enact the 'Cat and Mouse' reading practice at *Air*, by emphasizing silence and the passiveness of the situation. The ways in which children re-enacted literacy events in my study resembles to what Corsaro (1992) has described as "interpretive reproduction" (p. 160). By adapting and creatively reproducing adult behaviour, children appropriate meanings as part of their socialization. My findings illustrate this aspect of children's peer culture specifically in relation to literacy

practices. In another study, Wells Rowe (1998) has explored moments of play during which children explicitly refer back to elements of books and stories. Many of her observations of two-to-three-year-olds at home or preschool involved children's individual storytelling. Even though children were by themselves, they seemed to interact with imagined others or referenced previous group activities. Such references were also common in my data, for example in the ways in which children imitated adults' narrative tone of voice or way of asking questions when telling stories. These findings highlight the social aspect of literacy. Furthermore, one can say that children's way of reproducing common literacy events and practices in play are linked to the idea of *connections*, which I have presented in Chapter 10. While I have only analysed connections that were expressed through specific moments of speech or action, one could broaden the scope to include also whole situations. From this perspective, follow-up activities or certain moments of play become connections that support children's early literacy meaning-making.

11.3.3 The place of literacy in early childhood education

My findings show that children encountered literacy at *Air, Earth,* and *Water* in diverse situational, organisational and pedagogical arrangements. In all three crèches, the educators organised literacy-related activities, such as shared reading, singing or rhyming. While I have aimed to illustrate the diversity of literacy events in my findings chapters, there was a prevalence of book-related learning situations in the data. My personal interest in books has led me to focus on shared reading events in the beginning of the data collection. While this reveals a potential bias, the importance of storytelling and shared reading as key-activities in early childhood remains. As previous studies confirm, picture books are associated with supporting language development (Mourão, 2015), fostering enjoyment and relationships (Jimenez et al., 2019), and developing early literacy skills (Hancock, 2002). However, I found that the potential of book-related literacy events was not always fully realised. Some educators seemed to use books predominantly as a way of giving language input. They conceptualised shared reading as a receptive language learning activity and only accorded children with little opportunity to interact or talk about the stories prior and after reading them. Yet, dialogic approaches to shared reading are, as previous research has shown (Kotaman, 2020), better suited to support children's language development. Furthermore, as they allow children to actively participate and create engagement, they can foster children's interest in books and their motivation to become literate. While I frequently observed situations of shared *reading* in all three crèches, literacy events in relation to *writing* were rare in all three crèches (see Kirsch & Kemp, 2024). The example of

the letter to the forester from *Earth,* represents one of the few adult-led activities which included writing purposefully. Other situations involving writing were spontaneous and emerged as children observed practitioners' authentic use of written language or print in their environment and expressed interest. From my observations I conclude that literacy events involving writing were fruitful contexts for early literacy meaning-making. In the examples of *Earth,* during which Ms Dominique wrote the labels for the jam glasses together with Lia or Ms Joana wrote Etienne's name on her phone as they explored the name on the name tag, the children experienced the practice of writing in authentic situations. Furthermore, they expressed their interest in writing and developed emergent literacy skills, such as phonological awareness, letter knowledge and print concepts through their engagement. In the other two crèches, the children also expressed their interest in written language. They asked me about my notebook, pointed out symbols in the surroundings during walks or played with literacy-related activities trays. However, the educators from *Air* and *Water,* let children explore print by themselves and did not engage them in interactions, which prevented children from understanding the form and function of signs and symbols. My findings in relation to the role of writing in early childhood education align with previous research showing that writing is rarely incorporated into daily activities in early childhood education (Gerde et al., 2012). While early childhood educators presented children with opportunities to use writing tools, such as pencils and paper, they separated writing from other areas of learning (e.g. arts). Educators' reticence towards the inclusion of writing into early childhood education, might be linked to their understanding of early literacy as the development of skills and knowledge. While they might connect books and stories to creativity, imagination and *oral* language, writing may be associated with letters and the alphabet. Consequently, educators may see the place of writing in formal schooling and not in non-formal early childhood education settings. These practices also reflect the national policy documents, which make a clear distinction between crèches and schools. Furthermore, the framework for non-formal education names picture books, nursery rhymes and the use of digital media as examples of early literacy experiences (MENJE & SNJ, 2021, p. 47). While the use of books and songs was common in adult-led activities of all three crèches, digital media was less present. The project COMPARE set out to explore *multiliteracies* (Kalantzis & Cope, 2000), a concept which emphasised multilingualism and multimodality in contrast to monolingual and exclusively print-based literacy. However, this concept turned out to be less appropriate to describe the educators' and children's practices in the participating crèches. While my findings illustrate some examples of multilingual and multimodal literacy practices, such as the activities around the song 'Head, Shoulders, Knees and Toes' at *Earth,* which

involved the use of multiple languages and video recordings, most literacy events related to print-based and monolingual learning material. The educators' reticence towards the use of digital media in early childhood, represents a contrast towards recent studies, which emphasise the value of digital technology in education (e.g. Melo-Pfeifer, 2021; Brown, Hao & Zhang, 2022).

Furthermore, the observed literacy events revealed that educators seemed to have different views of children's learning and understood literacy either in relation to the development of knowledge and skills, as a social and cultural practice, or as a source of entertainment (see sub-chapter 11.3.3). These findings show that literacy in early childhood education can be understood as different *situated literacies* (Barton & Hamilton, 2000), which depend on the educators' attitudes and values as well as on circumstances of the distinct context. While all three crèches in this study applied the national framework, their language and literacy practices varied and represented different cultural themes of literacy in early childhood. These themes match cultural differences of parents, described by Baker and colleagues (1994). At *Air,* there was a clear tendency of literacy events to be more formal and instructional, which corresponds to the view of literacy as a set of discrete skills (ibid.). By contrast, at *Earth* literacy events were more authentic and informal, which is in line with the understanding of literacy as a social and cultural practice (ibid). Finally, at *Water* literacy events seemed to highlight emotional and relational aspects, which is in line with the view of literacy as a source of entertainment (ibid.). While the study of Baker and colleagues (1994) was based on home-literacy practices, my findings illustrate similar patterns in the context of non-formal early childhood education. As ECEC represents the transition between families and schools, this parallel does not come as a surprise. However, it has also become clear that the contexts of the crèches often resembled formal learning arrangements. In fact, Clark (2002) states that early childhood education in England has become increasingly formalized, which she attributes to the impact of policies, such as the National Literacy Strategy (NLS). Other researchers have described this process as the *schoolification* of ECEC (Doherty, 2007). Especially when it comes to early literacy, educators seem to be divided into those who wish to give children a *head start* in developing school-relevant skills and knowledge, and those who see school teachers as responsible for literacy development (David & Goouch, 2001). In the following sub-chapter, I will now take a pedagogical perspective on my findings.

11.3.4 A pedagogical approach to early literacy meaning-making

My findings have shown the pedagogical value of considering early literacy with a focus on meaning-making. I argue that adults can support early literacy meaning-making through high quality interactions. In Chapter 7, I presented different contextual factors that shaped children's engagement and adult-child interactions in literacy events. Furthermore, in Chapter 10, I described conditions which promoted early literacy meaning-making. These aspects revolve around the role of pedagogical approaches and choices. In this sub-chapter, I reflect on this aspect, first by addressing the dichotomy between formal and non-formal understandings of education, the educators' differing views of learning and the child, and how this was expressed in child-centred pedagogies.

While the policy documents in Luxembourg clearly advocate for a non-formal approach to learning in ECEC (MENJE & SNJ, 2021), my findings revealed elements of rather formal early literacy practices. Activities such as circle time and particularly the literacy-related activities at *Air* tended to be school-like. As the development of non-formal early education in Luxembourg is rather recent, in comparison to other countries, educators in Luxembourg cannot draw on long-standing experience and traditions. Additionally, one of the practitioners had a professional background as a *teacher* with an initial training in formal education. Consequently, it is understandable that educators relied on practices and activities from school. As the longitudinal ethnographic study of Honig and colleagues (2013) has shown, there is a prevalence of organised activity-based learning in non-formal ECEC contexts in Luxembourg. This tendency may be reinforced by the presentation of different subject-like areas of learning in the national policy (see sub-chapter 12.4.1). In my data, formal or school-like literacy events tended to be more adult-centred and less interactive than non-formal or spontaneous ones. Early literacy meaning-making, however, seemed to be facilitated through children's active participation and engagement.

I have already discussed in the previous sub-chapter, that the educators' underlying views of literacy have influenced their practices. Further, their pedagogical values have shaped the ways in which they engaged children in literacy events. The educators at *Air* seemed to base their approach on the understanding that adults transfer knowledge and skills to children, who learn through repetition and application, which represents a behaviourist understanding of learning. By contrast, the educators at *Earth* seemed to implement a socio-constructivist pedagogy, as they encouraged children's active engagement and participation and the social dimensions of learning. At *Water*, the educators seemed to perceive their role mainly as providing children with appropriate learning environments in which children could learn and develop in their own

individual rhythms. This pedagogy can be linked back to maturationist views of development, which emphasise that children learn when they are ready and presented with the right learning opportunities (see Kirsch & Kemp, 2024).

While the national framework of non-formal education (MENJE & SNJ, 2021) does not impose a distinct pedagogical approach or learning theory, it promotes a clear image of the child. Children are depicted as "unique" and "competent individuals" as well as "social and cultural beings" (p. 17, my translation). This is based on the United Nations' convention of children's rights, which views children as active agents (1990). The image of the child as a social construct is an important idea in early childhood, as it informs educators' pedagogical choices (Whitaker, 2019). The national framework seems to be in line with the image of the rich child, following the ideas of the Reggio Emilia pedagogy. In this sense, the term *rich* refers to the child's learning potential and social competences. Pedagogical values resulting from this view relate to community, dialogue, democracy, and experimentation (UNESCO, 2010). However, regarding the pedagogical practices in the three crèches, I see ambiguities in the implementation of the national framework. From my perception, the practices of the educators from *Earth* seem to correspond most to this view. They included children in decision-making processes of the crèches, encouraged them to participate or express their ideas and promoted social interaction and learning from each other. Furthermore, they adapted their strategies to individual children and promoted shared understanding. While the educators at *Earth* put the children's interests and perspectives at the centre of learning, they also seemed to perceive their own role as supporting learning through guidance. This approach has presented children with more opportunities and support to make meaning of literacy. By contrast, the practices at *Water* expressed an understanding of learning as being related to children's independent exploration and individual development. They accorded children with a lot of freedom and only seldomly imposed rules. Their approach seemed to foreground care and children's socio-emotional development, for example by fostering positive relationships, enjoyment or well-being. At *Air,* the educators' practices seem to represent two underlying images of the child. On the one hand, the image of "the child as a cute object" (Whitaker, 2019, p.1). This was expressed through the educators' excessive praising of children and the use of nicknames, such as "bébé" (*baby)*. On the other hand, the educators seemed to see children as "empty vessel(s)" (ibid., p. 1). This was represented by the educators' adult-centred approach during literacy events and the lack of children's autonomy. These findings show that the educators had different interpretations of the national framework and the child-centred pedagogy that it strives for.

