

**On raising multilingual children:
a study on parental language strategies and childhood
multilingualism in Norway**

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Abstract in Norwegian

I denne masteroppgaven har jeg undersøkt hvilke språkstrategier foreldre i flerspråklige familier i Norge anvender for å lære sine barn foreldrenes språk. Det eksisterer langvarige myter og feiloppfatninger knyttet til kognitive forsinkelser ved samtidig tilegnelse av flere språk hos barn. Dette kan føre til at foreldre i flerspråklige familier avstår fra å benytte sine morsmål for å unngå språkforvirring hos barnet. Til tross for at forskning innen språkvitenskapen har motbevist at denne myten, synes den fortsatt å være fremtredende blant noen foreldre. Derfor er det relevant å gjennomføre studier som belyser de positive kognitive fordelene ved flerspråklighet hos barn, og oppmuntrer foreldre i flerspråklige familier til å snakke sitt morsmål med sine barn.

Hensikten med denne studien er å identifisere hvilke strategier foreldre i Bergen anvender for å lære barna sine flere språk, og å vurdere om noen strategier fremstår som mer effektive og suksessfull enn andre. To hovedstrategier som forskningen gjennom årene har satt søkelys på, og som utgjør hovedinteressen i denne studien, er *en forelder, ett språk* (One Parent One Language, OPOL), og *hjemmespråk* (Home Language, HL) strategiene. Studien gir en oversikt over tidligere og pågående forskning innen flerspråklighet hos barn og språkstrategier, samt gjør rede for Engelsk sin status i Norge og utforsker språktilegningsprosessen hos flerspråklige barn.

Åtte flerspråklige familier i Bergen deltok i prosjektet, hvor både foreldre og barn ble intervjuet, og de deltakende barna gjennomgikk grunnleggende språktester. Funnene viser at alle foreldrene ønsker at barna deres skal oppnå høy språkkompetanse i sine respektive språk, hovedsakelig Engelsk og Norsk i denne studien, samt Spansk, Litauisk og Urdu. Språkstrategiene varierer blant familiene, hvor noen konsekvent følger enten OPOL eller HL strategiene, mens andre anvender en mer blandet tilnærming hvor alle språkene i hjemmet benyttes av begge foreldre. Det er ingen av foreldrene som uttrykker bekymring for at barnas Engelskferdigheter ikke vil utvikles, da de lærer Engelsk på skolen fra første klasse. Foreldre med andre minoritetsspråk er til en viss grad mer motivert til å selv sikre at barna lærer sine arvespråk. Språktestene viser i hovedsak ingen betydelige forskjeller i språkkompetanse mellom barna tilhørende OPOL og HL familier, men det er en klar sammenheng mellom foreldrenes evne til å konsekvent følge sin valgte strategi og høye språkferdigheter hos barna.

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Abbreviations

AR	Adult Repetition
B1	Boy 1
B2	Boy 2
C	Child, non-participating
CPH	Critical Period Hypothesis
D	Dad
ESL	English as a Second Language
EGS	Expressed Guess Strategy
FLP	Family Language Policy
G	Girl
H1, 2, 3, 4, 5, 6	Hypothesis 1, 2, 3, 4, 5, 6
HL	Home Language
L2	Second Language
LAD	Language Acquisition Device
LS	Language Switching
M1	Mom 1
M2	Mom 2
MGS	Minimal Grasp Strategy
MLP	Mixed-Language Policy
MOS	Move On Strategy
OPOL	One Parent One Language
RQ	Research Question
UG	Universal Grammar
y/o	Years old

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1 Introduction

Children growing up in multilingual homes may not necessarily acquire native proficiency in all languages of the home, as differences in parental language input have been shown to correlate with a child's use of a minority language (De Houwer, 2007: 441). Parents of young multilinguals face the important task of properly facilitating language acquisition in their children while navigating myths and misconceptions regarding correlations between multilingualism and cognitive delays (Byers-Heinlein & Lew-Williams, 2013: 95). In a multilingual family the minority languages are the ones at risk of incomplete acquisition, as research indicates that children growing up with multiple languages invariably learn to speak the majority language (De Houwer, 2007). To ensure balanced acquisition and proficiency in the community and heritage languages, parents can utilise various language strategies and correction techniques, with the One Parent One Language (OPOL) and Home Language (HL) strategies being among the most studied. This thesis explores which language strategies parents of multilingual children in Bergen employ and aims to investigate the impact these different strategies have on multilingual language acquisition in young children. Ultimately, the overarching goal of this thesis is to contribute to dispelling myths surrounding negative cognitive impacts of childhood multilingualism and to encourage parents to expose their children to multiple languages from an early age.

1.1 Research gap and previous research

Numerous studies have examined the influence of various parental strategies on bilingual children's language development. Yet, few have specifically focused on English-Norwegian bilingual children, particularly comparing the effects of different strategies within a single study. To my knowledge, the predominant focus in current research on bilingualism in children lies within learning contexts, notably in English as a Second Language (ESL) classrooms, with limited attention directed towards parental input and the impacts of diverse parental strategies. For instance, the areas of interest for the University of Bergen's research group "Multilingualism on my mind" are intercultural awareness and identity among language learners, teacher trainees and

language teachers in various educational settings (UiB, 2024). This is demonstrated by some of their research projects, which include Calfato's "Teachers' multilinguality, language awareness and metalinguistic practices in the classroom", Storto's "Development of multilingual and multicultural identity in secondary school", and Vikøy's "Conditions for encouraging multilingualism in the Norwegian L1 subject" (UiB, 2021). The research focus in Norway is overall centred on English within educational contexts. As for completed PhD research projects at the University of Oslo, the focus lies on specific lexical and grammatical development within Norwegian and various minority languages, such as Polish or Russian (UiO, 2024).

Lanza (1998) conducted a longitudinal study on two English-Norwegian bilingual children aged two years, each with an American mother and a Norwegian father (73). The study primarily examined discourse strategies concerning child language mixing (77), and through parental audio-tape recordings spanning four to seven months, Lanza concluded that fostering active bilingualism relies on initiative by the parents (86). Moreover, the research revealed that both families employed a mixed language approach, with varying degrees of minority language usage by both parents, naturally more prominently used by the American mothers. The study emphasises the significance of interactional strategies when promoting the use of the minority language (86). While insightful regarding the Norwegian context, this study does not specifically address the OPOL or HL strategies and was conducted over two decades ago.

Asbjørnsen's Master's thesis, completed in 2013, conducted a literary review of the advantages and disadvantages in the cognitive development of bilinguals, alongside an experimental investigation into potential benefits for bilingual young adults. Her findings indicate that bilingualism could be a positive influence on the development of cognitive and linguistic skills, advocating for the encouragement of bilingualism in educational practice (29). In the second part of her study, Asbjørnsen also concluded that bilingualism positively impacted both tested groups in her study (43). Additionally, she underscored the importance of homogenous testing groups in similar studies, and emphasised how future research should account for the complexity of Norwegian-English bilingualism (44).

Cabezas Serpa's Master's thesis, completed in 2014, investigated adult strategies and bilingual language acquisition, focusing on the role of kindergarten personnel in the context of Norwegian-Spanish bilingual children in Oslo (1). Her objective was to examine specific approaches and strategies employed by preschool teachers and the

challenges they encountered, utilising semi-structured interviews for data collection. Like other studies, Cabezas Serpa encountered difficulties recruiting a sufficient number of participants (49) but found that all participants predominantly adopted a form of the OPOL strategy with the children, wherein they exclusively spoke either Norwegian or Spanish to them (50).

Soltanieh (2014) conducted a study exploring paternal attitudes toward bilingualism through a case study in Stavanger, which revealed that parents generally held positive attitudes toward bilingualism and valued it highly. Soltanieh focused on various language skills such as reading, listening, speaking, and writing, examining how parents were involved in their children's learning as well as the strategies they employed. She found that mothers were highly involved in fostering reading and writing skills and noted that all participants utilised similar correction techniques with their children. Although her study included bilingual families beyond those with English as a minority language, Soltanieh identified a common motivation among participants: the desire to maintain their mother tongue to foster a connection with their native country and cultural heritage (86).

Ruiz Martin (2017: 127) surveyed Spanish-English bilingual families, revealing that most families employed a mixed approach to language acquisition alongside the home language strategy and OPOL. One of the mixed approaches, Mixed System 1, typically involves one parent using the minority language while the other employs both the minority and the community language with the children. Additionally, Ruiz Martin discusses other mixed systems, such as Mixed-Language Policy (MLP), where both parents generally use both languages with their children. While her study primarily focused on the characteristics of the Mixed System 1 approach through questionnaires, she recommended future research to assess the strategy's effectiveness using more objective methods (152).

Belova (2017) conducted a study similar to the present thesis for her Master's thesis, focusing on Russian-Norwegian bilingual families. The study assessed attitudes, family language policies, and the oral proficiency of children in both languages. Although her study did not explicitly address OPOL or the home language strategy, Belova found a direct correlation between children's language proficiency and the family language policy, particularly regarding parents' awareness of their role in language input (105). Despite high levels of motivation to pass on their native language

among the participating parents, Belova concluded that motivation alone did not ensure successful acquisition of Russian.

Smith-Christmas (2018) explored the affective dimensions of family language policy (FLP) by conducting a case study on the interactions between a Scottish Gaelic grandmother and her granddaughter. The study aimed to illustrate the fluid nature of FLP and focused on the grandmother's use of a child-centred discourse style to encourage her grandchildren to use their minority language (131). Emphasising the significance of positive interactions in the language acquisition process of bilingual children, the study underscored the need to consider the emotional aspect of maintaining a minority language (149).

Drawing from this and to the best of my knowledge, it is reasonable to assert that the different effects of family language policies remain underexplored, particularly concerning English as a minority language in Norway. Thus, further exploring the topic in this project could offer insights into how various language strategies can be tailored and serve as a guide for parents of multilingual children in Norway when selecting a family language policy to adopt.

1.2 Aims, research questions and hypotheses

The interest and motivation for this study stemmed from a desire to contribute to the debunking of misconceptions surrounding children acquiring multiple languages from an early age, as well as inspiration from personal encounters with bilingual children and families. The research questions (RQ) for this thesis are,

RQ 1: What language acquisition strategies do parents of multilingual children in Bergen utilise?

RQ 2: Do parents of multilingual children in Bergen have deliberate approaches and set goals for their children's language acquisition?

RQ 3: Are some approaches to raising multilingual children more effective/successful than others?

Originally, only the term "successful" was employed in RQ3, with high proficiency levels and native-like competence perceived as indicators of success. The term can be defined as "the achievement of something that you have been trying to do" (Collins,

2018: 1505). Its utilisation in my research question and hypotheses entails that the parents aspire for their children to attain native-like competence in their languages. Moreover, the term has been utilised by other scholars discussing family language policies, as evidenced in Schwartz & Verschik's (2013) "Successful Family Language Policy: Parents, Children and Educators in Interaction". However, given the inherent ambiguity and subjectivity of the term "success", the term "effective" has been introduced, with the definition of "something that works well and produces the results that were intended" (Collins, 2018: 482). By incorporating both terms, the intended aim of the research question is encapsulated, reducing potential ambiguity associated with the term "success".

In accordance with the posited RQ's and based on previous research accounted for in 1.1, a set of hypotheses was formulated.

- H1:** Parents of multilingual children in Norway have set approaches and goals for their child's languages and have strategies to either,
- (i) support proper and equal development of both/all languages in the household (OPOL).
 - (ii) focus on the minority language(s), as the dominant language of the community will naturally develop through exposure outside of the home (home language).
- H2:** Most families use a mix of methods – not strictly adhering to one.
- H3:** The children have no problem telling English and Norwegian words apart from each other.
- H4:** The children prefer the dominant language of the community (Norwegian).
- H5:** The parents' choice of strategy reflects in the child's proficiency of the languages.
- H6:** OPOL is the most efficient and "successful" strategy.