Taking a pedagogical perspective on early literacy meaning-making does not only include reflections about values and the view of the learner, but also relates to questions of organizing learning activities. In my findings, I have analysed the influence of several contextual factors, namely space, material, group size and language use. The terms *influence* and *factors* may read oddly in a qualitative thesis. In fact, contextual factors such as group size have been studied through experimental or quantitative methodologies in previous studies. For example, (Phillips & Twardosz, 2003) have compared interactions in the context of small and large group activities in an experimental study design. They concluded, that smaller groups increased the quality of interaction and children's verbal participation in interaction. In my findings, I also describe that smaller groups facilitate high-quality interactions and children's engagement, although I base this conclusion on naturalistic observations of learning situations. In another study, Kutnick and colleagues (2016) have observed learning activities of four-to-five-year-olds in thirty-four English preschool settings. Like me, they observed a range of different authentic situations. However, they conducted a frequency-based analysis to identify patterns related to group size and composition. For example, they found that larger groups, composed by practitioners tended to be more diverse in terms of children's gender and peer-relationships. By contrast, child-oriented activities resulted in smaller and more homogeneous groups. While these findings contribute to our understanding of learning contexts, they do not allow us to draw conclusions about the quality of adult-child or peer interactions and how they contribute to learning. By contrast, my findings show that group size as a contextual factor influences children's learning potential.

To sum up we may ask: What is the influence of different pedagogical approaches on children's early literacy meaning-making? I suggest, that the children in all three crèches made meaning of literacy, but that the *results* of this learning process were different. At *Air,* the children may have learned that being literate means to skilfully and correctly use spoken and written language. At *Earth,* children may have recognised literacy as a communicative tool and a part of everyday life. And at *Water,* the children may relate literacy to fun and a sense of comfort. From my perspective, all these *meanings* of literacy can be relevant for children in different areas of their life. Therefore, I argue for holistic and diversified pedagogical approaches to literacy in ECEC, which enables children to develop different *meanings* of literacy.

11.4 Summary

In this discussion chapter I have, first, provided a summary of my findings in relation to the research questions. I found that the children engaged in a range of adult-planned, spontaneous, and child-centred literacy events in all three crèches. Children made literacy-related meaning on three levels: the level of print awareness, (print) concepts, and literacy practices. Furthermore, I found that high-quality adult-child interactions, as well as child engagement supported early literacy meaning-making and could be promoted through authentic learning situations, the inclusion of children's perspectives, and shared understanding. Additionally, establishing different concrete, emotional and abstract connections between literacy and the self was a common aspect of children's early literacy meaning-making. Finally, children expressed engagement and interacted with peers, adults, material and space using multiple languages and other non-vocal modes of communication.

Secondly, I have discussed my findings in relation to several overarching topics. In sub-chapter 11.3.1, I have discussed the multilingual and multimodal nature of children's early literacy meaning-making, with a focus on the role of translanguaging and multimodality. I have emphasised that young emergent multilingual children are able to engage in complex meaning-making in relation to literacy. In sub-chapter 11.3.2, I have discussed the context of play as an important context for early literacy meaning-making. Furthermore, in sub-chapter 11.3.3, I have discussed the meaning of literacy in early childhood education, more specifically in relation to the practices of reading and writing. I have related my findings to the concept of multiliteracies and situated literacies and discussed the different underlying understandings of literacy, that the educators' practices revealed. Finally, I have addressed the risk of increasing *schoolification* of early childhood (see Doherty, 2007). In sub-chapter 11.3.4, I have discussed the dichotomy between formal and non-formal education, as well as the role of different pedagogical approaches and images of the child. I have ended the discussion by highlighting the importance of taking into account the pedagogical contexts and specific contextual factors, such as group size.

Chapter 12: Conclusion

12.1 Introduction

My personal interest in literacy, as well as my academic background in education and multilingualism have considerably shaped my understanding of early literacy meaning-making (see Chapter 1). In my thesis, I have approached literacy meaning-making from a sociocultural perspective and with a focus on learning in early childhood (see Chapter 2). I have reviewed literature on literacy (see Chapter 3) and meaning-making (see Chapter 4), and identified research gaps in relation to the young age of the children and the exploration of multilingual and non-formal contexts. With a rapidly developing non-formal early childhood education sector and a national plurilingual education policy, Luxembourg represents a relevant research context for this study (see Chapter 5). My research followed a qualitative and interpretive research design in which I inductively analysed naturalistic observations from three ECEC settings (see Chapter 6). This research design has allowed me to contrast the early literacy practices of the three crèches and describe the ways in which different contextual factors have influenced literacy events (see Chapter 7). Furthermore, I found several conditions which promoted the quality of adult-child interactions as well as children's engagement (see Chapter 8). I found that children made meaning of literacy-related concepts, skills, and practices alone, as well as together with peers and adults (see Chapter 9). Finally, I have identified the aspect of connections between literacy and the self as a relevant aspect of early literacy meaning-making and placed different types of connections on a continuum from concrete to abstract (see Chapter 10). As children's early literacy meaning-making can be seen as a situated practice, I discussed the importance of considering children's distinct contexts and individual learning processes and the need for a pedagogical approach to early literacy meaning-making (see Chapter 11).

I have argued that literacy should be understood from a holistic perspective to overcome existing dichotomies between oral and written language, as well as skills- and practice-oriented approaches. A holistic approach is, from my perspective, better suited to study and support children's early literacy-related learning. The children in this study have actively and creatively made meaning of literacy in a range of different situational contexts. They engaged with literacy during pedagogical activities, spontaneous everyday life situations, or play and interacted with material, spaces, adults, and peers. Engaging learning opportunities and high-quality interactions seemed to enable meaning-making.

In this final chapter of my thesis, I will now conclude my thesis by reflecting on the quality of my study and outlining contributions and implications. I will begin with the theoretical, methodological and empirical contributions, before formulating implications for policy-makers and practitioners. Finally, I will discuss the limitations of my study and give recommendations for future research.

12.2 Evaluation of the research process

Evaluation criteria aim to increase the quality and validity of any research endeavour. The concept of validity originally derives from quantitative methodologies and describes the extent to which research claims correspond to the applied research process (Abdalla et al., 2018). The use of evaluation criteria in qualitative research is debated. Firstly, some researchers generally question the use of evaluation criteria in qualitative research and see it as a concept that belongs only to the quantitative realm of research (Patias , 2019). Secondly, among those who agree on the need for evaluation criteria in qualitative research, two main discourses exist. On the one side, researchers advocate to adapt evaluation criteria for quantitative research to make them applicable in qualitative research. On the other side, there are those who argue for the development of specific criteria for qualitative research.

Whittemore and colleagues (2001) suggest to distinguish between primary and secondary criteria of evaluation. While primary criteria are necessary to all kinds of qualitative inquiry, but insufficient as such, secondary criteria are more flexible and can be applied to different kinds of investigations. Table 19 lists the primary and secondary criteria of evaluation for qualitative research and provides guiding questions in order to assess their fulfilment.

Table 20: Evaluation criteria of qualitative research (Whittemore et al., 2001, p. 534)

Primary criteria	*Credibility*	Do the results of the research reflect the experience of participants or the context in a believable way?
	Authenticity	Does a representation of the emic perspective exhibit awareness to the subtle differences in the voices of all participants?
	Criticality	Does the research process demonstrate evidence of critical appraisal?
	Integrity	Does the research reflect recursive and repetitive checks for validity as well as a humble presentation of findings?

Secondary criteria	*Explicitness*	Have methodological decisions, interpretations, and investigator biases been addressed?
	Vividness	Have thick and faithful descriptions been portrayed with artfulness and clarity?
	Creativity	Have imaginative ways of organizing, presenting, and analyzing data been incorporated?
	Thoroughness	Do the findings convincingly address the questions posed through completeness and saturation?
	Congruence	Are the process and the findings congruent? Do all the themes fit together? Do findings fit into a context outside the study situation?
	Sensitivity	Has the investigation been implemented in ways that are sensitive to the nature of human, cultural, and social contexts?

Although there are different views in regard to the evaluation of qualitative research, they can be summarised under two main concepts: reflexivity and trustworthiness. Through reflexivity, qualitative researchers acknowledge that their work can never be objective, and that it is influenced by different personal and contextual factors. Trustworthiness refers to the ways in which researchers render their research process transparent and their findings credible for the reader. In the following sections, I will elaborate on these two evaluation criteria for qualitative research. I will start by defining and explaining the aspect of reflexivity in the context of my study. More precisely, I will position myself in regard to the topic of early literacy meaning-making and reflect on the ways in which my role has influenced the research. Secondly, I will elaborate on the ways in which I ensured trustworthiness of my analysis and results.

12.2.1 Reflexivity

Patton and Winter (2023) define reflexivity as "an active acknowledgement that the construction of knowledge through the use of particular methods is not an objective process but that the researcher has an active role on the construction of knowledge by their own subject positioning" (p. 304). Therefore, in the following, I will elaborate on my position as a researcher in the context of my study, as recommended by scholars (Darwin Holmes, 2020). I will transparently point out possible biases that arise from my personal and academic background.