The research questions will be explored using a mixed research design. This will include in-depth interviews with parents and children to investigate their chosen strategies and attitudes concerning childhood multilingualism. Furthermore, a set of language tasks were administered to the children to assess their language proficiency in both English and Norwegian.

1.3 Outline of thesis

This thesis consists of five chapters. Following the introduction, the second chapter presents theory and further relevant research regarding multilingualism, in addition to segments such as the cognitive effect of multilingualism, English in Norway and parental strategies. The methodology employed and the materials used are accounted for in Chapter 3. Here, the different materials used to conduct the study is presented, in addition to addressing the thesis' reliability, validity and ethical considerations. The fourth chapter presents the study's main findings related to each posited research question and discusses the findings in light of the adhering hypothesis and theoretical framework. Finally, Chapter 5 summarises the findings and addresses the study's limitations and any implications for future research on multilingual families and parental strategies in Norway.

2 Theory

2.1 Chapter outline

This chapter aims to establish the theoretical backdrop of childhood bilingualism and the parental strategies for raising multilingual children. This chapter addresses the fundamentals of language acquisition and gives an overview of the various views on how bilingualism is represented in the mind. Moreover, it includes an overview of the different debates regarding the effect bi- and multilingualism can have on a child's linguistic and sociolinguistic development, some insight into the nature of language mixing, and an exploration of the parental strategies employed in the raising of bilingual children.

2.2 Language acquisition: how children learn language

As this project aims to gain insight into how parental strategies can impact language acquisition and childhood bi- and multilingualism it is relevant to include theoretical perspectives on the language acquisition process in children. This subsection will present the two main paradigms discussing the matter. These two paradigms argue whether the human brain comes equipped with an inherent acquisitional device primed to receive and learn language, or if humans learn language using pre-existing equipment used to acquire any new skill (O'Grady, 2005: 182 – 187). Additionally, there have been debates on the age of acquisition within both paradigms and how early in life one has to acquire language, and the section will briefly discuss the *Critical Period Hypothesis* (CPH) and the notion of a *sensitive period*.

In the early stages of life, typically within the first year, most healthy children commence language production, a naturalistic process for most children (O'Grady, 2005: 7). This is true for all children across the world who do not suffer from any developmental delays, no matter what language they grow up exposed to. A prolonged scholarly debate has persisted regarding the underlying mechanisms of language acquisition. Nativist theorists claim that humans are equipped with a language acquisition device (LAD) that processes all raw linguistic data a child receives and utilises an inborn device to construct grammar, and that humans cannot learn merely by

listening to other speakers (Krulatz et al., 2018: 86). This device could be spread across different parts of the brain, and O’Grady (2005: 182) uses the metaphor of the brain being a “black box”, as it is a unit with contents that cannot be observed directly, and that the part of the black box that deals with language is the *acquisition device*. A prominent name within this view is Noam Chomsky who advocated for the notion of preborn grammar and the theory of *Universal Grammar* (O’Grady, 2005: 184) and argues that humans would not be able to learn any language without access to the innate knowledge of universal linguistic principles. This would give children a great advantage when learning language, especially when learning word categories and the difference between, for example, nouns and verbs, the systems within sentence structures, and knowledge of the components that make up a sentence. Advocates for the theory of Universal Grammar (UG) somewhat rely on the *poverty of stimulus* argument, which demonstrates how child grammar includes forms that are not present in their input (Heil & López, 2020), thereby conforming to UG principles. Summarised, UG states that a child’s experiences and raw data is not enough to learn all rules of a language, meaning that the knowledge of language rules must lie within human genetics. All humans are born with the same underlying principles, ready to be tuned into the specific language of their environment.

Support for UG and the existence of a specific language acquisition device is evident through children’s early ability to distinguish nouns and verbs as distinct categories and accurately categorise words accordingly (O’Grady, 2005: 184). Children do not place all words starting with the same letter in the same category nor classify all monosyllabic words together, as the acquisition device tells children how to categorise their input and gives clues as to what goes where, according to UG. With the help of these clues, like “all words referring to concrete things are nouns”, children can use the information in their input to categorise more abstract words as nouns by noticing their positions in sentences, a process also known as *bootstrapping* (O’Grady, 2005: 185). However, the notion of bootstrapping is flawed as it could lead to over-generalisation, and several other attempts exist to solve both the problem of bootstrapping and the poverty of stimulus problem. However, an extensive exploration of these lie beyond the scope and relevance of this paper.

An alternative perspective views the language processing device in the brain as not language specific but as a mechanism that utilises general learning methods to make sense of linguistic input. The device is instead seen as a “new machine made up of old

parts”, a metaphor by Bates and MacWhinney (O’Grady, 2005: 187). The *Mutual Exclusivity Assumption* ensures that entities can only have a single label, an approach applicable to language acquisition and general information learning, as presented by O’Grady (2005: 187). If a child is shown a picture of a car and an unknown object and asked to point to the “smig”, it will not point to the car but the other picture as she assumes the car is not also called “smig”.

Another learning method used in language acquisition is statistical learning (O’Grady, 2005: 189), i.e. the ability to keep track of the relative probability of two or more things happening simultaneously. Studies show impressive accomplishments by infants, like the experiments by Peter Jusczuk and colleagues, which imply that infants have knowledge of words’ phonetic properties before they start producing their own language. Despite being unable to produce sentences, infants prefer grammatically “correct” sentences, thereby displaying knowledge of word boundaries and which elements should occur together (O’Grady, 2005: 189). Still, neither statistical learning or *Mutual Exclusivity Assumption* is exclusive to language learning; the methods are extended to various other domains of learning, like the knowledge of which sounds different animals make, how a sunny day is warmer than a rainy one, and going to the doctor implies needles.

The discourse on the nature of language within the human brain has gone on for decades. Researchers on both sides have focused their research on different phenomena within the area and have different views on basic terminology, which challenges direct debate on specific aspects of language learning. As pointed out by O’Grady (2005: 190), the field of linguistics lacks a joint agreement on what language is, as some linguists see language as a highly intricate innate system, and some as a medium driven by its communicative function, shaped by strategies that facilitate language (e.g., information status, point of view, and situation). The debate on the nature of language and the acquisition device’s purpose is much more complicated than presented in this short section. Still, an introduction to the discussion serves a purpose as it plays a role in the debates surrounding bilingualism and language strategies for raising children.

The discourse concerning the age of acquisition and the importance of an early introduction to language will be included, as parts of the debate are relevant when discussing the acquisition of two or more languages, simultaneously or sequentially. While numerous variables influence successful L2 acquisition in children and adults (e.g., cognitive, personal, and environmental), age is consistently seen as a critical

variable. In essence, children exposed to a language will always acquire it, regardless of the types of activities they engage in, parental interventions, and their inherent aptitude (Krulatz et al., 2018: 35). This natural ability to acquire language seems to change and diminish with age, and learners of second or third languages after childhood are presented with other challenges than infants, with researchers stating that native-like competence is nearly impossible to reach as an adult learner (Krulatz et al., 2018: 45). Furthermore, studies on feral children who were deprived of exposure to language in their early years and never acquired language as adults emphasise the significance of an early exposure to language for successful acquisition. These are studies like the cases of Victor in the 18th century and Genie in the 1970's (Rowland, 2014: 215-216).

The Critical Period Hypothesis (CPH) states that after a specific point in childhood or early puberty, the internal mechanisms necessary to achieve naturalistic language acquisition becomes less accessible or unavailable (Krulatz et al., 2018: 45). The concept was introduced by Penfield and Roberts (1959) and refined by linguist and neurologist Lenneberg (1967) who argued that acquisition needed to take place somewhere between the age of two and puberty, as he believed this period coincide with the lateralisation process of the brain, i.e. different regions of the brain gain control of specific behaviours and cognitive skills (North Shore Pediatric Therapy, 2024). Some of Lenneberg's findings drew on studies of the mentioned feral children (Vanhove, 2013). Following the CPH, the *sensitive period* theory was developed. The sensitive period suggests a more gradual decline in linguistic acquisition abilities, affecting diverse aspects of language acquisition at varying stages (Krulatz et al., 2018: 46). For instance, the ability to gain native-like pronunciation in a second language appears to have an early decline. Still, the ability to gain complete vocabulary knowledge is available for longer. Overall, both Lenneberg's CPH and the sensitive period acknowledge age as a crucial factor in language acquisition.

2.2.1 Acquiring more than one language

My project is not only concerned with general language acquisition but also with the process of children acquiring two or more languages simultaneously. In the interest of clarity and focused theoretical discourse, this section centres primarily on bilingualism and the developing of two languages from birth. However, some consideration will also

be given to the various types of bilinguals and multilinguals, as these play a role in my study.

In this complex landscape there are many ways to define bilingualism and across scholarly papers different qualifications for being deemed bilingual emerges. Linguists struggle to agree on terminology across the field, and bi- and multilingualism are no exceptions. Given that the bilingual experience varies based on fluency levels in each language, the age and method of acquisition, and cultural and familial ties to the language, it is imperative to make some distinctions between the different types of bilingualism. The following definitions are based on Krulatz et al. (2018: 55-57), with the potential for overlap in some definitions. *Simultaneous bilinguals* are individuals exposed to and acquiring two languages from birth and, through substantial exposure, develop competence in both languages simultaneously. This group is often considered as the prototypical form of bilinguals. However, not all simultaneous bilinguals are *balanced*, being equally proficient in both languages, and thus can have varying competence across their languages due to external variables such as majority vs. minority language and varying input.

Successive bilinguals commence their second language acquisition after starting acquisition of their first language, such as children of immigrant families who start learning the majority language upon entering kindergarten or primary school. Many successive bilinguals might transition into an unbalanced bilingual state after some time, particularly as the majority language of the community assumes a more prominent role in their lives, potentially leading to a loss of proficiency in the initially acquired minority language. This process is also referred to as language attrition. Both simultaneous and successive bilinguals are considered early bilinguals, whereas individuals acquiring a second language once their first language is fully developed are classified as late bilinguals, seen in children relocating to a new country during early school years, becoming proficient in the majority language of their new environment.

Mahootian (2020: 26-29) provides further definitions within the realm of bilingualism, mainly focusing on heritage bilingualism, where language is seen through the lens of cultural and familial ties over mere proficiency levels. The definition relates to that of native or home language. For instance, children of immigrant parents grow up using their parent's first language as their heritage language, and it will remain their heritage language regardless of their proficiency level. As for multilingualism, the same definitions of *simultaneous*, *balanced* and *successive* applies, now accommodating an

additional language. Multilingual children may have various experiences, encompassing simultaneous and balanced multilingualism, navigating possible attrition resulting in loss of proficiency in one or more language as another assumes dominance.

Maintaining proficiency in more than two languages requires equal exposure and input from all languages and is just as possible as achieving and maintaining bilingualism.

There are multiple disputing theories within the research field of childhood bilingualism. Still, the main discourse regards whether the two languages are part of a unitary system in the early stages, to be recognised as two or more separate systems later, or if children perceive the two languages as different from birth (cf. section 2.2.2). However, there is a consensus that, eventually, the systems are stored separately within the brain, extending the debate to exploring how these language systems interact. The *autonomous systems theory* advocates little to no interaction between the languages and nearly isolated grammar, lexicon, phonology, etc. In contrast, the *interdependent systems theory* argues that the systems interact, and that cross-linguistic influence and transfer happen during development (cf. section 2.2.3).