As I have outlined in sub-chapter 1.2, my PhD study can be seen as a continuation of my previous studies. I obtained a Bachelor's degree in Education and a Master's in *Learning and Communication in Multilingual and Multicultural Contexts.* After that, I started working as a doctoral researcher at the University of Luxembourg. Apart from freelancing activities as a tutor and internships during my Bachelor studies, I did not have any practical teaching experience. However, I had obtained some knowledge about literacy during my previous studies. From my Bachelor studies, I had learned about the dichotomy between oracy and literacy and I had gained

knowledge about alphabetisation, phonological awareness and other formal literacy skills in the context of primary education. In my Master thesis, I explored the literacy practices and bedtime story readings of a multilingual family with two preschool children. While I had some previous knowledge, my understanding of literacy did not yet include literacy development in non-formal educational contexts or the emergent literacy perspective. Hence, I had to gradually expand my understanding of literacy during the PhD. At the beginning of the data collection, I mostly focussed on adult-led activities, such as story reading or circle time routines. I soon discovered that early literacy meant much more than that, and I developed an interest in children's independent activities and their interactions with different kinds of signs. However, throughout the whole research process, I constantly had to question my tendency to foreground formal aspects of literacy due to my teaching background. Furthermore, I had to consciously draw my attention away from shared reading situations, to avoid neglecting other relevant literacy events.

My interest in shared reading situations is also influenced by my own childhood experiences. I had the privilege of growing up in an educationally oriented family, with both my parents working in education. They placed high value in learning and literacy from an early age on and, therefore, books have always been a part of my life. The bedtime stories my parents read to me and my sisters, and the countless audiobooks that I listened to are some of my fondest childhood memories. To this day, reading remains one of my favourite hobbies. Unsurprisingly, this personal passion has influenced my research interest in reading, and in literacy in general. I am aware that my own experiences do not necessarily correspond to those of many children today. But, at the beginning of my PhD studies, I did not have other reference points as there were no preschool children in my personal environment. I had to learn to question my own perception of *good* or *normal* early literacy practices and be open towards other experiences. Furthermore, I had only worked with school pupils and did not have much contact with younger children. I, therefore, tended to compare my observations to what I had experienced in schools and gradually developed more knowledge about language and literacy development in the early years.

My knowledge of the non-formal early childhood education sector in Luxembourg was limited at first. When I was growing up I visited one of the first and only crèches in my hometown for a few hours a week. As my mother has told me, at the time this was exceptional and even badly regarded by other parents. Much has changed since then and today, crèches are an integral part of many families' care arrangements. I did not have much knowledge about the daily practices of crèches in Luxembourg. The few insights that I had, came from my father who worked as a

teacher at the LTPES, where he supervised and tutored pre-service educators during their internships. His accounts were generally critical and painted a rather negative image of early childhood facilities. Consequently, I developed a tentative scepticism towards crèches and the growing institutionalization of childhood in general. This explains personal preferences and dislikes I felt towards certain pedagogical practices of the observed settings. For example, I did not appreciate the rigid structure of the daily schedule at *Air*, while I admired the more flexible and child-centred approach at *Earth*. Another reason why I felt captivated by the latter, was the nature-based pedagogy. During my Bachelor studies, I had chosen to do an internship in one of the first forest preschools of Luxembourg. It was a fascinating experience and a learning environment that I greatly appreciated. I cannot deny these personal inclinations regarding settings and practices. However, I learned to be reflective and to interpret my observations in line with the values and norms of the respective settings and not according to my own.

12.2.2 Trustworthiness

Trustworthiness refers to the extent to which the presented research process has led to the conclusions and results of a study. The credibility and plausibility of research can be judged by the researchers' choices in terms of theoretical background, research design, data collection, as well as analysis (Anderson, 2017). While researchers can take measures to increase the trustworthiness of their work, in the end "a study is trustworthy if and only if the reader (…) judges it to be so" (Rolfe , 2006, p. 303). Researchers who aim for trustworthiness of their research, make their choices along the research process transparent. Furthermore, they take an open and critical stance towards their own research (Johnson et al., 2020). This "minimize[s] the risk of bias and maximize[s] the accuracy and credibility of research results" (Johnson et al., 2020, p.145). Furthermore, they can employ methods such as member checking, triangulation, or showing representative quotations to increase the trustworthiness of their research (Cho & Lee, 2014).

In the context of my research, several factors contribute to the trustworthiness of my work. Firstly, my long-term participation in the field to collect data. Overall I have spent over 260 hours in the three crèches (see sub-chapter 6.5.1) This extended time of presence in the field has led me to observe recurring and exceptional events, which allowed me to better understand the crèches' practices. The longitudinal character of the study, firstly, allowed me to witness changes over time. Secondly, it ensured that the participants' behaviour during my observations was authentic and not staged. Another factor that enhances the trustworthiness of my research is the triangulation of data sources and methods (see sub-chapter 6.6.5). The combination of

several types of data allowed me to address the same topic from different perspectives and with different foci. Furthermore, I combined several methods of analysis to approach the data on different levels and with precise questions in mind (see sub-chapter 6.6.6). By assembling various types of information through different methods I could gain a more holistic and a deeper comprehension the meaning of my data. In the presentation of my methodology and findings I aimed to be transparent and clear. Illustrating my explanations with concrete examples from the data and embedding it in a larger context of previous empirical work enhanced the trustworthiness of my research. Finally, this thesis is the result of a four-year long research endeavour, during which I have presented my ongoing work in various contexts. Most importantly, as a member of the COMPARE research team, I regularly shared and discussed my ongoing analysis process with my colleagues. Furthermore, I have presented my work in research conferences, courses and colloquia, and I have received feedback from internationally renowned experts in the field (see Appendix A2.2). All these steps have helped me to learn and grow as an emergent researcher and to enhance my analytical and reflective skills.

12.3 Contributions of the study

My study contributes to the field of early childhood education research on a theoretical, methodological, as well as on an empirical level. In the following, I will first describe to what extent my study adds to existing theoretical understandings of literacy and meaning-making in the early years. Then, I will explain in which ways my study can inform methodological considerations of future studies. Finally, I will outline the empirical contributions of my study. I formulate these contributions according to my knowledge of relevant literature in relation to early literacy meaning-making.

12.3.1 Theoretical contributions

My study centres around the two concepts of *literacy* and *meaning-making*. Both have been discussed extensively in previous research. Literacy has been recognised as one of the most relevant domains of children's learning and as a crucial prerequisite for educational success (Skibbe et al., 2011; Farver et al., 2013). Therefore, there is a consensus on the importance of promoting children's experiences with literacy from an early age on (Elkin, 2014; Niklas et al., 2016). Conceptualisations of literacy range from a focus on skills and knowledge, that children acquire in line with their cognitive development (Frey & Fisher, 2010), to an emphasis on the social and cultural practices involving literacy (Gregory, 2017). While the former view is

oriented towards mainstream discourses on literacy in relation to formal schooling, the latter aims to include perspectives of non-dominant cultural groups and contexts as well. The concept of literacy has often been described from a dichotomous perspective. Nevertheless, some researchers have united these contrasting views and conceptualised literacy in the form of different continua (Kirsch & Hornberger, 2024) and have highlighted the importance of considering both skills and practices for early literacy development (Purcell Gates, 2004). My study aligns with these researchers, as it adopts a holistic understanding of early literacy. By considering different types of literacy events, evolving around the use of books, nursery rhymes as well as signs and symbols my study shows the complexity and diversity of literacy practices in early childhood education. Furthermore, as I considered three distinct early childhood education settings, my study allows to illustrate a range of literacy events, both in adult-planned pedagogical activities as well as during more spontaneous situations during play or every day interactions.

From the beginning of this study on, I was intrigued by the concept of meaning-making and by the question of how it can be defined. As I have described in Chapter 4, the term meaning-making has been employed in various research fields and contexts. In relation to the theory of constructive development, Ignelzi (2000) has defined meaning-making as: "the process of how individuals make sense of knowledge, experience, relationships, and the self" (p. 5). Here, meaning-making is defined on the level of the individual learning. By contrast, Lee and Smagorinsky (2000) highlight the social aspects of meaning-making and say that "meaning is constructed through the process of articulating ideas." (p. 6). Thus, there seems to be no generally accepted definition of meaning-making (Park, 2010). Moreover, from what I have read, studies of Dyson (1984; 1990) or Wells Rowe (1998), which relate meaning-making and literacy in the early years, remain rare. My study contributes to existing knowledge, by illustrating the ways in which young children develop and express understandings of literacy in early childhood education settings. In the context of my study, I have used meaning-making synonymously to understanding and shown the ways in which young children learn about literacy-related concepts, skills and practices. Furthermore, I have illustrated how young children expressed their literacy-related understandings and co-constructed meaning in interaction with peers or adults. Finally, my study suggests to conceptualise early literacy meaning-making according to three levels. This detailed breakdown of meaning-making in relation to literacy, which I have discussed in Chapter 9 is an original contribution to previous research, which have focussed either on the level of concept formation (Gelman, 2009; Fleer, 2011) or literacy socialization (Gregory et al., 2004; Becker-Zayas, 2022) distinctively.

These theoretical contributions have resulted, amongst others, from the use of a sociocultural theoretical framework. This framework has allowed me to emphasise the situatedness of learning and literacy and required me to contextualise early literacy meaning-making and gain a more holistic understanding. Furthermore, it highlights the role of language and interactions in children's learning, which considerably shaped my analytical approach. Finally, Vygotsky foregrounded the importance of the early years for children's development, as it is the time during which thought and language unite (Vygotsky, 1934). Therefore, the age group of the children in this study is especially relevant for advancing theoretical perspectives of early literacy meaning-making.

12.3.2 Methodological contributions

Previous studies have emphasised the need for a multimodal approach when researching learning processes of young preschool children (e.g. Flewitt, 2005; Taylor, 2014; Gowers, 2020). Not taking into account young children's non-vocal modes of communication, would mean to ignore a crucial means of expression for young children. Nevertheless, owing to the amount of data that I had collected, I refrained from the use of a fine-grained multimodal analysis as suggested by Norris (2004) or McNeill (2005). During my analysis process, I have experienced that focussing on multimodality *only* has led me to get lost in details and prevented me from understanding the overall meaning of my data. As Taylor (2014) noted, a focus on multimodality is not meant to overshadow the relevance of language in communication, but rather aims to analyse to what extent different semiotic modes contribute to meaning-making. Therefore, I recommend other (emergent) researchers to employ several methods of analysis and adapt their approach to different types of data and in line with the overall research aims. Furthermore, in my study I have not only considered embodied modes of communication, such as language or gestures, but also included spatial and material semiotics as part of multimodality. My study, therefore, shows to what extent multimodality can be integrated into educational research following a sociocultural framework. Qualitative and inductive research methodologies allow researchers to adapt their methods to the circumstances of the research context and interests. The research design, entailing qualitative fieldwork in three very different crèches, has required me to remain flexible and sensitive to the specificities of each setting. In particular, the prevalence of outdoor activities at *Earth* has been methodologically challenging. Outside, children and educators moved more and frequented places, which did not allow to sit down when writing notes. Therefore, I adapted my way of taking fieldnotes and added oral recordings to my methods of data collection. However, to not disturb the ongoing activities,

these notes could not be recorded simultaneously to my observations, but only in retrospective. For example, I recorded audio notes while walking back to the crèche or as the educators changed children's nappies. Therefore, the use of oral fieldnotes has facilitated the documentation of my observations, while at the same time, occupying and possibly preventing me from observing other situations. While previous studies (e.g Aasen et al., 2009 or Streelasky, 2019) have explored learning and literacy in forest-based educational settings, they have not reflected on the impact of the outdoor context on data collection. My experience of conducting fieldwork in outdoor educational settings can inform the methodological choices of other researchers, who plan to investigate outdoor learning. In relation to taking fieldnotes outdoors, a potential solution to explore could be the use of digital notes (e.g. on the phone or a tablet). Digital notes could be written more flexibly than pen-and-paper based notes, without the need of sitting or having a flat surface. Additionally, digital notes could be taken simultaneously to the observations, by contrast to oral audio notes.