2.2.2 The Unitary Language hypothesis vs. the Dual systems hypothesis

Regarding the organisation and distinction of the multiple languages of bilinguals, the discourse revolves mainly around two opposing views: the *unitary language hypothesis* and the *dual systems hypothesis* (independent language system) (Mishina-Mori, 2005: 292). The discourse around the bilingual brain could impact parental decisions on the early introduction of a second language, as a long-running concern has been potential confusion or delayed acquisition in children raised as simultaneous bi- or multilinguals, a topic to be explored further in section 2.4.

In 1978 Volterra and Teaschner advocated the unitary language hypothesis, a view that claims that children are not able to distinguish between their two languages in the early stages of language acquisition (Mahootian, 2020: 117). They posit a three-stage model of bilingual development. In the first stage, infants organise their linguistic input into a singular language system containing words from both or all languages. There are very few translation equivalent words at this stage, and the children behave as if they were learning one language, as they have only one word per known item (*mutual exclusivity*). This stage ends around age three, and in the second stage the children can distinguish between words from the different languages but still apply the same

syntactic rules to both or all languages. They appear to have one syntax system, but two or more lexical systems depending on the number of languages they are acquiring. Eventually the single syntax system divides into language-specific systems at the third stage, facilitating complete distinction between the languages (Rowland, 2014: 177).

The study by Volterra and Taeschner (1978) is challenged by its' lack of evidence, but subsequent supportive research has demonstrated instances of lexical, phonological, morphological, syntactic, and pragmatic mixing in young children. Additionally, supporting empirical evidence has come from observing a reduction in mixed utterances as bilingual children age, in line with the three-step model (Rowland, 2014: 178). However, the opposing evidence demonstrates methodological flaws in the study by Volterra and Taeschner. For instance, the views of Genesee (1989), who questioned the lack of potential explanations for mixing in the original study. Additionally, opposing evidence in other studies support alternative explanations like *the gap filling hypothesis* and *intentional codeswitching*, which are themes that will be further explored in section 2.3.

Conversely, the *dual systems hypothesis* (the independent language system hypothesis of bilingual language acquisition) states that multiple languages are considered distinct systems from the outset of the acquisition process. The majority of research over the decades strongly favours the dual-system model, which receives substantial support from the domains of sounds and rhythm, grammar and language differentiation, and translation equivalents, elucidated by Mahootian (2020: 117-221). As for rhythm and discrimination abilities, a study by psychologists Bosch and Sebastian Galles (2001) demonstrated that bilingual infants treated each language as a new stimulus, suggesting that regular exposure to both languages (in this case, English and Spanish) did not impair their ability to differentiate between them. Mehler et al. (1996) argued in support of the dual systems hypothesis, claiming that being able to distinguish sounds and languages from each other is crucial when acquiring language (Rowland, 2014: 187). Research on grammatical development and language differentiation has examined vocabulary size and grammatical development, looking at how a larger vocabulary in one language impacts grammar in the other language. For monolinguals, expansion of vocabulary predicts better grammatical development, and studies on bilinguals have affirmed the existence of separate language systems, as a larger vocabulary in one language did not impact grammatical development in the other. Additionally, a study by Houston-Price et al. (2010) concluded that mutual exclusivity,

i.e. one label per item, is not an innate feature of the brain but a learned behaviour, as bilingual infants did not respond equally as those raised monolingually to being presented to alternative labels to known items. Their research supports the dual systems hypothesis, as it points to bilingualism providing cognitive flexibility and building of separate lexicons, as infants could accept more than one label without confusion (Mahootian, 2020: 121).

2.2.3 Autonomous systems theory vs. interdependent systems theory

The prevailing evidence and research in the field heavily favours the dual systems hypothesis, prompting the debate on the nature of interaction between the language systems. This debate hinges on two prominent theoretical frameworks: the *autonomous-* and the *interdependent systems theory*. The *autonomous systems theory* states that a speakers' languages evolve in relative isolation with minimal influence on each other. According to this hypothesis, language learners independently acquire language's phonological, lexical and grammatical aspects without significant interaction (Rowland, 2014: 181). Contrastingly, the *interdependent systems theory* states that language systems interact, with developments in one language influencing the other through cross-linguistic influence, transfer or bilingual bootstrapping. For instance, acquiring a syntactic rule in one language may facilitate the acquisition of similar rules in a different language, or delay the acquisition if the languages systems have considerable differences. Rules acquired in one language might be wrongly applied in another (Rowland, 2014: 181). Studies have presented findings aligning with both theories, suggesting a nuanced system where bilingualism may affect certain aspects of language more than others.

Paradis and Genesee's 1996 study on French-English bilingual children investigated the use of inflection and negation in French and the use of pronouns in English. The study aimed to find out if developments in one language influenced corresponding developments in the other. If the languages influenced each other one would expect to see that the correct use of French inflection cause more use of inflected forms in English, and for the children to place negators both before and after the verb in English as it does in French, and for the young children to use pronouns with both inflected and non-inflected verbs in French as it is a common phase English monolinguals go through. Despite the expectations of cross-linguistic influence, the

observations did not reveal an impact across the languages. The researchers concluded that language development in each language followed a trajectory equal to monolingual development (Rowland, 2014: 182), supporting the autonomous systems theory.

In contrast, some studies have found influence across languages in support of the interdependent systems theory. Studies by Müller and Hulk (2001) proposed two conditions under which cross-linguistic influence occurs. The first is in vulnerable areas of grammar, areas in which also monolinguals struggle, particularly those at the interface of syntax and discourse pragmatic systems, for instance switching to the use of pronouns instead of repeating someone's name. The second condition is in partial overlapping, where grammatical structures partially overlap and children will adopt one strategy for both/all languages (Rowland, 2014: 183). Their 2001 study analysed European bilingual children, providing support for their proposed constraints on cross-linguistic influence. However, attempts to replicate the study in other languages than used in the original study (French and English) have provided inconclusive results, indicating other explanations for the differences in monolinguals and bilinguals. Differences in individual input could partially explain cross linguistic influence, as children copy the flaws in their parent's non-native language, and input analysis is often tricky as it looks vastly different in monolinguals and bilinguals. By studying bi- or multilingual children acquiring vastly different languages it is more likely to find "real" transfer between languages, as spotting authentic cross-linguistic influence is easier when the child is learning two diametrically different sentence structures (Rowland, 2014: 185), i.e. a SOV-language such as Japanese or Urdu and a SVO-language like Norwegian. Overall, the existing body of evidence presents a complex and to some extent conflicting landscape regarding the interaction between bi- and multilingual language systems. The nature of the interaction between languages may impact the views parents have on multilingualism, given a certain level of linguistic interest in the parents. Their views on multilingualism could influence their choice of language strategy, as a high level of interaction may cause concern of confusion for the child. In contrast, independent systems may prompt some to limit the number of languages to not overwhelm the child.

2.3 Code mixing

In the context of bi- and multilingual language systems, code mixing, cross-linguistic influence, and transfer could provide evidence of the interdependent systems theory. Additionally, multilingual children's use of code mixing could mistakenly be interpreted as language confusion (Byers-Heinlein & Lew-Williams, 2013), which makes it essential to more closely examine the cause and nature of code mixing. This section examines the structural and social functions of code mixing and examines its' nature and intentionality. Additionally, Gumperz's (1982) six conversational functions of intentional codeswitching will be explored, along with other potential purposes and explanations for codeswitching.

When discussing bi- and multilingualism, "code" refers to language, and "codeswitching" refers to switching from one language to another, consciously and unconsciously. Such switches occur *intrasententially*, involving changing a word or an affix within a sentence, or *intersententially*, switching between entire sentences. The past decades of studies have demonstrated that codeswitching is not random, but a systematic, rule-governed linguistic behaviour which is considered a natural consequence of multilingualism rather than an indicative of language loss (Mahootian, 2020: 57).¹ The intentionality of codeswitching varies and can be unconsciously motivated by factors like lexical gaps or a more frequently used word from one language being used in a conversation in another language to keep the flow, by not wasting time searching for the equivalent in the other language. Codemixing can also be viewed as a "path of least resistance", as borrowing a word in language B is quicker than searching for the appropriate word in language A (Byers-Heinlein & Lew-Williams, 2013). Unintentional switches inspire theories of language storage, organisation, and language access in the brain, concepts to be expanded on shortly. Intentional switches, however, transcend the meaning of what is being communicated but serve as a discourse tool with added layers of social and psychological significance.

In the 1970's, linguists sought to find the rules and grammatical foundations of codeswitching, challenging the earlier perception of code mixing as a random mixture of languages (Mahootian, 2020: 91). Results indicated that codeswitches are grammatical, conforming to rule-governed patterns within language. Subsequent

¹ As in Mahootian (2020), the terms "code mixing" and "code switching" will be used interchangeably throughout the present thesis.

research explored the possibility of codeswitching between languages with distinct grammatical structures and if this mix would create a “new grammar”, leading to four different approaches; (i) descriptive approaches, (ii) approaches involving a third grammar specific to codeswitching, (iii) approaches with special rules for codeswitching, but no third grammar, and (iv) approaches with no special rules or third grammar (Mahootian, 2020: 91).

The descriptive approaches saw codeswitching as something that could not happen if the languages did not have the same rules of word placement, and analysed codeswitching in terms of word categories and where in an utterance the switch would occur. Though correct, the early studies were limited. The approach involving a third grammar included a series of codeswitching-specific rules intended to predict where in a sentence the switching would happen, and ultimately concluded that bilinguals have three grammars; one for language A, one for B, and combined one for both languages. However, this approach has been criticised in connection with multilinguals due to the mental energy need for a separate grammar per combination. Refuted rules within this approach posited that speakers would not combine words from one language with affixes from the other, and that switches can only happen when both languages have equal word- and phrase order. Further on, more data collection made it clear that the previous proposed constraints did not apply to most language combinations, and special rules for codeswitching were developed and refuted later by evidence found in natural speech. Lastly, research following the 90’s has provided more data on the grammar of codeswitching, with new ideas emerging, like codeswitching now seen as a natural process without additional rules or grammar, with both grammars applying as a team (Mahootian, 2020: 92 – 97).

Structurally and socially, code mixing serves various functions, such as filling vocabulary gaps, emphasising words or phrases, quoting, narrating, or accommodating the listener’s proficiency. Children’s language-mixing tendencies often mirror those of their parents, highlighting the social influence of the phenomenon (Rowland, 2014: 180). Code mixing is often mistaken as evidence of language confusion, but young multilingual children have several reasons for mixing, such as imitation of the adults in their language environment and limited linguistic resources (Byers-Heinlein & Lew-Williams (2013). Intentional switches serve as a discourse tool for bi- and multilingual speakers, facilitating topic shifts, signalling relationship changes, adjusting formality, and expressing respect to a person or a community. Additionally, attentional switches

can include or exclude listeners, adopt to social settings and serve as a connection to different communities. In contrast, unintentional switches may arise from subconscious variables, including processing issues or the tendency to adapt speech to the listener's style and expectations (Mahootian, 2020: 56). In some bilingual communities the mixing even acquires its own name, like *Spanglish* (Spanish + English), *Svorsk* (Swedish + Norwegian), *Chinglish* (Chinese + English) etc. Despite its many communicative purposes and grammatical "correctness", codeswitching is stigmatised, as biases towards communities influence language biases. In some communities code mixing is seen as a sign of disrespect and a lack of proficiency despite being a natural consequence of bilingualism independent of age, language, and socioeconomic class (57).

In 1982, John Gumperz identified six conversational functions of intentional code-switching. These were (i) *quotation*, to distinguish between direct speech and reported speech, (ii) *addressee specification*, switching to address a specific person in a conversation, (iii) *interjection / sentence fillers*, filler words in another language used to intensify or draw attention to certain elements, (iv) *reiteration*, emphasising or clarifying a message by repeating in another language, (v) *message qualification*, to add more information to a message, and lastly (vi) *personalisation versus objectification*; switching reflects the speaker's closeness with the message or listener (Mahootian, 2020: 66 – 67). All contribute an added layer of information to the communication, involving social and psychological factors. Further functions of intentional codeswitching have been proposed, such as ensuring privacy of conversations, avoidance of awkward translations, status elevation, humour, statement softening, topic changes or side comments, and identity marking. These conversational functions pertain to both young and older multilinguals, with children potentially using them more unconsciously than adults due to their developing understanding of language dynamics.