12.3.3 Empirical contributions

Firstly, my study sheds light on young emergent multilinguals' ways of communicating and acting in diverse multilingual contexts. Researchers advocate for the need to explore children's perspectives (Patton & Winter, 2023). In Luxembourg, the MuLiPEC project (see Kirsch & Seele, 2020 or Kirsch & Mortini, 2021) and particularly the doctoral research of Mortini (2021) have foregrounded the perspectives of young emergent multilingual children and their agentic behaviour within translanguaging practices. As one of the main goals of ECEC institutions remains the levelling out of educational inequalities between children of diverse (linguistic) backgrounds (OECD, 2012), it is important to illustrate the perspectives of children with non-dominant language backgrounds (Brown, 2014) to support ECEC practitioners in fulfilling this objective. My study contributes to this line of research, by providing empirical data on nine young emergent multilingual children and their experiences in three crèches in multilingual Luxembourg.

Secondly, while the importance of play for learning in early childhood (Vygotsky, 1978), as well as the relevance of early literacy (Purcell-Gates et al., 2004) are recognised, these aspects have not often been studied in non-formal education settings. In a study of five-to-six-year-olds in Portugal, Mourão explored the potentials of structured child-initiated play for foreign language learning (2018). In another study, Waddington (2018) has focussed on children's interactions in language enriched play areas, which aim to promote foreign language learning.

These studies have investigated the role of play in specific language learning environments. Therefore, my study represents a contribution, as it provides empirical qualitative data on children's literacy-related play in non-formal early childhood education settings. For instance, I have provided examples of children's interpretive reproductions of literacy practices within role play.

Kachorsky and colleages (2017) state that more studies on the ways in which children make meaning of picture books or other literacy-related material in peer interactions is needed. My study allows to address this gap, by considering early literacy not only in adult-planned pedagogical activities, but also in young children's play and peer interactions. Furthermore, apart from shared reading situations, which have been abundantly explored in previous studies (e.g Torr, 2019 or Martucci, 2014), the ethnographic approach of my study has allowed me to also observe spontaneously occurring everyday life literacy events. These "fleeting snippets of interaction" (Church & Bateman, 2022, p. 166) cannot be underestimated as they represent authentic moments of learning and literacy development. Through my data, I can show several of these instances and, thereby, make an important empirical contribution.

Finally, my study allows to illustrate topics and concepts which have previously only been described theoretically or through experimental data. For example, I am able to provide qualitative examples of children's development of emergent literacy skills in authentic situations such as the examples of Lia and her interest in letters shows. Previous studies have often addressed this topic by evaluating emergent literacy skills in a series of orchestrated situations (e.g. Sulzby, 1985; Engel de Abreu et al., 2020; Melzi et al., 2022) or through testing of children (e.g. Deacon, 2011; Cabell et al., 2021). Moreover, while sociocultural studies advocate the need for taking into account the contexts of learning and communication, researchers only rarely elaborate and provide detailed breakdowns of different contextual elements, as I have done in my analysis. Furthermore, my examples of the ways in which children make meaning of words and concepts in the context of literacy extend the Vygotskian theory of concept-formation, which has mostly been discussed theoretically in previous research (Hedegaard, 2007).

12.4 Implications of the study

In the previous sub-chapter I have discussed to what extent my study has contributed to scientific knowledge production in relation to theory, methodology and empirical data. I will now move on to discuss the implications of my study for policy-makers and practitioners.

12.4.1 Implications for policy-makers

My study results in a number of recommendations for policy-makers, as it sheds light on the literacy-related pedagogical practices of for-profit ECEC institutions and the ways in which educators implemented the framework for non-formal education, more specifically the *éducation plurilingue* (MENJE & SNJ, 2021). All three crèches in this study were for-profit ECEC institutions. While I cannot compare them to state-funded crèches, certain business-related aspects seemed to have influenced the crèches' pedagogical practices. In all three crèches, directors seemed to struggle with finding and keeping qualified educators, which resulted in compromises in favour of lower-qualified practitioners and frequent staff changes. At *Water,* the pedagogical practices were heavily influenced by the requirements of the commercial carrier, which led to frustrations on the side of the educators. For example, they disagreed with the extended COVID-19-restrictions, which prevented them from inviting the parents to the crèche until the Summer of 2021. The educators at *Air* included English vocabulary teaching in their daily routines, to satisfy the expectations of parents who saw English as crucial for their children's later schooling and job opportunities. This practice does not reflect the aims of the *éducation plurilingue*, which requires educators in French-speaking crèches to familiarise children with Luxembourgish and vice versa. While I seldomly observed the inclusion of Luxembourgish at *Air,* the educators at *Earth* and *Water* regularly made use of French for example in daily conversations or when singing. This does not come as a surprise, as French-speaking practitioners may not necessarily know Luxembourgish, but Luxembourgish-speaking practitioners are most likely multilingual and also speak French. This raises the question if the *éducation plurilingue* might be more easily implemented in Luxembourgish-speaking crèches, than in French-speaking ones. These examples illustrate the complexity of applying the national framework to diverse settings and circumstances. I, therefore, would recommend policy-makers to further investigate the implementation of the framework and how it is translated into practice by the practitioners. Furthermore, further collaboration with commercial carriers and directors of for-profit crèches is needed, to ensure that all actors agree about the educational objectives of ECEC.

While one of the pillars of the *éducation plurilingue* is language development (p. 122), literacy – as one of the key-aspects of language development – is not emphasised. Rather, literacy-related activities, such as shared reading or nursery rhymes are mentioned as examples. Furthermore, the framework presents literacy as one aspect of language development, separated from other areas such as arts, physical development, or sciences. In this sense, the framework

follows a school-like logic which distinguishes between areas or subjects of learning. By contrast, I have argued for a holistic approach to literacy, which integrates different aspects of learning. My findings showed, that children appropriated literacy-related knowledge, skills and understanding in various activities. They acted creatively as they re-enacted stories or literacy-related practices, moved and used their bodies when dancing or learned about new concepts or body parts through picture books. In this sense, my study shows that language and literacy are not separated from arts, physical development or sciences, but rather tools or vehicles for learning. I would, therefore, recommend policy-makers to reevaluate the place of literacy in the framework and promote a holistic and integrated view of early literacy.

Furthermore, the framework, which serves as a guideline for practitioners, foregrounds a positive view on the child as a competent and active learner. As I have discussed in sub-chapter 11.3.4, the educators' practices revealed different interpretations of such a child-centred pedagogy. Furthermore, the framework describes the role of the educator in relation to supporting children's learning and providing rich and stimulating environments. Nevertheless, it remains vague regarding the role of co-construction and learning in interaction. Learning is characterised as an *individual* process towards children's independence first (p. 19), and as a *social* process second (p. 21). This representation risks to give the impression, that educators only play a secondary role in children's learning process. While my study confirms children's active and creative role in learning, it also foregrounds the importance of high-quality adult-child interactions. I, therefore, recommend that policy-makers should provide practitioners with clearer guidelines on supporting and guiding children in their learning processes, to avoid misconceptions or a *laisser faire* approach.

However, as my study has illustrated the diversity of non-formal early educational settings, it is crucial that practitioners are support in finding appropriate solutions for their specific contexts. This could be achieved through professional development. While educators in Luxembourg already benefit from a large offer of professional development courses, my study points to additional needs. As I have shown, educators supported children's early literacy meaning-making through high-quality interactions which included the children's perspectives. Furthermore, children's ways of expressing meaning was often non-vocal and moments of meaning-making were fleeting. Therefore, professional development courses on pedagogical observation and documentation could help educators in becoming more attentive and sensitive to children's needs and adapting their strategies accordingly. While educators preparing to become *référents pédagogiques* receive such training, other staff members do not.

Educators seemed to be aware of the value of shared reading practices. In turn, they did not systematically include writing in pedagogical activities. Rather, they seemed to see writing as being connected to alphabetisation and, therefore, formal schooling. As my study has illustrated that writing can be a fruitful context for early literacy meaning-making, I suggest to offer professional development courses about writing and how it can be authentically and meaningfully included in non-formal early childhood education. Generally, professional development courses should allow educators to critically reflect on their own practices and to develop new approaches which are adapted to their distinct contexts and the needs of the children they work with.

12.4.2 Implications for practitioners

My study allows to draw several implications for practitioners. Firstly, in relation to the ways in which literacy should be included into pedagogical and everyday life activities in early childhood education. While literacy has been emphasised as one of the key-areas in the early years by previous research (Pegorraro et al., 2023) as well as international policy documents (OECD, 2012; EEF, 2018) pedagogical practice seems to be lagging behind. My study, in line with the overall results of the COMPARE project shows that literacy-related activities did not always happen daily and were not always implemented in a purposeful way. Therefore, I join the claim for a frequent, but most importantly reflected use of literacy in early childhood education contexts. More precisely, I encourage practitioners to include diverse forms of representations, such as symbols, pictures, words or text in their daily practices. Literacy, should not be seen as an add-on to the existing pedagogical offer, but be integrated authentically.

Furthermore, my study has illustrated the importance of children's peer interactions and play for early literacy learning. However, I also found that children's play time was limited on the one hand, or completely independent from adult-guidance on the other. In regard to early literacy meaning-making it is important that practitioners allow children to play and explore literacy-related material freely. At the same time, educators should remain attentive and observe children's play in order to grasp emerging learning opportunities. I advise educators to find an appropriate balance between structuring children's play – by providing stimulating material and taking part in children's play – and allowing children to (inter)act freely and creatively on their own.

Observing children's play also relates to my second recommendation for practitioners, which refers to the need for high-quality interactions. As my study shows, children's early literacy meaning-making can be supported if their perspectives and understandings are included in high-

quality interactions with adults. In order to achieve this, it is important that educators take the time to observe and listen to children, instead of assuming shared understanding. This includes the consideration of young children's non-vocal forms of expressing meaning, as the examples of Etienne's name tag, or Luisa's engagement with the little princess story have showed. By reacting to children's gestures, gaze, or facial expressions, educators can encourage active participation, thereby, fostering early literacy meaning-making from an early age on.

Enabling high-quality interactions also relates to the organisation of literacy-related activities. As my study shows, different contextual factors have shaped adult-child interactions. If educators wish to promote interactions, for example during shared reading, they should aim to organise literacy with smaller groups of children. For the educators in this study, it was more challenging to make all children actively participate and engage them in high-quality interactions, when doing activities in larger groups. Another way of promoting high-quality interactions is through dialogic reading. By using this method, practitioners can encourage children's talk and thinking through open-ended and age-appropriate questions (Mol et al., 2008). Therefore, dialogic reading has the potential to promote language development and early literacy meaning-making. To support this, the COMPARE research team has published a guide in multiple languages for parents and practitioners about the use of dialogic reading with young children (Kirsch et al., 2023).

Furthermore, my study shows that shared understanding was, at times, achieved by the use of children's family languages. While I encourage educators to make use of their whole semiotic repertoires when interacting with children, they should be cautious to do this in an inclusive way. As the example of Ms Isabela and the shared reading of the book about the Ocean has showed, the use of Luisa's family language Portuguese has increased the child's participation. At the same time, it has prevented other children from understanding. Therefore, educators should reflect on their use of children's family languages and *translanguage* strategically and reflectively (Kirsch & Seele, 2020).

Finally, my study implies that practitioners should reflect on their pedagogical approaches and their own understandings of literacy in the early years. As I have shown, the educators' pedagogical approaches revealed differing underlying understandings of learning and literacy. While I acknowledge the educators' best intentions of using literacy as a way of making young children *ready* for formal schooling, it is important to recognise that their efforts may be counter-productive. In fact, as Özdemir and colleagues (2019) note, authentic early literacy experiences, which aim to promote enjoyment and engagement potentially contribute more to children's later learning than direct teaching of emergent literacy skills. Therefore, I advise

educators in early childhood education settings to reflect on the purposefulness of formal approaches to literacy and, instead, base their activities and interactions on the children's interests and previous experiences. This also requires a shift from a focus on *acquiring* predefined skills and knowledge to *understanding.* As David and Goouch (2001) write so convincingly:

> "The educator's role is not simply to produce effects in a learner, but to produce understandings. Errors are then seen as misunderstandings rather than a failure to learn. The question moves from 'What can't this child do?' to 'What is this child trying to do?' and 'What is this child understanding or misunderstanding?'"
>
> (David & Goouch, 2001, p. 20)

By reframing one's role in this way, educators can overcome deficit-oriented views and better support each individual child's early literacy meaning-making. Moreover, this change of perspective can help us to reconsider the value of mistakes or misunderstandings as essential drivers of learning. Finally, the educators' role in supporting early literacy meaning-making lies in the professional attitude to develop their pedagogical practice by adapting it to the children's needs. In this sense, Rintakorpi (2016) recommends documentation as an important tool for pedagogical self-reflection and improvement of pedagogical practice.

12.5 Limitations of the study

Every research endeavour entails making compromises in terms of methodology and subject and, thereby, comes with its limitations. Especially qualitative researchers tend to relativise the findings of their small-scale studies, in relation to generalizability (de Saint-Georges, 2018). While it is true that my findings are based only on the distinct contexts of the three crèches and the individual experiences of the nine focus children, there are, nevertheless, generalisable lessons to be learned from this study. The embedding in the research project COMPARE has increased the trustworthiness of my findings (see sub-chapter 12.2.2). Furthermore, the early literacy practices that I have observed are in line with the quantitative results of COMPARE (see Kirsch & Aleksić, 2021 and Aleksić & Kirsch, 2024). As participants of professional development courses I taught over the past years have confirmed, the practices of the three crèches resemble those of many other crèches in Luxembourg. While Luxembourg may have a uniquely multilingual and multicultural population – compared to other *countries* – the backgrounds of children in large *cities* may be similarly diverse. Although my work highlights

the importance of taking into account the specific contexts of children's experiences, my findings could be applicable to other multilingual ECEC contexts. For example, including the children's perspectives and ways of understanding, as well as non-verbal modes of communication into one's pedagogical approach is a recommendation that is independent of language.

In this sub-chapter, I will reflect on some methodological and thematic limitations of my work. The first methodological limitation concerns the way in which I recorded my video data. The mobile camcorder that I used, allowed me to remain mobile and to flexibly switch the angle of filming, depending on the focus of my observation. I could film from a wider angle to capture all those present at once or zoom in to focus on individual participants' behaviour. In most of the observed situations, such as shared reading, singing or other group activities, the functionalities of the camcorder were sufficient. Though, in less structured situations, such as the moments before the children took a nap or during play, I noticed the limitations of the camcorder in relation to sound recording. These situations often involved simultaneous conversations and background noise, which, later on, made it difficult for me to understand the verbal utterances of children. Therefore, I observed and recorded a number of peer interactions, which I could only analyse in relation to children's non-vocal behaviour, or few distinguishable words. I tried to address this problem by moving closer to the children or by using a dictaphone additionally to record their speech. However, these attempted solutions disturbed the interactions or created distractions. Data triangulation through the use of additional fieldnotes and including multimodal modes of communication in my analysis have helped me to address this limitation.

Furthermore, I would, in hindsight, analyse the non-vocal modes of communication differently. Firstly, because I focussed on the children's non-vocal communication, and only analysed the adults' gestures or facial expressions when they were picked up by the children. I did not systematically analyse the educators' non-vocal interactional strategies, but focussed on their verbal communication instead. Consequently, I could analyse the influence of language use on the quality of interaction and children's engagement. However, it would have also been relevant to see in what ways the educators' use of gestures or facial expression may have influenced adult-child interactions, or if the educators' adapted their use of non-vocal modes of communication to the children's age or language backgrounds. This decision was also linked to my focus on the children's perspectives within the COMPARE project. The embeddedness of my study in a larger research project resulted in a large amount of video data, fieldnotes, thick descriptions and audio recordings. This reflection shows that working within the COMPARE

research team has made me realise potential areas to explore, which I now perceive as limitations of my thesis. As Carter and colleagues (2014) state, while using several methods of data collection allows triangulation and increased validity of results, it also presents the researcher with the challenge of handling larger amounts of data. However, the access to a large data set and the triangulation of data sources and researchers' perspectives have increased the trustworthiness of my work and should be acknowledged as a strength. On the one hand, it has helped me to get a more holistic understanding of the three settings and, on the other hand, it may also have come at the expense of more in-depth and fine-grained analysis. Moreover, it has made it more difficult for me to determine a clear research focus, in line with existing literature. The temporal structure of my PhD, with the focus on data collection during the first year and the consecutive literature review and data analysis, has contributed to this struggle. Retrospectively, I think critically about some methodological choices that I made due to a lack of knowledge at the time. For example, I would have found more explicit ways of ensuring children's assent, or I would have collected more data on the use of signs and symbols outside of book-related pedagogical activities. Through the inductive research design and the condensed period of data collection, I only realised the relevance of certain aspects in hindsight and after the fieldwork. For example, I only observed play situations or other peer interactions, if they were connected to literacy from *my* perspective. As my initial perspective on literacy centred around print, I focussed less on the use of decontextualised language in oral conversations. Other studies, for example, have explored children's narration or personal storying during meals or other everyday interactions (White et al., 2021). I also missed the opportunity to further explore children's drawing or mark-leaving practices, which have been addressed in other studies about early literacy (Brooks, 2009; Deguara & Nutbrown, 2017; Kukkonen & Chang-Kredl, 2017). These reflections reveal my initial biased understanding of literacy and learning in relation to books, letters, and learning *activities.* Shifting my formal teacher-like view to a more age-appropriated and non-formal perspective took time and was challenging.

12.6 Future directions

My study has shown that the literacy practices of the three crèches varied considerably. Owing to the diverse organisational, spatial and material contexts of the crèches as well as practitioners' professional and linguistic backgrounds, the national framework, including the *éducation plurilingue* were applied differently. Although the three crèches might represent a spectrum of

existing pedagogical approaches, my study does not allow to make general claims about literacy practices in ECEC in Luxembourg. Therefore, more studies exploring the heterogenous non-formal early education sector in Luxembourg are needed. More specifically, the differences between state-funded and for-profit, as well as Luxembourgish-dominant or French-dominant crèches should be investigated. This could help to promote the implementation of the framework and prevent the amplification of educational inequalities. Some empirical studies, including the present study and the COMPARE project, have laid the foundation for future research (e.g Kirsch et al., 2020; Hornung et al., 2023; Simoes Lourêiro, 2023).

Furthermore, as the contexts of early literacy meaning-making in the three crèches were so different, the question arises: "What difference does difference make?" (Dyson, 1997, p. 2). While I have described and interpreted differences in my study, I cannot know about the impact children's various experiences had on their knowledge and understanding of literacy. For example, other researchers have found that shared reading in ECEC, which reflects the educators' aim of entertaining children is more efficient in supporting emergent reading development, than shared reading that aims to develop skills (Özdemir et al., 2019). Moreover, my study suggests that children were socialised into different values and norms in relation to literacy. To what extent this may influence their future literacy development and their later literacy practices remains unknown. This topic could be further investigated through future longitudinal studies.