The discourse surrounding code mixing and language switching has implications for the debate between the unitary and dual language development theories. While some view code mixing and switching as evidence of a unitary language development, others argue that the systematic and structured nature of mixing supports the idea of a dual system, suggesting the separation of languages. Notably, code mixing provides evidence for an interdependent system, challenging the notion of languages evolving in complete isolation. There have been no reports of any bi- or multilingual children only using mixed speech, implying that mixing by children results from social and other linguistic

factors, not due to mixing in the brain. It is essential to consider that children's language knowledge should not be solely evaluated based on their productive vocabulary, as their receptive vocabulary often surpasses their expressive capabilities, highlighting the need for nuanced analysis.

2.4 The effect of multilingualism

The persistent discourse over several decades surrounding the social impacts of growing up with multiple languages has significantly influenced parental decisions regarding the upbringing of bi- and multilingual children. Disputing perspectives exist, with some claiming that exposure to more than one language from birth may delay and negatively affect a child's language acquisition. Others argue that a multilingual upbringing provides linguistic and social advantages. Research has sought to investigate the impact of acquiring multiple languages simultaneously on the brain's development and executive functions, with various findings in the field.

Historically, early views stated that bi- and multilingual children might experience delayed language and cognitive development, with certain stigmatizing beliefs suggesting lower intelligence compared to monolingual children. The early studies failed to account for socioeconomic factors in their analysis, and the negative conclusions might have been motivated by anti-immigration sentiments (Mahootian, 2020: 132) However, modern insight, as demonstrated by Rowland (2014: 197), reveals a nuanced picture where bilingualism presents advantages and disadvantages and areas where the effect remain unclear. The distinct linguistic environment of bilingual and monolingual children may contribute to different development of cognitive skills, with some of the areas studied being attention control, metalinguistic awareness, and language proficiency and fluency.

Several studies suggests that bi- or multilingual speakers engage both or all their languages during conversations, even if only actively conversing in one, requiring significant attentional control (Rowland, 2014: 197). This skill, associated with the central executive mechanism in the brain, may provide advantages in attention-related tasks, as demonstrated by Bialystok et al. (2008). Their study revealed that bilinguals outperform monolinguals in tasks requiring attention to specific cues, such as pressing the correct buttons according to pictures displayed on a screen. Moreover, this advantage lasts into adulthood, offering benefits in activities such as driving, and

potentially providing some level of resistance against age-related cognitive decline (Rowland, 2014: 198). Notably, there is no evidence indicating that executive functions of bilingual children lag behind those of monolinguals (Mahootian, 2020: 130)

Metalinguistic awareness, i.e. the ability to reflect on language's nature and functions, represents another area of study. Although it seems reasonable to expect higher metalinguistic awareness in bi- and multilingual individuals due to exposure to multiple linguistic aspects, current research outcomes in this domain are inconclusive. Studies such as that of Bruck and Genesee (1995) have produced conflicting results, with some indicating advantages in phonological awareness for bilingual children at age five who were asked to separate words into onset and rhyme. This advantage diminishes a year later, while other studies show monolinguals outperforming bilinguals in certain phoneme-counting tasks. More research is needed to draw definite conclusions in this area, as there might be important factors at play that have not been accounted for by now.

Language proficiency and fluency, the third area of investigation highlighted by Rowland (2018: 199), has found both advantages and disadvantages for bilinguals. Some studies suggest that bilinguals may have trouble retrieving words from memory, as seen in slower rapid picture naming tasks and in problems with specific semantic and lexical tasks. The bilingual brain's internal competition, resisting the use of equivalent words in competing languages, could potentially cause these challenges.

In exploring the effect bilingualism has on the brain, researchers use advanced technology to examine brain regions' reactions to language stimuli and different task. Factors such as age of acquisition and exposure to each language have proven to impact the level of interaction between the languages. However, conflicting results persist, with some studies suggesting positive cognitive effects and others finding no impact. Still, others claim there is a potential mental cost regarding cognitive load and processing time. It is important to note that these perceived "costs" do not influence intellect, social abilities or achievements. Instead, the positive effects of bilingualism, mainly increased executive control, stand out (Mahootian, 2020: 154).

While definitive conclusions regarding bilingualism's effects on the brains of children and adults remain unclear, growing evidence suggests that bilingualism could enhance specific processing activities. Beyond cognitive considerations, bilingualism offers undeniable social and personal benefits, connecting the speaker to multiple cultures and speech communities (Mahootian, 2020: 130). Being bi- or multilingual

entails participation in various communities and cultures, a great benefit beyond language knowledge.

2.5 English in Norway

As this project focuses on bi- and multilingualism in Norway, it is relevant to briefly address the role of English and the treatment of other minority languages in the country. Norway is home to a diverse linguistic landscape, with Norwegian as the official language and variations like Bokmål and Nynorsk, Norwegian Sign Languages, and several indigenous minority languages, such as Lule Saami and North Saami (Eberhard et al. 2024). The Norwegian language policy, administered by the Language Council of Norway, aims to strengthen Norwegian's status, promote its use in culture, and secure linguistic diversity by providing alternative Norwegian terminology to English in all areas (Krulatz et al., 2018: 25). English holds a distinct position, and to some degree there are efforts in place to resist loss of Norwegian in specific domains like education and research. English has been taught as a mandatory subject in Norwegian schools from the 1st grade since 1997, and its role extends beyond formal education (Krulatz et al., 2018: 27). To many native Scandinavians, English is their second language, which they use through education and other cultural expressions. English films and TV shows are rarely dubbed in Norway, and English is recognised across Scandinavia as a very useful tool for personal growth and intercultural communication.

Harding and Riley (1986; Lanza 1998) made distinctions between *elitist bilingualism* and *folk bilingualism* when comparing the challenges met by bilingual families. Given the prominent role of English in Norwegian society, maintaining English-Norwegian bilingualism may not present as many challenges as bilingualism involving other minority languages. This positions English-Norwegian bilingual families as *elitist bilinguals* compared to those with other minority heritage languages. However, as highlighted by Lanza (1998: 76), the spread of English through Scandinavia has sparked discussions regarding the influx of English loan words into Norwegian, with some advocating for the preservation of the Norwegian language by rejecting English and other foreign loan words. Consequently, both monolingual and bilingual speakers in Norway may encounter negative attitudes towards their use of English, as some has a desire to preserve the purity of the Norwegian language amidst the increasing influence of English (Lanza, 1998: 76).

2.6 Parental strategies

Balanced bilingualism is relatively rare, with individuals often exhibiting an increased proficiency in one language or facing challenges in both (Rowland, 2014: 189). The individual differences prompt the question; why are there individual differences in the success of bilingual language acquisition? In the United States, bilingualism is considered a risk factor for academic achievement, as some children with a different home language tend to enter school with English skills below those of their monolingual peers, impacting their academic performance. However, many bilingual children in the US come from economically disadvantaged homes (189). Variables such as socioeconomic status, age, linguistic input, and the attitudes, beliefs and behaviours of both the learner and their environment predict the effectiveness of bilingual acquisition.

As previously discussed, age significantly impacts on the learner's ability to attain native-like proficiency in a language. A popular view is that children exposed to a new language can still gain native-like skills despite the introduction not being immediate, a notion supported by numerous studies on late and early language learners. A study by Dehaene et al. (1997) on brain activities in language learners revealed that early learners and those bilingual from birth exhibited similar activation patterns in syntactic tasks, while late learners displayed different patterns (Rowland, 2014: 190). Although there is debate regarding whether these patterns are solely age-related or influenced by increased practice in young learners, the consensus is that acquiring a language before puberty or during childhood leads to similar rate of success. However, recent research underscores the importance of early acquisition, especially concerning pronunciation (phonological development), as older children may encounter challenges in acquiring new language sound patterns (Rowland, 2014: 191).

The quality and quantity of language input significantly impact bilingual acquisition. Despite having less language input per language, bilingual children reach linguistic milestones at the same pace as monolingual children, such as producing their first word, forming two-word combinations, and acquiring a vocabulary of 50 words (Rowland, 2014: 193). A study by Pearson et al. (1997), who tested the speaking environment and vocabulary of Spanish-English bilingual children aged eight months to 30 months, highlights that the quantity of language input reflects a child's knowledge, with most words being produced in the language to which the child is predominantly exposed to. Additionally, the rate of vocabulary increase is influenced by exposure to

different speakers and whether the input comes from native speakers, which indicates more successful acquisition when native speakers are involved, as they may provide more precise articulation, wider use of vocabulary and range of grammatical structures (Hoff & Place, 2012). Overall, in the analysis of skills and learning success, both or all languages of a bi- or multilingual child must be considered, as their learning is equal to monolinguals but distributed across several languages (Rowland, 2014: 194).

The attitudes, beliefs and behaviours of both language learners and those around them also play a crucial role in the acquisition process. Studies show that parental awareness of language choices and understanding of language impact contribute to successful bilingualism. Factors such as language status in the community, national bilingualism policies, social circles, and the availability of bilingual education further influence the success of bilingual acquisition (Rowland, 2014: 196).

The authors of *Language Loyalty in the United States* (1966), noted that bilingualism was seen in a positive light if acquired through formal education or travel but as a negative if acquired from immigrant parents and other relatives, and provides a peek into previous views on bilingualism in America. Still, negative attitudes towards bilingualism are mostly related to immigration politics, and language views often reflect views on a community, not the language itself (Mahootian, 2020: 38), a possible factor behind the myth of bilingualism coming at a cost for children's development.

Parents who are conscious of the role of language have a higher success rate in raising children bilingual. Children also need the same awareness and ideas on how language can help them achieve specific goals (Mahootian, 2020: 110). The goals can be emotional and abstract, such as maintaining strong relationships with monolingual family members, or they could be practical and concrete, like being able to play and interact with the monolingual kids in the neighbourhood. Successful bi- or multilingualism depends on both or all languages serving essential social, psychological and emotional functions in the child's life. Two approaches have captured these elements: the one person, one language (OPOL) method, and the home language vs. public language method (Mahootian, 2020: 110-111).

OPOL, initially proposed in 1902 by linguist Maurice Grammont, remains a successful parental strategy in raising bilingual children. The OPOL method entails each parent consistently using their designated language when speaking to the child, and when speaking to the other parent in front of the child, fostering simultaneous bilingualism. The child should not be aware that parents can speak both languages and

within this method, each language is a direct link to a parent (Mahootian, 2020: 110). Grammont theorised that with this method, chances of the child mixing languages would be significantly reduced, and the emotional connection between parent and child would be strengthened. Grammont's friend Ronjat initially implemented and observed the outcome of the method on his French-German bilingual child. The child rarely mixed languages and was at age three clearly aware of the differences between his languages and would adjust to who he spoke to (Barron-Hauwaert, 2004: 1-2). A similar study was conducted on an American-German bilingual girl who gained equal proficiency in both languages at a young age. However, at around age 15, German had become the weaker language as English dominated her life in America (Barron-Hauwaert, 2004: 3), showing how childhood bilingualism does not guarantee bilingual proficiency into adulthood. Though effective, challenges may arise within the OPOL method as it demands conscious language choices from parents. Additionally, the parents might have to change the language they have previously used for communication, and perfect upkeep of the method all times may seem unpractical and unlikely.