Apart from the Luxembourgish non-formal ECEC sector, other contexts are relevant for children's literacy development. My study allows to draw conclusions of children's early literacy meaning-making in the specific context of crèches. However, from my Master thesis (Kemp, 2020) and from the COMPARE data provided by parents, I know that the home environment is crucial to understanding children's literacy development. Therefore, future studies should combine data from home and educational settings, to understand the ways in which both environments influence children's learning. Furthermore, my study took place in the non-formal part of the ECEC sector in Luxembourg and does not allow to draw conclusions about formal *précoce* settings. As the recent work of researchers from LUCET shows, children's attendance of either formal or non-formal educational settings is linked to their linguistic and socioeconomic backgrounds (Kaufmann et al., 2022), which, in turn, influence children's academic perspectives. Future studies should, therefore explore to what extent pedagogical and literacy practices in crèches and *précoce* classes differ and if this influences children's later schooling. Additionally, it has been shown that children's literacy and numeracy skills at the end of the first two years of formal schooling (Cycle 2 in Luxembourg), already set the course

for their future educational trajectory (ONQS, 2022). This underscores the value of high-quality early education and the need to strengthen literacy development from an early age on.

As I have argued, there is a need for a holistic view on early literacy learning. Previous researchers have emphasised that we need socio-cultural (Ashton, 2005; Mercer, 2010; Gregory, 2017; Twiner et al., 2021), as well as cognitive (Frey & Fisher, 2010) approaches to understanding children's early literacy meaning-making. Consequently, future research should aim to combine different perspectives in mixed-method and interdisciplinary projects.

In my findings I have described early literacy meaning-making according to three levels. Additionally, from children's and adults' ways of relating literacy to oneself, I have developed a continuum of increasingly abstract connections. These findings are based on the early literacy meaning-making practices of the nine emergent multilingual focus children in this study. It remains debatable, if monolingual children or children frequenting ECEC in other contexts make meaning of literacy in similar ways. Future research about young children's literacy-related learning could compare their findings to mine to validate, refute or extend the different levels of early literacy meaning-making and the continuum of connections.

12.7 Concluding remarks

From the outset, this research was driven by the question: what is meaning-making? Over the past four years, I observed children's practices and took part in their daily lives at the three crèches. I talked to the children, their educators and parents and engaged actively with my experiences by reflecting, reading and writing. I structured and re-structured my thoughts, shared ideas with colleagues and became aware of my previous understandings of early literacy. In that sense, I see my research about early literacy meaning-making as a meaning-making process in itself.

At a conference in May 2024, Prof. Michel Vandebroek – who is an expert in early childhood education and a member of the scientific advisory board for the *éducation plurilingue* in Luxembourg – said that one of the major challenges in the field of ECEC in the near future will be to "overcome dichotomies". He was referring to the dichotomies of formal versus non-formal education and child- versus adult-centred education. Instead of thinking about pedagogy and education in terms of opposing views and contrasts, we should try to see connections and bridge ideas for the benefit of all children. Having studied children's early literacy meaning-making for the past years, I would add to this that dichotomies between oral and written language as well as narrow and broad perspectives on literacy, should be critically reflected. Furthermore, critical approaches, such as translanguaging can help us to develop a holistic perspective on

learning and communication, instead of artificially distinguishing between named languages, verbal and non-verbal modes, or multilingualism and multimodality (see García & Kleifgen, 2019). As adults, we tend to think in such predefined categories, which often prevent us from questioning the status quo and seeing deeper meanings. In turn, children are freer in their ways of making sense of the world. I believe, that their thinking and acting is driven by their curiosity, imagination, and creativity. By focussing on the children's experiences and by trying to understand their perspectives, I have learned to question the self-imposed boundaries that had previously structured my own understanding of learning and literacy. Most importantly, my research has enabled me to recognise that the most valuable teaching strategy is to remember what it was like to see the world through the eyes of a child.

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Appendices

Appendix 1: Abstracts

A1.1 English Abstract

Early experiences with literacy have positive effects on children's language development (Dickinson et al., 2012; Sénéchal & LeFevre, 2014) and emergent literacy skills (Farver et al., 2013; Kennedy & McLoughlin, 2022). These are the foundation of children's later reading and writing and, hence, contribute to educational success (Klein & Kogan, 2013). While many studies about literacy in the early years have analysed the development of emergent literacy skills (e.g Whitehurst & Lonigan, 1998), my study takes a sociocultural perspective on literacy as a situated practice (Gee, 2000) and examines children's meaning-making during literacy events with a focus on literacy-related concepts, skills, and practices. The concept of meaning-making describes learning and understanding as a co-constructive process where language (Wells, 2009) and social interactions (Mercer, 1995) play a crucial role.

In Luxembourg, more than two thirds of the under-four-year-olds grow up in multilingual households, many of them without speaking one of the official languages Luxembourgish, French or German at home (SNJ, 2023). If their parents have a low socio-economic status, these children risk to be disadvantaged by the trilingual Luxembourgish school system (ONQS, 2022). Early Childhood Education and Care (ECEC) can be a possible lever to counteract these educational inequalities (Burger, 2010; Skibbe et al., 2011). The ECEC sector in Luxembourg has grown drastically since the early 2000s (Schumacher et al., 2021) and has known a series of policy developments. In 2017, the policy for *éducation plurilingue* resulted in guidelines for multilingual early education, published in the national framework for non-formal education (MENJE & SNJ, 2017; 2021). The *éducation plurilingue* aims to promote children's language development and inclusion of their family languages in ECEC, as well as collaboration between educators, parents, and local actors. The mixed-method project COMPARE (*Collaboration with parents and multiliteracies in ECEC in Luxembourg)*, therefore, set out to investigate and develop collaboration with parents and multiliteracies in ECEC.

This study is embedded in COMPARE and explores the early literacy practices of nine focus children, in three ECEC settings – called *crèches* – across Luxembourg. Using qualitative methods of data collection, such as videography, fieldnotes, photographs, and interviews, and

drawing on a combination of qualitative content, sociocultural discourse (Mercer, 2004), and conversational analysis (Seedhouse, 2006), I explored the ways in which children made meaning of literacy-related concepts, skills, and practices during literacy events alone, or in interaction with peers and adults.

The findings of my study indicate that literacy practices in the three crèches were varied and shaped by different contextual factors, such as space, material, group size and language use. These factors, as well as authentic learning situations, the inclusion of children's perspectives, and shared understanding, influenced the quality of adult-child interactions and children's engagement, which supported early literacy meaning-making. Furthermore, children's early literacy meaning-making involved three levels of meaning; print awareness, print and linguistic concepts, as well as literacy practices. Finally, adults and children made different types of connections ranging from concrete, over emotional, to abstract, when they co-constructed meaning of literacy in interaction.

These findings extend theoretical understandings of early literacy by taking a holistic perspective that encompasses skills and practices. Furthermore, they extend empirical studies by examining young emergent multilingual children's early literacy meaning-making in naturalistic observations. My study has several implications for policy-makers and practitioners who ought to reflect on their views on literacy in the early years as well as their interpretations of a 'child-centred' pedagogy. This could be achieved by clarifying policy documents and offering specific professional development training. Finally, my study showed the pedagogical value of taking into account diverse children's perspectives and overcoming deficit-oriented views, by shifting the focus from the acquisition of skills to children's understanding.

A1.2 German Abstract

Frühe Erfahrungen mit Schriftsprache, oder *Literacy* wirken sich positiv auf die Sprachentwicklung (Dickinson et al., 2012; Sénéchal & LeFevre, 2014), sowie auf die *emergent literacy skills* von jungen Kindern aus (Farver et al., 2013; Kennedy & McLoughlin, 2022). Da diese die Grundlage für späteres Lesen und Schreiben bilden, tragen sie grundlegend zu den Bildungsperspektiven von jungen Kindern bei (Klein & Kogan, 2013). Viele Studien spiegeln eine kognitive Sicht auf *Literacy* in der frühen Kindheit wieder und erforschen vor allem die Entwicklung von *emergent literacy skills* (z. B. Whitehurst & Lonigan, 1998). Im Vergleich dazu, wird in dieser Studie eine soziokulturelle Perspektive eingenommen und *Literacy* als situierte Praxis (Gee, 2000) angesehen. Die Studie wendet das Konzept *Meaning-Making* an,

welches Lernen als ko-konstruktiven Prozess beschreibt und die Rolle von Sprache (Wells, 2009) und sozialen Interaktionen (Mercer, 1995) hervorhebt.

In Luxemburg wachsen mehr als zwei Drittel der unter Vierjährigen in mehrsprachigen Haushalten auf, wobei viele Kinder zu Hause keine der Amtssprachen Luxemburgisch, Französisch oder Deutsch sprechen (SNJ, 2023). Diese Kinder werden, wenn sie außerdem in Familien mit niedrigem Bildungs- und sozioökonomischen Status aufwachsen, durch das dreisprachige luxemburgische Schulsystem benachteiligt (ONQS, 2022). Frühkindliche Bildung und Betreuung kann dieser Benachteiligung, die zu Bildungsungleichheiten führt, entgegenwirken (Burger, 2010; Skibbe et al., 2011). In Luxemburg ist der Sektor der frühkindlichen Bildung und Betreuung seit Anfang der 2000er Jahre drastisch gewachsen (Schumacher et al., 2021). Zusätzlich wurden mit dem nationalen Rahmen für nicht-formale Bildung und den Leitlinien für mehrsprachige frühkindliche Bildung, die sogenannte *éducation plurilingue* (MENJE & SNJ, 2017; 2021), bildungspolitische Maßnahmen entwickelt. Die *éducation plurilingue* zielt darauf ab, die Sprachentwicklung von Kindern und Einbeziehung ihrer Familiensprachen, sowie die Zusammenarbeit zwischen Erzieher:innen, Eltern und lokalen Akteur:innen zu fördern. Das Projekt COMPARE (*Collaboration with parents and multiliteracies in ECEC in Luxembourg*) untersuchte hierzu die Zusammenarbeit zwischen Erzieher:innen und Eltern, sowie *Multiliteracy-Practices* in non-formalen Einrichtungen der frühen Bildung.

Die vorliegende Studie ist Teil des Projekts COMPARE und untersucht die *Literacy-Practices* von neun Kindern in drei Krippen in Luxemburg. Unter Verwendung von qualitativen Methoden der Datenerhebung (Videographie, Feldnotizen, Fotos und Interviews), sowie einer Kombination aus qualitativer Inhaltsanalyse, *sociocultural discourse analysis (*Mercer, 2004) und *conversation analysis* (Seedhouse, 2006), wurde untersucht wie Kinder sich Konzepte, Fähigkeiten und *Practices* in Bezug auf *Literacy* aneignen, sowohl eigenständig, als auch in der Interaktion mit Gleichaltrigen und Erwachsenen.

Die Ergebnisse dieser Studie zeigen, dass die *Literacy Practices* in den drei Krippen vielfältig sind und von verschiedenen kontextuelle Faktoren, nämlich Raum, Material, Gruppengröße und Sprachgebrauch geprägt werden. Diese Faktoren, sowie authentische Lernsituationen, das Einbeziehen der kindlichen Perspektive und Fokussieren auf ein gemeinsames Verständnis, beeinflussen die Qualität der Interaktionen zwischen Erwachsenen und Kindern, sowie die Teilnahme von Kindern an *Literacy*-Aktivitäten. So kann das *early literacy meaning-making* der jungen Kinder gefördert werden. Darüber hinaus wurde auf Basis der Daten herausgearbeitet, dass *early literacy meaning-making* drei Bedeutungsebenen umfasst: das

Bewusstsein für *Literacy*, die Entwicklung von Konzepten, sowie das Aneignen von *Literacy Practices*. Abschließend zeigt sich, dass in den Interaktionen zwischen Erwachsenen und Kindern beim *early literacy meaning-making* verschiedene Verbindungen hergestellt werden, die sich auf einem Kontinuum vom Konkreten, über das Emotionale bis hin zum Abstrakten anordnen lassen.

Diese Ergebnisse erweitern das theoretische Verständnis von *Literacy* in der frühen Kindheit, indem sie aus ganzheitlicher Perspektive sowohl *emergent literacy skills* als auch *Literacy Practices* einbezieht. Darüber hinaus veranschaulichen die Ergebnisse *early literacy meaning-making* mehrsprachiger Kinder in authentischen Lernsituationen. Meine Studie legt nahe, dass politische Entscheidungsträger:innen und Praktiker:innen ihre Sichtweise über *Literacy* in der frühen Kindheiten, sowie das Verständnis einer „kindzentrierten" Pädagogik reflektieren sollten. Dazu können eine Überarbeitung der Richtlinien und spezifische Fortbildungsangebote beitragen. Schließlich hat meine Studie gezeigt, wie wichtig es aus pädagogischer Sicht ist, die verschiedenen Perspektiven der Kinder zu berücksichtigen und defizitorientierte Sichtweisen zu überwinden, indem wir unser Augenmerk vom bloßen Erwerb von Fähigkeiten auf das Verständnis der Kinder beim Lernen verlagern.

Appendix 2: Publications and Conference Presentations

A2.1 List of publications

Chapters:

Kirsch, C. & Kemp, V. (2024). Making Sense of Writing: Infants' Experiences in a Multilingual Day Care Centers in Luxembourg. In Isaak Papadopoulos; Tanya Hathaway (Eds.) *Multilingual Early Childhood Education: Modern Approaches and Research.* DOI:10.52305/XYLP7011. https://novapublishers.com/shop/making-sense-of-writing-infants-experiences-in-a-multilingual-day-care-centers-in-luxembourg/

De Moll, F., V. Kemp, K. Simoes Loureiro, A. Hadjar, and C. Kirsch. 2024. "Luxembourg – ECEC Workforce Profile." In *Early childhood workforce profiles across Europe. 33 country reports with key contextual data*, edited by P. Oberhuemer and I. Schreyer. Munich: State Institute for Early Childhood Research and Media Literacy. https://www.seepro.eu/Seiten_Englisch/Home_engl.htm

In press:

Kirsch, C., Mortini, S. & Kemp, V. (accepted 2022, in print 2023). Translanguaging in frühkindlichen Bildungseinrichtungen in Luxemburg – mehrsprachiges Handeln von Kindern und Pädagoginnen. In Meier, J., Dirim, İ., Blaschitz, V. (Hrsg.). *Handbuch Mehrsprachigkeit*. Verlag Julius Klinkhardt

Pedagogical material (also available in Luxembourgish, French, German and Portuguese):

Kirsch, C., Kemp, V., & Bebić-Crestany, D. (2023). *Guide on Dialogic Reading for Parents and Professionals.* Esch-Alzette: University of Luxembourg.

A2.2 List of conference presentations

Kemp, V. (2024, May 24). Early meaning-makers: Children and literacy in multilingual ECEC. Paper presented at the conference Living Multilingualism in Education, University of Luxembourg, Esch-sur-Alzette.

Kemp, V. (2023, November 9). Children's early literacy meaning-making: A qualitative study in crèches in Luxembourg. Paper presented at the LuxERA Conference 2023, Esch-sur-Alzette, Luxembourg.

Kemp, V. (2023, August 23). Mapping meaning-making: A qualitative study of children's early literacy engagement in three crèches in Luxembourg. Paper presented at the ECER Conference, Glasgow (Scotland), United Kingdom.

Kemp, V. (2022, June 23). "My name is L-I-A": A case study of a young child's meaning-making in multiliteracy events. Paper presented at the International ELLME Conference

– Future Challenges in Early Language Learning and Multilingual Education, Spain, Granada.

Kemp, V. (2022, November 10). Mapping meaning-making: A qualitative study of children's early literacy engagement in three crèches in Luxembourg. Paper presented at the LuxERA Conference 2022, Esch-sur-Alzette, Luxembourg.

Kemp, V. (2022, July 12). Children's early literacy meaning-making. Paper presented at the SIG5 Learning and Development in Early Childhood Conference, Utrecht, Netherlands.

Kemp, V. (2022, May 13). Young children's multiliteracy meaning-making: A case study in non-formal ECE in Luxembourg. Poster presented at the Second HaBilNet Colloquium, Frankfurt, Germany.

Kemp, V. (2021, April 21). Diana's meaning-making in multiliteracy activities. Conference "Developing Multilingual Literacies – Exploring the role of communities for literacy development in multilingual families. EERA network. Esch-sur-Alzette: University of Luxembourg.

Kemp, V., Colucci, L., Bebić, D. D., & Kirsch, C. (2021, September 7). Head, shoulders, Knie et pés – singing one's way into multilingual practices. Language policies and practices in ECE. Paper presented at ECER, Geneva, Switzerland.

Kirsch, C. & Kemp, V. (2024, August). Children as Mediators: Leveraging Translanguaging in joint Literacy Events. Paper presented at the ECER, University of Cyprus, Larnaca

Kirsch, C. & Kemp, V. (2024, Januar 12). Empowering children and parents through literacy activities in multiple languages. Paper presented at the Conference Next Generation Literacies Network. University of Hamburg, Hamburg.

Kirsch, C., & Kemp, V. (2023, September 23). Rollen von pädagogischen Fachkräften und Erziehungspersonen in gemeinsamen Literacy Aktivitäten in Kitas in Luxemburg. Paper presented at 3. Innsbrucker Fachtagung zur Elementarpädagogik.

Kirsch, C., & Kemp, V. (2023, September 1). Children's agentic behaviour in literacy practices in crèches in Luxembourg. Paper presented at EECERA, Estoril, Portugal.

Kirsch, C., Kemp, V., & Bebić-Crestany, D. (2023, August 23). Multilingual Literacy Practices in Theory and Practice in Day care Centres in Luxembourg. Paper presented at ECER, Glasgow (Scotland), United Kingdom

Kirsch, C., Aleksić, G., Bebić-Crestany, D., Kemp, V. & Colucci, L. (2023, March 28). My mummy is here" opening translanguaging spaces. Paper presented at Hunter College, New York.

Kirsch, C., Aleksić, G., Bebić, D. D., Kemp, V., & Colucci, L. (2021, September 04). Perspectives on multilingualism and multilingual literacies from early childhood educators in Luxembourg. Paper presented at Crossroads of Language and Cultures CLC 6, Cyprus.

Kirsch, C., Aleksić, G., Bebić, D. D., Kemp, V., & Verba, I. (2021, April 21). Multilingual practices and literacies in Luxembourg: perspectives from teachers, parents and children. Paper presented at EERA Presentation. Developing Multilingual Literacies – Exploring the role of communities for literacy development in multilingual families, Esch-Alzette, Luxembourg.

Appendix 3: Affidavit

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

FAKULTÄT
FÜR ERZIEHUNGSWISSENSCHAFT

Eidesstattliche Versicherung

Ich, Valérie Kemp, versichere an Eides statt, dass ich die Dissertation mit dem Titel: „Children's early literacy meaning-making in multilingual early childhood education" selbst verfasst und keine anderen als die angegebenen Hilfsmittel benutzt habe.

Esch-sur-Alzette 14/06/2024
Ort, Datum

Unterschrift Doktorand:in

Erklärung

Darüber hinaus erkläre ich, dass ich keine kommerzielle Promotionsberatung in Anspruch genommen habe und die Arbeit nicht schon einmal in einem früheren Promotionsverfahren angenommen oder als ungenügend beurteilt worden ist.

Esch-sur-Alzette 14/06/2024
Ort, Datum

Unterschrift Doktorand:in

Appendix 4:The COMPARE research project

A4.1 Ethics Review Panel (ERP)

Ass.-Prof. Claudine Kirsch
Université du Luxembourg
Maison des Sciences Humaines
Porte des Sciences 11
L-4366 Esch-Belval

Esch-sur-Alzette, 12 December 2019
ERP 19-050 COMPARE SA/kk

Research project: Multilingual Encounters in Family and School (COMPARE) (ERP 19-050)

Dear Ass.-Prof. Kirsch,

The Ethics Review Panel of the University of Luxembourg received your request on 14 November 2019, and a revised version on 1 December 2019, concerning the approval of your project: **Collaboration with Parents and Multiliteracy in early childhood (COMPARE).**

Your request included:

- application form
- consent form
- information sheet
- recruitment documents

After examining all the documents, the Ethics Review Panel has decided to **approve** the amended project description and the related documents, in the form provided to the Ethics Review Panel.