Contrastively, the home language/public language method allows both parents to speak the same language to each other and the child. The home language is exclusively used at home, while the dominant community language is reserved for interactions outside the home. This approach often leads to sequential language acquisition, with the home language naturally acquired first. However, there will most likely be some input of the public language at home and in other family situations, through different media types and visits to public venues. The key to the method is exclusive attention to the home language at home, as the public language will naturally develop through exposure. If the parents have two different languages, both different from the public language, the method could combine with the OPOL method. Both strategies aim to provide plenty of various language situations for the child to form social and emotional ties to each language (Mahootian, 2020: 111).

Within these strategies, parents can employ various discourse strategies to promote bilingual acquisition. De Houwer and Nakamura (2021: 33) present several strategies to employ when children communicate using the public language when the home language is wanted, like the *Minimal Grasp Strategy* (MGS), where parents will respond to their children by asking them to clarify in their desired language, using sentences like "what did you say?" or "I don't know what you mean" to motivate a

response in the heritage language. Another discourse strategy is the *Expressed Guess Strategy* (EGS), where parents use a question in the heritage language translating what the children intended to say, like “Did you mean to say [...]?”, with the expectation of a response in the heritage language. *Adult Repetition* (AR) is a strategy where parents repeat their children’s utterances in the heritage language, hoping to change the language of the conversation, or for the children to “correct” themselves by repeating their parents. When using the *Move On Strategy* (MOS), parents do not repeat their child’s utterance or ask for clarification but precede the conversation in the heritage language. Lastly, *Language Switching* (LS) entails the parents switching to the majority language or some mixed utterance when their children use the majority language. Parents are not always aware of their language choices, behaviour and their impact, but those who do may engage more consciously in the different strategies with a positive influence on their children’s bilingualism.

Parental access to information on these strategies and methods has increased through the availability of bilingual parenting resources, and many refer to them in preparation for raising a bi- or multilingual child. These resources, including books and online materials written by academics and non-academics, offer insight based on empirical findings and personal experiences (De Houwer & Nakamura, 2021). Parents’ choices and motivations to seek information and educate themselves on effective strategies for their family’s specific needs play a crucial role in fostering successful bilingualism.

3 Method and materials

3.1 Chapter outline

This study investigates the success of diverse language strategies employed by parents in Norway who are raising multilingual children.¹ The study examines parents' attitudes and beliefs, provides a brief exploration of how bilingual children perceive their multilingualism, and aims to determine whether one strategy proves more effective than others. The study also seeks to identify the factors influencing successful simultaneous acquisition of multiple languages. The chapter begins by describing the research design and its elements, the rationale of the chosen design and a description of the participant recruitment in section 3.2. Subsequently, the chapter accounts for the design process, the conduct of interviews and tests in section 3.3, the treatment and analysis of data in section 3.4, and concludes by addressing the project's reliability (3.5), validity (3.6), and ethical considerations (3.7).

3.2 Research design

This study is primarily grounded in qualitative research methods and fundamentally aligns with qualitative paradigms but exhibits nuances of quantitative methods. Employing open-ended questions in interviews and simple language skill tests, the study aims to gain insight into each participating family's language dynamics. Open-ended questions, a staple of qualitative research, provide data directly from participants' perspectives, capturing their authentic words and thoughts. In contrast, quantitative research aims to generate theory by moving directly from observations and data to descriptions and patterns. Qualitative research places greater emphasis on exploration, description and, at times, the construction of theories (Johnson & Christensen, 2014: 64).

Data collection instruments for this study include an in-depth interview with parents, a shorter interview with their children, and three language tasks for the children

¹I acknowledge that half of the participating children would only classify as "bilingual" as they have no more than two languages. However, as five of the participating children speaks more than two languages, the term "multilingual" will be used throughout the paper for an easier read and more accurate representation.

to complete. The in-depth interviews will provide the qualitative aspect of the present study, whereas Test 1, 2 and 3 provides a more quantitative dataset. The language tasks consist of two translation tasks, one “underline the Norwegian/English word” and one with spoken descriptions of pictures. While the primary analytic approach is qualitative, certain quantitative data will be presented as well. Pure qualitative research is primarily used to describe what is seen locally. It relies on data such as words and pictures, whereas mixed research uses both qualitative and quantitative research methods, and the specific blend will depend on situational and practical considerations (Johnson & Christensen, 2014: 82). Quantitative and qualitative research have different views of human behaviour. Quantitative research presupposes highly predictable and explainable cognition and behaviour, aiming to identify cause-and-effect relationships for generalisation. Qualitative research, conversely, perceives behaviour as fluid, dynamic and context-dependent and aims to make generalisations beyond the group studied (83). Supporters of mixed research methods value both perspectives as they consider the use of only one as limiting and incomplete, asserting that a mixed method offers a more comprehensive understanding of the subject matter and is needed to fully understand the world (85). Given my study’s aim to generalise the success rate of various parental strategies in raising bilingual children, a mixed-method approach holds potential benefits, as mixed methods apply both qualitative and quantitative data collection and analysis (Sántha & Malomsoki-Sántha, 2023: 2).

This study somewhat aligns with a case study, a form of qualitative research that focuses on providing detailed accounts of one or more cases (Johnson & Christensen, 2014: 105). It also bears traces of narrative inquiry, characterised by the study of life experiences conveyed through stories. Participants share narratives of their lived experiences through in-depth interviews, responding to inquiries that prompt reflection on the past, extending to their pre-parenthood period (104). Stories and recollections of their language situations growing up are also recounted through the interviews.

Originally intended as an experimental study to investigate cross-linguistic influence in English-Norwegian bilingual children aged five to ten, this study has evolved into a case study. Experimental studies are commonly employed in child language research for their simplicity and accessibility to non-specialists. An alternative, but time intensive approach is the naturalistic approach, which is reliant on observations of children’s speech in everyday contexts, either through recordings or language diaries (O’Grady, 2005: 4-5). There are limitations to both methods.

Naturalistic observations could offer unique insight into the authentic language use in participants' homes, as they could be misrepresenting their reality through self-reporting, and it would eliminate the need for tasks as observations provide a more accurate representation of their language skills. However, it introduces several logistical challenges for a study of this size and funding. Qualitative researchers, operating under the assumption that reality is socially constructed, advocate for closeness to the studied object, and personal contact is deemed essential for understanding participants' perspectives through the process of inquiry, data collection and interpretation (Johnson & Christensen, 2014: 86). Through thorough, in-depth interviews with parents and personal contact with each participant proximity is ensured, which allows me to get substantial insight into their language dynamics. Consequently, the study assumes characteristics of a slightly mixed design, Overall, the study might better fit the label of a "somewhat mixed study", combining quantitative and qualitative data for a comprehensive understanding of the studied situation.

3.2.1 Materials

The empirical data material investigated in this study consists of interviews and practical tests conducted with eight families. This includes eight interviews with sets of parents (12 parents in total) and ten recorded interviews with children. The duration of the interviews exhibited considerable variability, ranging from a minimum of 15 minutes and 41 seconds (Family 6) to a maximum of 55 minutes and 8 seconds (Family 5). This fluctuation can be attributed, in my assessment, to three principal factors: (i) the presence of both parents, leading to lengthier interviews, (ii) the inherent communicative disposition of the parents, as some had elaborate answers beyond the asked questions throughout the interview, and (iii) the number of interruptions by their children. Some parents adhered strictly to the specific questions, whereas some were prone to various digressions.

All participating families are characterised as bi- or multilingual and reside in Bergen, Norway. The participating children's age range from six to nine years. In the case of some of the younger children assistance was provided by the researcher in completing written tasks, wherein they articulated their responses for verbatim transcription. In total, the children completed 20 written translation tasks, half from Norwegian to English and the remaining half from English to Norwegian. Furthermore,

ten written tasks instructing them to “underline the English/Norwegian word” were completed by each child, and ten audio recordings of them describing five pictures in both English and Norwegian. All interviews and tests were conducted in person, each session lasting approximately 45 minutes to one and a half hours per family. Further details on data collection will follow in section 3.3.3.

3.2.2 Rationale for the choice of method

The adoption of a qualitative research design for this project was deliberate, allowing an exploration of the language strategies chosen by parents raising bi- and multilingual children, as well as an examination of their overarching attitudes toward bilingualism. The utilisation of in-depth interviews enables the parents to contemplate their decisions and ideologies both prior to and during the interview process. In contrast to the utilisation of brief questionnaire responses, this approach ensured a more nuanced understanding of the subject matter. Qualitative methodologies are particularly advantageous in studies of this nature, fostering precise analyses and facilitates a comprehensive dataset. Concurrently, an interview with the children was conducted to address any omissions from the parental interviews and assess whether the children engaged in self-reflection concerning their bilingualism. This interview format facilitated clarification of any misrepresentations by the parents and the incorporation of additional relevant information. However, it is crucial to acknowledge that children may not possess the same expressive capacities as adults and may feel uncomfortable being asked personal questions by an unfamiliar person. Consequently, the focus of data analysis will not rely on the responses provided by the children during the interview.

The language skills tests were necessary for comparative purposes with parental reports, aiming to (i) scrutinise translation skills to unveil insights into the relationship between productive and receptive language knowledge, (ii) assess the children’s ability to differentiate between the two languages when presented simultaneously, and (iii) obtain naturally produced language samples, potentially revealing differential proficiency levels across the two languages. These tests were conducted to measure and compare proficiency levels in Norwegian and English. A qualitative method is commonly used to understand people’s experiences and perspectives (Johnson & Christensen, 2014: 82) and this research design facilitated brief observations of all

participating family members and their interpersonal dynamics, given the researcher's active presence during all interviews and tests.

As Johnson & Christensen (2014: 107) accentuate, the integration of multiple perspectives and research methods is considered a strength in educational research. By incorporating diverse data sets encompassing various tests and interviews in this study, an effort is made to assemble a dataset characterised by complementary strengths and non-overlapping weaknesses.

3.2.3 Recruitment and participants

This study's research question focuses on Norwegian families with young multilingual children, which leads to the use of a non-random sampling technique in the recruitment process. Sampling is constructed as the act of selecting a sample from a population to gain insights into the larger group's characteristics (Johnson & Christensen, 2014: 343). Non-random sampling is said to introduce bias, making the sample less representative than a random sample, as non-random samples tend to be systematically different from the population on certain characteristics (Johnson & Christensen, 2014: 344). In this study, close to all participants had affiliations with academia whether through one parent's employment at a university, active pursuit of a Master's or PhD degree, the teaching profession, or close associations with individuals involved in higher education, which could potentially affect the sample's representativeness. This study employed purposive sampling, where the researcher specifies population characteristics and locates individuals meeting these criteria, coupled with elements of convenience sampling as participants volunteered based on availability and personal interest (Johnson & Christensen, 2014: 363-364). According to several researchers, such as Patton (1990; Coyne 1997) and Sandelowski (1995; Coyne, 1997), all sampling in qualitative research is purposeful, as it typically focuses on small samples, selected purposefully (Coyne, 1997: 627). Non-random sampling methodologies inherently limit the study's ability to generalise to a broader population due to inherent constraints and biases. However, an ideal scenario would involve random sampling from a defined population meeting the study criteria; this approach was impractical and time-consuming in this context, a challenge many similar studies face. There are elements of snowball sampling, wherein participants contribute to identifying potential participants (Johnson & Christensen, 2014: 365), as some initial participants passed on the project

information through various channels like social media and work, drawing more participants into the study.