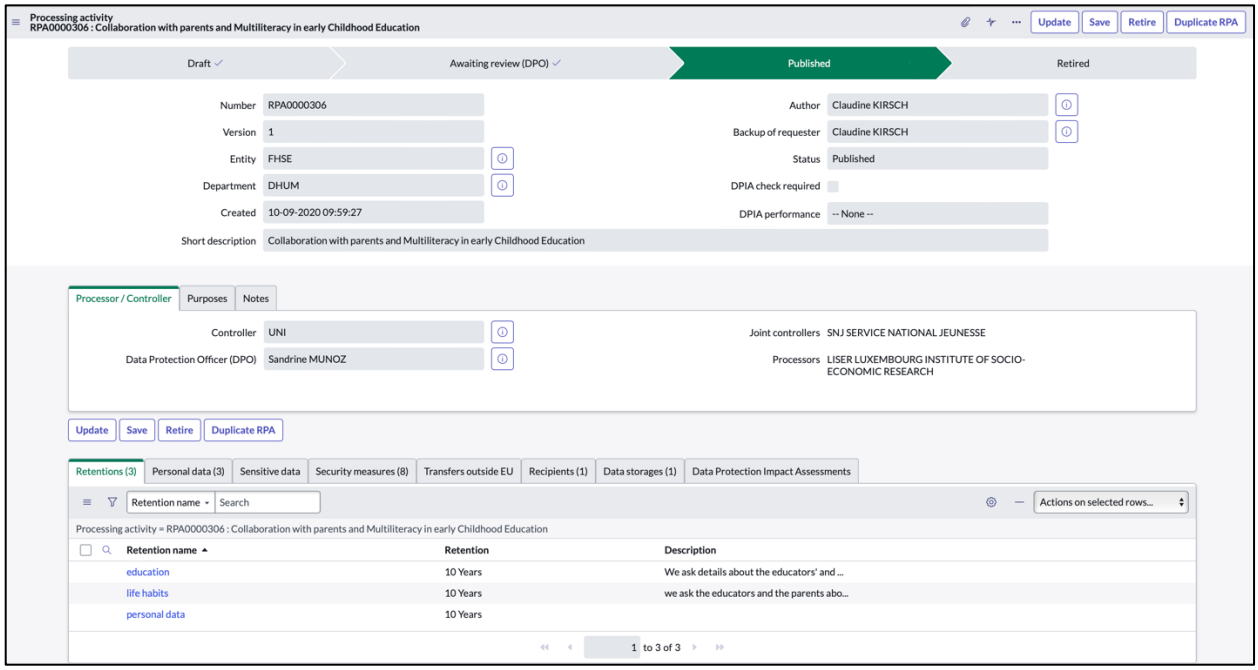
Please note that the ERP has to be informed of any changes to the study that affect the parts that were subject to ethics approval.

Yours sincerely,
Best wishes

Prof. Dr Silvia Allegrezza
Chair of the Ethics Review Panel

Ethics Review Panel of the University of Luxembourg
Address for correspondence:
2, av. de l'Université
L-4365 Esch-Belval
erp-submissions@uni.lu
c.c. Gabrijela Aleksic

A4.2 General Data Protection Regulation (GDPR)



A4.3 Information for participants and consent forms

Focus Parents

September 2020

Information sheet

Collaboration with parents and Multiliteracy in early Childhood Education (COMPARE)

Dear parents,

Your *crèche* participates in the research project *Collaboration with parents and Multiliteracy in early Childhood Education* led by associate professor Dr. Claudine Kirsch at the University of Luxembourg, and funded by the *Fonds National de la Recherche*, the *Ministère de l'Education nationale, de l'Enfance et de la Jeunesse* (MENJE) and the Service National de la Jeunesse (SNJ). The project examines the literacy practices in *crèches* as well as partnership building in Luxembourg. It aims to examine collaboration between parents and educators as well as the use of books and stories with children aged two-to-three.

To document situations when parents and educators collaborate and engage children in activities, researchers will visit the group of the two-to-four three-year-olds approximately every six weeks between September 2020 and July 2021. We will video-record some of the interactions of the educators, the parents and the children in natural situations, for example when they narrate stories. If we cannot video-record owing to the Corona virus situation, we will ask the educators to send us some videos. Because children still develop language(s) and often use their whole body to communicate, it is necessary to video-record the interactions. We will not video-record children who display a frightened or hesitating behaviour.

We also involve a few parents in our study. We will video-record them as they engage in activities with children in the *crèche*, interview them twice between September 2020 and July 2021, and ask them twice to document interactions between them and their child at home in a suitable manner (e.g. making notes, video-recording).

The data collected (videos, pictures, interviews, documents) will be used exclusively for the purpose of research. It can be used for publications (reports, articles, magazines, information booklets), conference presentations, and possibly training purposes (e.g. professional development).

We hereby take the opportunity to ask you and your child if you wish to take part in our study. Please complete the consent forms for you, your child and the one to use authorize the University of Luxembourg to use pictures and videos.

The processing of your personal data is based on Article 6.1(a) of the General Data Protection Regulation 2016/679 (hereinafter "the GDPR") to participate to the project. The University of Luxembourg implements measures to process your personal data securely and in a confidential manner and the researchers responsible for the collection of these data are bound to maintain confidentiality. The following personal data are conducted in the research project COMPARE: your name and the name of your child, the name of your *crèche*, the videos of interactions involving your child, your answers in interviews on audio-recorded files, your interactions with children and educators on video-recorded files, your documentation of your child's activities. Personal data will only be collected and processed with your prior consent. Names of institutions or participants (parents, children, educators) are not mentioned to protect anonymity. Pseudonyms will be used. There are no health and safety risk and no risk of invasion of your private life to those taking part in this project.

All data will be processed securely and in a confidential manner. They will be stored on servers of the University of Luxembourg protected by a password for a period of 10 years. In accordance with the GDPR, you have the right to information, right of access, the right to rectification, right to erasure, right to restriction of processing, the right to object, the right to data portability. The University of Luxembourg provides more information on its website at: https://wwwen.uni.lu/university/data_protection/your_rights

In practice, you can exercise these rights by contacting our DPO at dpo@uni.lu.

Please also note:

- You have the right to interrupt the participation in this study at any time.
- Participation is on a voluntary basis.
- In accordance with the GDPR, you have some rights regarding your personal data as listed above
- You may contact the researcher in charge to learn more about the use and analysis of your data in the research.
- You will be provided with a copy of this consent form.
- The data will be stored for 10 years and then deleted.

If you consider that the processing of your personal data is contrary to the provisions of the GDPR, you will have the right, without prejudice to any other administrative or judicial remedy, to file a complaint with the Luxembourg Data Protection Authority, namely *the Commission Nationale pour la Protection des Données* (CNPD). Information is available on http://www.cnpd.lu.

If you have a concern about any aspect of your participation, please raise this with Associate Professor Dr Claudine Kirsch (ph: 464466 9802; Email: claudine.kirsch@uni.lu)

Many thanks for your support!

Yours sincerely,

Associate Prof. Dr. Claudine Kirsch

claudine.kirsch@uni.lu (phone 464444 9802)

Collaboration with parents and Multiliteracy in early Childhood Education (COMPARE)

Consent form for the child to participate

I hereby certify that I have been properly informed about the nature as well as potential benefits and risks of the study and I had sufficient opportunity to clarify any questions.

I have been informed that I am entitled to withdraw my consent at any time without giving reasons and without negative consequences to myself. Furthermore, I can object to a further processing of my data and request these to be deleted.

I agree that interactions of my child will be video-recorded for the purpose of this study.

I agree that data (video-recordings, pictures) are collected within the scope of the study and are used for scientific purposes only. They are treated as strictly confidential according to the regulations of the Data Protection Act.

I agree that the data can be processed and used in scientific publications (articles, reports, information booklets, dissertation, conference presentations) and for educational purposes (training).

Participants

Family name of the father/mother/ legal guardian: _____

First name of father/mother/ legal guardian: _____

Family name and first name of the child: _____

Place and date: _____

Signature of the participant: _____

Please hand this consent form to the educators of your *crèche*.

Consent form for the parents to participate

I hereby certify that I have been properly informed about the nature as well as potential benefits and risks of the study and I had sufficient opportunity to clarify any questions.

I have been informed that I am entitled to withdraw my consent at any time without giving reasons and without negative consequences to myself. Furthermore, I can object to a further processing of my data and request these to be deleted.

I agree that interactions of me and my child will be video-recorded for the purpose of this study.

I agree that data (video-recordings, pictures, interviews, documents) are collected within the scope of the study and are used for scientific purposes only. They are treated as strictly confidential according to the regulations of the Data Protection Act.

I agree that the data can be processed and used in scientific publications (articles, reports, information booklets, dissertation, conference presentations) and for educational purposes (training).

Participants

Family name of the father/mother/ legal guardian: _____

First name of father/mother/ legal guardian: _____

Family name and first name of the child: _____

Place and date: _____

Signature of the participant: _____

Focus Parents

Please hand this consent form to the educators of your *crèche*.

Form: Right to use my image and the image of my child, in video shootings and photographs

I, the undersigned _____,
hereby authorise the University of Luxembourg to capture my image and the image of my child, in videos and photographs during the research project « Collaboration with parents and Multiliteracy in early childhood » for publishing them on the University's website and on platforms (print and web).

As controller of personal data, as defined in the EU General Data Protection Regulation 2016/679 (hereafter "GDPR"), the University of Luxembourg (2 Avenue de l'Université, L-4365 Esch-sur-Alzette) may use said data as long as the person concerned exercises some activities in connection with the University, or for the duration of the communication campaign concerned. This communication campaign excludes any commercial activities.

The processing of my personal data is based on my consent (art 6.1. (a) of the General Data Protection Regulation 2016/679).

- I am informed that, according to the GPDR, I have the right to access, rectify and delete my personal data. This enables me, if necessary, to oppose the publication of pictures and videos authorised above at a later stage by contacting Associate Professor Dr Claudine Kirsch (ph: 464466 9802; Email: claudine.kirsch@uni.lu). I am informed that I can lodge a complaint with the national data protection commission (CNPD) should I consider the processing of my personal data an infringement of my rights.
- I am informed that information on my rights and procedures to follow are described on https://www.uni.lu/university/data_protection and https://cnpd.public.lu.

Furthermore,

- I agree not to hold the University of Luxembourg as controller responsible for a possible change of framing, colour or density, which may occur during reproduction.
- I declare that I am 18 years of age or over and competent to sign this form on my own behalf.
- I am informed that my photographs and videos may be stored after the event, including on social media, for archiving purposes.

For any questions or queries regarding personal data processing I can contact the Data Protection Officer of the University on dpo@uni.lu.

Read and approved,

_____

(Date and signature)

Appendix 5: Semi-structured interview guide

Member-check Interviews

As an introduction, explain how I took the videos (in what situation, what I said to the children, why I used these books etc.)

- In how far do these videos meet your expectations about the children?
- Was there any behaviour of the children that surprised you?
- To what extent do you think the way you tell these stories yourself have influenced the children's behaviour here?
- Other things you want to add about the videos?
- Can you tell me your general impression about the development of the focus children over the past year?
- What can you tell me about the focus children's next year? Will they go to school etc.