Primary recruitment efforts focused on engaging potential participants through Bergen's schools and kindergartens, with a starting goal of ten families. Communication was established via email, forwarding information about the project in both English and Norwegian directed towards parents, targeting families with children aged five to ten raised in a bi- or multilingual environment, with English as one of their languages. Email correspondence reached over 200 schools and kindergartens, as I, through Bergen municipality's website <https://www.bergen.kommune.no/> accessed email addresses of the school's principals and managers with the hopes of them forwarding the information to potential participants (cf. Appendix 8). The response varied with some schools forwarding the information, some cited already collaborating with other research programs. The vast majority, however, remained unresponsive. There is no count of how many families were reached, but out of the outreach, four families expressed interest, three of which aligned with the present study's criteria of the child's age (between five and ten) and languages spoken within the family (English and Norwegian). Subsequently, initial participants extended project information through personal networks, with Family 1 introducing another bilingual family from the workplace and Family 3 sharing the project details on the Facebook group "Bergen Expats", where five additional families expressed interest. All five families fit the criteria and were added to the study.

The project's scope underwent a strategic shift early in the research process. The transition was from a focus on cross-linguistic influence in English-Norwegian bilingual children to a project on parental strategies, enabling conclusive insight from the study's conclusion. The initial research on cross-linguistic influence required a more homogenous linguistic background among the children, a challenging criterion to fulfil due to the first set of participants diverse language variables, i.e. Spanish, Urdu, and Lithuanian. Initially, the recruitment process encountered some difficulty, with limited responses to emails sent to schools and kindergartens. By November 9, 2023, three families were participating, but subsequent exposure to "Bergen Expats" led to increased participant numbers. The participant count culminated at eight families, with twelve parents and ten children actively participating. While the initial recruitment email (cf. Appendix 8) conveyed to potential participants that the primary focus of the

study was cross-linguistic influence, those who made contact were immediately made aware of the transition to the investigation of parental strategies prior to the meetings.

3.3 The interviews and tests

A qualitative, semi-structured and informal approach was adopted to conduct both interviews. The questions in the interview guides were predominantly open-ended and retrospective, prompting participants to recollect experiences from earlier periods in their lives (Johnson & Christensen, 2014: 546). This method facilitated access to the participants' inner worlds and personal perspectives, allowing them to freely express their opinions while the researcher maintained control over the conversation's structure. Notably, all participating parents were provided with the interview guides and general project information in advance of the meetings, affording them an opportunity to ask questions, reflect on the topic, potentially engage in discussions with their partners or children, and arrive somewhat prepared for the interview. However, it was explicitly communicated that no formal preparation was required before the meeting, and the assumption regarding some degree of pre-meeting preparation is drawn from observations made during interactions with the families.

Given the semi-structured nature of the interviews, any necessary or relevant follow-up questions were naturally incorporated during the conversation, adapting to the conversational dynamics that varied among families due to their differing regarding the length of answers. Certain participants' responses addressed multiple questions at once, while others responded more straightforward, explicitly addressing the questions. Following all interviews, a pattern emerged wherein similar follow-up questions were consistently posed. For instance, a recurring variant of the query "Where did you find information on your chosen strategy"? was noted under the subcategory "The parent's attitude towards the child's language".

3.3.1 Designing the interview guides

A principal aspect of the preparation for data collection involves the formulation of interview guides, which loosely dictates the sequential execution of the interview while emphasising key topics of interest. The guide serves as a base for the interview, offering

guidance to the researcher while maintaining flexibility, allowing a relatively free order of questioning (Grønmo, 2020: 168). A qualitative interview with open-ended questions elicits qualitative data, demanding responses that go beyond simple yes- or no responses but encourage participants to elaborate on their answers. Before designing the interview guides, the researcher must consider the information requirements and the nature of the information that will be collected (Grønmo. 2020: 168), considerations that are reflected in the various subsections of both interviews.

The interview guide for parents is organised into four parts: the parents' language situation, the child's language acquisition process, language dynamics within the home, and the parents' attitude towards the child's language (cf. Appendix 1). While some questions may seem repetitive, they are intended to probe different nuances of the participants' situations. Repetition facilitates clarification, encourages reflection, and avoids the risk of misrepresentation in their responses. The first segment centres around the parents' own language situation and is a vital component for comprehensively understanding their situation. The second section dives into the child's language acquisition process, prompting parents to recount narratives from the past. This section is designed to offer insight into the early stages of language acquisition and enables comparisons with the typical development of both monolingual and bilingual children. Concerning the third section on language dynamics within the home, participants were asked about their current language situation. The final segment focuses on the chosen strategy and prompts reflections made by parents before and during the process of raising a bilingual child.

The children's interview guide is structured into three parts: their personal language experience within the home, their language experience outside the home, and general reflections on multilingualism. While the analysis will not heavily rely on the children's responses in these interviews, they were conducted to potentially address any gaps left by the parents and provide a more nuanced perspective. For instance, one of the questions addressed to parents revolved around the languages children use during play with siblings or other children – a domain where parental knowledge might be limited, and direct input from the children could prove more valuable.

3.3.2 Designing the tests

When creating the tests, I aimed to design assessments that would most accurately capture the children's authentic language proficiency. Throughout the design process, I aimed to define the precise data required for analysis, primarily focusing on their productive spoken proficiency in English and Norwegian and their ability to distinguish between the two languages. Three tests were formulated and are included as Appendices 3, 4, and 5.

The first test (1a) instructs the children to translate seven sentences from Norwegian to English, and (1b) instructs them to translate seven sentences from English to Norwegian. The selected sentences were drawn from free digital children's books at <https://barnas.com/digitale-barneboker/>. Specifically, the books used for (1a) and (1b) were "De to vennene of bjørnen" and "A street or a zoo?". All sentences were slightly modified, transitioning from past to present tense, to maintain a straightforward sentence structure for the children's translation. A variety of sentence structures was incorporated for each task, encompassing both shorter and "easier" sentences, and a few longer and potentially more "complex" sentences. This variety aimed to assess the children's language proficiency limits and to maintain their motivation throughout the test, hoping to foster a sense of accomplishment. Including overly intricate sentences might have demotivated the children, impacting their performance.

The second test (2a) requires participants to underline English words in five primarily Norwegian sentences, and (2b) Norwegian words in five primarily English sentences. The sentences for tests (2a) and (2b) were taken from the books "Tyven og gjestegiveren" from and "Chinku's dog". Two to three words per sentence were switched to the other language, resulting in overall twelve word changes in both (2a) and (2b). These are word spotting tests, as the participants are tasked with spotting target words in sentences. This technique is frequently used in psycholinguistic research, and usually participants are asked to spot real words in a string of nonsense speech (McQueen, 1996: 695). These tasks do not only activate lexical understanding (697), but the competition that occurs when presented with two known languages at once. This could provide insight into the separation of the two tested languages.

Lastly, the third test prompts children to describe five illustrations in their own words, three in English and two in Norwegian. The illustrations for Test 3 were obtained from the same website used in the previous tests, featuring images from the

books “Bondejenta og melkebøtta”, “Harene og froskene”, “Den gamle kona og legen” and “Hjorten og jegeren”, all sourced from Æsop’s fables.

Initially, I contemplated incorporating a larger number of sentences in both Test 1 and Test 2, as well as more pictures in Test 3. However, the selected quantity proved to be suitable for the participating children. While some were likely capable of answering more, others needed help to complete the set amount, influenced by factors such as fatigue or finding the tasks challenging. Overall, the length of the tests proved effective in generating diverse data for the following analysis.

3.3.3 Conducting the interviews and tests

The meetings took place between October 27, 2023, and November 27, 2023. All interviews and tests were conducted in person at the families’ residences in all but one instance. This choice was driven by practical considerations and the expectation that the children would feel more at ease responding to inquiries and completing tests in their familiar home environment. The meeting with Family 4 was conducted in the office of Mom 1, where her child joined us. The interviews were conducted in the language preferred by each family, which could be exclusively English or Norwegian, or a natural blend of the two, depending on the language dynamic within the individual households.

Before the meetings, parents were provided access to all interview guides and tests, along with an information letter and a declaration of consent for their review and to sign during our encounter. The information letter and declaration of consent were provided in English, and signing was mandatory to complete the interviews and tests. If only one parent was present, they signed on behalf of themselves and their child(ren), and if both were present, both parents signed.

This study has a high level of transparency, allowing participants access to materials beforehand to facilitate preparation, potentially saving time at our meeting, and giving them the possibility of familiarising themselves with the project in advance. It also allowed participants to ask questions or withdraw from the study if anything in the materials or information letter did not meet their expectations. While maintaining openness about project details, I postponed detailed responses to theoretical questions raised by parents until after the interviews and tests were conducted to prevent potential influences in their responses. The interviews sparked various theoretical discussions between the parents and me, for instance discussions on Norwegian dialects and

YouTube and language learning. However, I deliberately refrained from articulating any perspectives that might unnecessarily influence their perceptions of their chosen strategy.

In Test 1, some of the younger children did not independently write their answers; instead, we collectively read the sentences with a shared focus on the written text, and the children provided spoken responses, which I transcribed verbatim. For Test 2, some children read the sentences with me, and after one read-through they pointed to the words, and I underlined them. Recordings were made for both parent and child interviews, as well as for Test 3. In Test 3, I directed the language in which I desired the children to respond, utilising prompts such as the Norwegian “Hva ser du her?” or the English “What do you see here/ what is happening here?”. Notably, some children’s responses were very brief or challenging to decode due to mumbling. I adopted a cautious approach in asking follow-up questions or seeking clarification, avoiding conveying dissatisfaction with their initial answers or a desire for different responses. Consistency in brief or mumbled answers led to refraining from pushing for more information to sustain the children’s interest and confidence. Moreover, consideration of the children’s attention span factored into keeping the interviews and testing sessions as concise as possible while covering all planned components, especially given the meetings took place after a full day at school.

3.3.4 Transcribing the interviews

Transcription is pivotal in qualitative data collection, though it may be perceived as a routine task rather than an intellectually stimulating segment of the research process. Oliver et al. (2005: 1-2) states that transcribing is a crucial element of qualitative inquiry and present two modes of transcription practices: naturalism, wherein every utterance is transcribed in as much detail as possible, and denaturalism, which involves removing idiosyncratic elements of speech, such as pauses and fillers, while still striving for a comprehensive and faithful transcription. The parents’ and children’s interviews were recorded and transcribed in this study. Written transcription, employing a naturalistic approach, provides a verbatim account while it omits fillers and tone through denaturalistic transcription. In more recent qualitative studies, a combination of verbatim transcription and researcher notation of participants’ nonverbal

behaviour has been cited as being central to the reliability and validity of qualitative data collection (Halcomb & Davidson, 2006).

Halcomb & Davidson (2006) present arguments for and against verbatim transcriptions. Advocates for verbatim transcription claim that there are benefits such as making data audits by supervisors or others possible and that it enables researchers to immerse themselves more fully in their data. On the contrary, challenges with verbatim transcriptions include the time and resource costs, complexity, and potential for human error. They emphasise the importance of audio recordings, as they reduce interviewer bias and allows the researcher to reflect on the conversation, ensuring accurate representation of conveyed meanings. The final transcriptions for this study predominantly adopt a word-for-word format with selective omissions of filler words, interruptions, and non-interview-related digressions between the parents and the researcher. This approach makes the data more accessible for analysis and ensures participant anonymisation by excluding their voices.

Transcribing the parental interviews involved multiple steps. Initially, the recording was transcribed using the dictating tool provided by Word. Subsequently, I meticulously proofread the automatic transcriptions to rectify errors and eliminate digressions and filler words, enhancing the overall structure. Though helpful and making the process less time consuming, automatic dictation tools are not error-free and require manual proofreading. Each parental interview participant was anonymised and labelled with “M” for mom, “D” for dad, and “B” or “G” for boy and girl. In cases involving multiple children of the same sex, additional numbering (e.g., “B1” and “B2”) was applied. If parents discussed children not participating in the study due to their age, these were designated as “C” for child, accompanied by a number indicating the specific child under discussion.

Manual transcription was employed for the children’s interviews and the recordings of Test 3, given their less distinct speech patterns compared to their parents. Automatic transcription was deemed impractical and unnecessary due to the shorter duration of these interviews. Some children mumbled throughout our conversation, which made transcription somewhat time-consuming within the specified timeframe. The complete transcription encompasses a total of 102 pages. Relevant excerpts and references from the transcription of the parental interviews will be present within Chapter 4, and not included as separate appendices. I opted to present the results in this

manner for an easier and structured read, and a more comprehensive report of the data as context and other non-transcribed data is accounted for in the summaries.

3.4 Analysis of the interview and test data

To analyse the data collected from the interviews and tests, thematic analysis was used, as it is a common and useful analysis tool within qualitative research to identify, analyse and report patterns or themes within the data (Braun & Clarke, 2006: 79). Thematic analysis provides a highly flexible approach and is useful for summarising key features of a large data set as the researcher must have a well-structured approach to handling the data, which helps to produce a clear and organised final report (Nowell Lorelli et al., 2017: 2). The process of conducting thematic analysis involves generating codes, the systematic identification of overarching themes within the dataset, and subsequent revision and discussion of the identified themes. The categorisation of data through the application of codes and overarching themes makes it possible to identify connections within the dataset, providing a structured foundation for comparisons with the data obtained from the children's tests.

The transcribed interviews were colour-coded to obtain a comprehensive overview of prevailing themes, with categories structured in accordance with the subsections outlined in the interview guides. Key segments were marked, being either key words, sentences or longer sections of an interview, and the analysis of the coded material was completed in three main sections. The first section focuses on the analysis of the parental interviews, followed by an examination of interviews with the children, culminating in a comparative section contrasting reported language strategies with the children's test results.

An overview of the families was structured in Table 1, and they were numbered in the order of our meetings. The table presents a summary of the family members and their languages. The parents written in italics were not present for the meeting. Only the parents' native language(s) are represented in the table. However, all of them spoke English as well, and all the non-native Norwegians either spoke Norwegian fluently or were in the process of learning.

Table 1 Overview of participating families

	Parent 1	Parent 2	Child 1	Child 2
Fam. 1	Mom: Spanish (Venezuela)	Dad: Lithuanian	Boy (6): Lithuanian, Spanish, Norwegian, English	
Fam. 2	Mom: American English	Dad: Norwegian	Boy (9): Norwegian, English	Boy (7): Norwegian, English
Fam. 3	Mom: Urdu, Punjabi, English (Pakistan)	<i>Dad: Urdu, Punjabi, English (Pakistan)</i>	Girl (6): English, Norwegian, Urdu	
Fam. 4	Mom: Canadian English, Hebrew	<i>Mom: Norwegian</i>	Boy (9): English, Norwegian	
Fam. 5	Mom: Irish English	Dad: Norwegian	Boy (7): Norwegian, English	
Fam. 6	Mom: American English	<i>Mom: Norwegian</i>	Boy (6): English, Norwegian	
Fam. 7	Mom: Canadian English	<i>Dad: Norwegian</i>	Boy (8): English, Norwegian, Canadian French	Boy (6): English, Norwegian, Canadian French
Fam. 8	Mom: Canadian English	Norwegian, Spanish (Chile)	Girl (8): English, Norwegian, Spanish	

In research on parental strategies, it is important to keep in mind that parents may misrepresent their own language environment. Despite reporting exclusively speaking one language to their child, recordings or observations can reveal a different reality of language use, something parents either are unaware of or struggle to admit. In addition, parents may not always pay close attention to what language their children are speaking in, and continuing the conversation in their own language prompting a shift they are unaware of is happening (De Houwer & Nakamura, 2021). Only from brief meetings with the families, I quickly realised that the parents might misrepresent their language situation as I observed some reporting a strictly one-language policy right after using a different language with their child. More on this will follow in the analysis of the results.

3.5 Reliability

Reliability and validity are the two most critical psychometric properties to consider in a testing or assessment procedure, with reliability denoting the consistency and stability of the results (Johnson & Christensen, 2014: 239). In any study, meticulous consideration of the research process and results' validity and reliability is imperative, ensuring the potential for replication by other researchers and the likelihood of obtaining comparable outcomes. Reliability is established through clear and standardised data collection procedures, involving comfortable participants, accurately reported on and interpreted appropriately.

The study acknowledges the inherent limitations of self-reporting and personal biases, including participants' perspectives and the researcher's subjective biases as a language student. Considering the participants' comfort is essential, particularly recognising that children may be more susceptible to day-to-day variables than their parents. Some children seemed shy and provided brief responses during the interviews, possibly due to meeting a stranger asking them personal questions. To mitigate potential stress related to feeling tested, explicit assurances were consistently provided throughout the meetings that their responses were not evaluated in terms of right or wrong. Efforts were made to create a calm and secure environment, through my behaviour or the silent presence of their parents or toys. Additionally, the timing of our meetings may impact their responses, with observations suggesting increased fatigue and impatience later in the day.

Parental interviews revealed varying family atmospheres, from those fully engaged in the interview to those multitasking with household activities during our conversation. Interruptions by the children occurred during most interviews and could potentially have disrupted the parents' thought processes and influenced their responses. Furthermore, a lack of self-critical thinking may cause bias, as some parents might present themselves in a more favourable light than reality, possibly by overemphasising adherence to a specific strategy. In cases, I noted that the parents asserted "only speaking English" to their child, followed by an utterance to their children in Norwegian. I posit that this occurrence is unconscious, with the parents not intentionally misrepresenting the truth but failing to recognise these unintentional linguistic deviations.

A notable post-interview revelation was the frequent connection to academia among the participating families. These ties ranged from one parent being a university professor to others working in primary education or having close relationships with individuals in academia. Families expressed empathy for the challenges of participant recruitment, attributing their motivation for participation to an awareness of the difficulties in finding willing participants, including an interest in the research topic. The diverse connections to academia seem to influence the families' motivation to participate and their perspectives on bilingualism, language learning and parental strategies, leaving this case study more specifically representative of bilingual families in Bergen with ties to higher education.

3.6 Validity

Validity concerns the accuracy of the inferences or interpretations made from the results by the researcher (Johnson & Christensen, 2014: 239). Ensuring that the researcher measures the intended elements, verifying that observations represent the phenomena of interest, and recognising potential threats to study validity is crucial. Various measures were implemented to safeguard the validity of the study.

The recorded interviews represent the beliefs and thoughts of both parents and children, and it is essential for the validity of the study that interpretation is accurate. To ensure the validity of their responses and statements, repetition was employed to confirm understanding, and rephrasing or reiteration of specific questions throughout the interview to clarify intended meanings. By providing examples related to the questions or rephrasing them, participants were allowed adequate time for reflection on their responses during the interviews. The transcription process involved a combination of speech-to-text tools and manual transcriptions. While member-checking, i.e. sending transcriptions to participants for confirmation, was contemplated, it was deemed unnecessary, as the statements made during the interviews were clear. Additionally, there was a concern that such a process might cause participants to reassess their initial responses, potentially biasing their representation in a more favourable light if they were unhappy.

As mentioned, acknowledging the researcher's role in the interpretation and analysis of interviews and tests is crucial. Each meeting was approached with an open and impartial mindset to avoid biases, and without preconceptions regarding the family

or language situation. Additionally, transparency about the data collection and analysis process, as well as the study's purpose, was consistently maintained with participants. However, there are certain noteworthy limitations. Regarding the tests, not all the children were able to complete portions of them, and some provided limited responses during the interviews and the spoken Test 3. Impatience and fatigue were evident in some children, potentially from discomfort with a stranger asking personal questions after a lengthy school day.

3.7 Ethical considerations

Ethics encompasses a collection of principles and moral guidelines that uphold essential values. In the realm of research, ethical considerations constitute a necessary part of the entire study process. Familiarity with ethical principles and procedures is vital for the researcher, as it aids in the prevention of potential abuses and the recognition of their responsibility as an investigator (Johnson & Christensen, 2014: 192). Multiple organisations have issued ethical guidelines for linguistic research, and they all highlight the ethical conduct required when working with human subjects, such as the Linguistic Society of America (2009), the American Folklore Society (1988), and the American Anthropological Association (1998) (Mallinson, 2018: 57-58). Johnson & Christensen (2014: 192) present three ethical approaches: the deontological approach, which assesses ethical issues based on a universal code; ethical scepticism, viewing moral codes as matters of individual conscience; and utilitarianism, evaluating the ethics of a study based on its consequences for the research participants. Within these approaches, a set of guiding principles directs research ethics, necessitating researchers to identify ethical issues specific to their studies.

These principles encompass the relationship between society and science, questioning the extent to which social and cultural concerns should guide the study's trajectory (Johnson & Christensen, 2014: 195). Professional issues must be considered, including the problem of research misconduct like fabrication of evidence, falsification, and plagiarism, alongside the pressures of publication, competition for research findings and failing to present data contradicting one's own work (196). The treatment of research participants stands out as the most important ethical concern researchers confront, emphasising the need for participant awareness, safety, and ethical conduct in all studies.

Moreover, the American Educational Research Association (AERA) Code of Ethics has set forth five broad ethical guidelines for educational researchers (AERA Code of Ethics, 2011), with a focus on studies involving children, stressing the protection of these populations (Johnson & Christensen, 2014: 201). These principles include professional competence, requiring researchers to act within their expertise and stay current in their training. Integrity emphasises honesty, trustworthiness, and the avoidance of actions that may jeopardise others' well-being. Professional, scientific, and scholarly responsibility comprises 22 ethical standards that researchers must adhere to ensure thorough and ethical research conduct. Respect for people's rights, dignity and diversity calls for cultural sensitivity and the elimination of personal biases and discrimination. Finally, social responsibility advocates for actions that benefit others globally (201). These principles demonstrate the significance of professionalism, respect, and transparency, mainly when working with vulnerable groups such as children.

Given that 55% of the participant group in this study are children, a comprehensive understanding of ethical considerations surrounding research involving children is crucial. An essential part of any study with participants is informed consent, which is agreeing to participate in a study after being informed of its purpose, procedures, risks, benefits, alternative procedures, and limits of confidentiality (Johnson & Christensen, 2014: 202). As the children are minors, they are less likely to fully comprehend the procedures and potential risks of participating in research and may confuse the roles of those involved. While they can ultimately decide themselves if they will participate or not, minors can only provide verbal agreement to participate, and consent must also be obtained from the adults that are legally responsible for them (Eckert, 2013: 17). In the present study, the parents provided active consent by signing a form on behalf of themselves and their children.

4 Results, analysis and discussion

4.1 Chapter outline

This chapter presents, analyses and discusses the collected data. The chapter encompasses a summary of the interviews conducted with the eight participating families (4.2), wherein a total of 12 parents actively engaged in the interviews. Moreover, the chapter will summarise the responses obtained in the children's interviews (4.3) followed by an in-depth analysis and discussion of the overarching themes to answer the project's first two research questions in section 4.4. Section 4.5 presents and discusses the data acquired from Tests 1-3. Considering the study's objective to scrutinise the utilisation and efficacy of various parental strategies in multilingual families in Bergen, the data obtained from the interviews will be compared to the results from Test 1-3 in section 4.6. This will be to highlight and discuss the findings relating to RQ3, and to conclude the impact of diverse strategies on the present language proficiency of the children.

As indicated in 3.3.4, the identities of all participants are anonymised in the transcriptions and labelled either M for "mom", D for "dad", B for "boy", G for "girl", and C for "child not participating in the study". In families 4 and 6, the mothers are denoted as M1 and M2, with M1 representing the mother present during the interview, as only one was present in both instances. In families 2 and 7, the children are identified as B1 and B2, where B1 is the older and B2 is the younger brother. In all families, other children who did not participate in the study due to age are labelled as C, with additional information specifying if they are younger or older siblings. The father in family 3 did not actively participate in the interview and is not included among the 12 parents participating, but provided a written response to a specific question, which will be incorporated in its designated subchapter.

4.2 Parental interview summaries

Each summary in this section will present the parents' linguistic background, summarise each household's language situation, and present their chosen strategy along with the rationales behind their choice. Furthermore, the summaries will report on their

general perspectives on multilingualism, any challenges they encountered, and any pre-existing concerns preceding the start of their multilingual family. Finally, the researcher's general observations throughout the session will be accounted for along with any noteworthy remarks or statements made by the parents on the discussed subtopics. Reflections on the parents' consistency with their chosen strategies and a general discussion of overarching themes will also be included.

4.2.1 Family 1

Family 1 consists of a Venezuelan mother, a Lithuanian father, and three children, only one of which participates in the study. The mother made contact after learning about my project through her child's school, and neither parent appears to have affiliations with academia, their engagements stem from personal interest. The transcribed interview spans just over nine pages, with the audio recording lasting 26 minutes and 1 second. The meeting took place at their home, with all family members present.

At the time of the meeting, the participating boy was six years old and proficient in Spanish, Lithuanian, Norwegian and, to some extent, English. Both parents communicate fluently in English with each other and are in the process of learning Norwegian, with the father slightly more advanced. Additionally, the father has some knowledge of Spanish. The family adheres to the one parent one language (OPOL) strategy. However, they do not explicitly label it by its formal scientific term, but by stating M: "so he (D) speaks only Lithuanian to the kids, I speak only Spanish, but then they hear us speaking English every day". The boy receives Norwegian exposure at school and external activities, while English exposure comes from observing his parent's English communication and classes at school.

Their decision to adopt this strategy stemmed from consultations with experienced friends who were parents of bilingual children. They sought advice from those who had successfully raised children to be proficient in both their parents' languages. The mother expressed her rationale for the chosen strategy, stating:

[...] I didn't feel like it was natural for me to speak to my own kids in another language that was not mine. And also, because even when you speak another language that is not your mother language you pass even your mistakes, because you're not native, so you pass it, and they sometimes learn it either wrong or learn it with an accent.

The family's strategy involves extensive reading of books and listening to audiobooks in Spanish and Lithuanian. They consciously emphasise these languages at home through television and other media, assuming that exposure outside the home and at school will naturally foster Norwegian and English proficiency. Their motivation to prioritise their native languages is rooted in enabling their children to communicate with grandparents, and that native proficiency will aid in international educational opportunities in the future. They initially harboured some concerns about exposing their child to multiple languages, with the mother stating:

But we did ask the helsesøster when I was pregnant: “do you think we should cut it and just do Norwegian and Spanish let's say, and take out the Lithuanian?”, and they said totally no to us, they said “no, no, no, the kid can definitely handle those languages, so keep it to both of your languages and it's going to be fine”. So we did, and it worked like a charm.

These apprehensions dissipated following advice from healthcare professionals, and both parents expressed satisfaction with the outcome of their strategy. From my observations during the interaction, they appeared consistent, effortlessly switching between Lithuanian, Spanish, English and Norwegian in my presence. For instance, when the mother asked the child to introduce himself, she did so in Spanish, demonstrating consistency and loyalty to their established language strategy, even as it meant linguistically keeping another person out of the interaction.

According to the parents, the boy demonstrates equal competence in Spanish and Lithuanian. While I lack the proficiency to assess this claim independently, I trust their reports based on our interaction and the boy's seamless language switching when addressing his parents. Regarding Norwegian, the father has observed the boy narrating detailed stories to his friends, and believes the boy is slightly more proficient in Norwegian than Spanish and Lithuanian. He attributes this to the extended periods of hearing and using Norwegian at school compared to the exposure to his other languages. English, while the least proficient language, still enables the boy's participation in the study, a topic to be further explored in section 4.4.

4.2.2 Family 2

Family 2 consists of an American mother, a Norwegian father, and three children, two of whom participate in the study, aged 9 (B1) and 7 (B2), with English and Norwegian as their native languages. The third child is a younger sibling. The family became involved in the project when the mother, an educator at the primary school level, learned about it through her children's school. Both parents actively participated in the interview, which took place at their home with the entire family present. The transcribed interview spans nine pages, the audio recording lasts 33 minutes and 9 seconds, and the interview was conducted mainly in English.

All family members are proficient in both English and Norwegian. The mother has been learning Norwegian since 2011, while the father acquired English through school and media during childhood. Both languages are used interchangeably in the household, with the mother primarily using English and the father primarily using Norwegian. The boys typically address their mother in English and their father in Norwegian, and when communicating with each other the boys use Norwegian. However, the family initially considered the OPOL strategy, as indicated in their responses:

M: I mean, we sort of talked us, in the beginning, like I'm going to speak English to them all the time, and it's very much we try to translate back to them naturally [...] and then I've been very good with books, ordering children's book describing a lot of things, we also watch a lot of English TV.

The father adds, "We have more English than Norwegian books". They often prompt a language shift to encourage English use at home by repeating their Norwegian statements in English or asking English follow-up questions. According to the mother, this strategy has led the boys to predominantly address her in English. The mother later remarks, "It seems more natural to us to have both going at the same time". There is no strict adherence to either OPOL or a home language policy, but rather a flexible use of both languages based on their everyday needs. Nevertheless, proficiency in both Norwegian and English is important to both parents, as indicated by the mother:

They need to communicate with my family in the States, that's the biggest thing, but also English is a very universal language so I think, it's important to me that they're able to express themselves in both languages

Concerning challenges in raising multilingual children, the father mentions none, while the mother expresses an emotional challenge in not sharing Norwegian as a first

language. She finds it frustrating not being able to fully express herself in Norwegian as in English, stating, “I wish we had the same bases”.

The boys were born in Norway, and the mother reports a similar language development process for both. Their productive English blossomed after spending time in the US with the mother’s family when the boys were younger. “It just took three weeks for both of them to... kick in, and then they started using it and then it was no problem” the mother states, adding that the proficiency gained at the trip “stuck” more for B1, as B2 the was only three years old at the time. B1 did not exhibit a dominant language initially, blending both, with the mother stating, “he was very difficult to understand at first because he would blend everything”. When starting preschool at around four years old B1 leaned toward Norwegian and M: “went very Norwegian”. For B2, Norwegian was the dominant language from the start, with a growing comfort in English over time. The father attributes this to the mother being more fluent in Norwegian when B2 was born than when B1 was. A notable post-transcription observation is a potential bias in focus towards B1’s answers during the conversation, with reflections often starting with him, possibly overshadowing insight into B2’s language development as the topic tended to shift in lengthy answers. However, the parents claim to have employed the same strategy for both boys and that the children have had similar stages in their language development.

4.2.3 Family 3

Family 3 consists of two Pakistani parents, a mother and father, and two children, with the younger girl, aged 6, participating in the study. The older sibling is not participating due to the age limit. Both parents are native Urdu and Punjabi speakers with high proficiency in English. The mother initiated contact after learning about the project through her daughter’s school. She expressed interest, particularly given her experience with higher education, and showed empathy for the challenges associated with participant recruitment for research. The interview occurred at their home with the mother and children present. The transcribed interview spans nine pages, the audio recording lasts 36 minutes and 12 seconds, and the interview was conducted in English. After the interview, the mother asked if she could share information about the project through her personal networks and the Facebook group “Bergen Expats”, thankfully leading to the inclusion of five additional families in the study.

The participating child from this family is fluent in English, Urdu and Norwegian. She initially spoke Urdu and English after moving from Pakistan to Norway at two and a half years old. The mother emphasised her efforts to enhance the child's English proficiency before the move, stating, "My sole purpose of teaching her English was so that she could communicate [...] so when she came here she could talk to everyone and she was alright". The child began speaking at around one and a half, and could fully communicate at two and a half, with Urdu and English initially mixing. Regarding language strategy, the family seems to embrace a fluid, mixed approach, with both English and Urdu going simultaneously between parents and children. The girl and her older sibling primarily communicate in Norwegian, and sometimes the girl will use English with her mother, who is in the process of learning the language. Like Family 2, there does not appear to be a rigid strategy but rather an organic use of multiple languages.

At the time of the interview, the mother reported that the girl currently uses both English and Urdu with her parents but seems to be losing some Urdu proficiency, stating:

We speak to our kids in both Urdu and English, the problem now, but I see that they cannot understand if I speak everything in Urdu [...] There are a few words, a lot of words and a lot of sentences that they cannot understand in Urdu, but if I say the exact same sentence in English they might understand most of it.

Furthermore, she noted a shift in her child's dominant language from English to Norwegian, ranking them as "Norwegian top, English second, and Urdu third". The mother adds that when narrating a story to her daughter, she sometimes mixes some English words for her daughter to understand fully. The mother attributes this shift to the child's daily use of Norwegian and English both at school and exposure through media, coupled with the lack of Urdu literature in Norway and the inherent difficulty of the Urdu language, stating that it is "a very, very, very difficult language, it belongs to another family tree of languages." For these reasons, she sees her children learning and maintaining Urdu as an "uphill task".

When asked about decisions regarding language use in their home, the mother stated to have divergent opinions with the child's father. While he emphasises a larger focus on maintaining and learning Urdu, the mother leans towards prioritising a language studied, taught and spoken in Europe, like Spanish. Initially, the mother placed importance on her native languages for her children, but over time she states:

I love Urdu, it is beautiful, it has a rich culture [...] but now what I think is, I have become more open to the idea that they belong here (Norway) now, because I don't think they want to go back and a lot of things in my culture is something I would, I'd rather *forlate det enn å gå videre med det* (leave it behind than continue with it).

She states that she does not want cultural influences to be imposed on her children through language and wants her children to have the ability learn and unlearn languages according to their own values. As the father was absent, he supplied a written response, which is included in the last part of this section, as Figure 1.

The mother's decision to impart English to her children was rooted in the numerous advantages it would offer socially and educationally. She sought guidance from other families who had successfully raised multilingual children, aiming for a high proficiency in multiple languages. To teach her daughter English, she primarily spoke and read books in English, encouraging her to ask for things in English. There are currently no language priorities at home as long as the children have a "good" vocabulary and communicate properly, according to the mother.

The mother highlights a unique challenge in raising multilingual children, which is her inability to teach her children "pent ord" (nice word) in Norwegian, as it is a general concern of hers that her children have proper language, stating:

[...] when there is someone in Pakistan and they start speaking in Urdu I exactly know where they come from, or how much education do they have, what kind of literacy they have, just from speaking you can tell. [...] My problem is with Norwegian is, I don't, I cannot tell if they are speaking good Norwegian or bad Norwegian, if it reflects where they come from in Norway.

I attribute this concern to personal but mostly cultural aspects, as language proficiency often indicates one's education and literacy in Pakistan. Pakistan faces challenges related to a widespread lack of access to education, especially for girls, as it has the world's second highest number of out-of-school children. According to UNICEF (2024), an estimated 22.8 million children aged 5 to 16 are not attending school in Pakistan, making up around 44% of the age group. In contrast, Norway boasts high educational attainment rates, as only 218 children were registered not to have attended school in Norway in the schoolyear of 2019/2020, making up 0.03% of children of school age (UDIR, 2020). Concerns about language proficiency and lack of education are thus comparatively minimal in Norway than in Pakistan, which leads me to attribute the mother's worries about her daughter speaking properly to her cultural background.

In a post-interview discussion, the mother also expressed a belief that bilingualism could potentially cause developmental delays, which led to an interesting conversation between us.

Figure 1

Hi!

It is important for me that my children speak their native language because of two reasons.

1. Majority of people in Pakistan speak Urdu, among these people are my children's grand parent's and also some close family members.

In order to communicate with them it is important for them to know the native language.

2. It is always good to know multiple languages.

In case of my children, presently, they can communicate in three languages. Urdu, English and Norwegian. Also, when they came from Pakistan they already knew Urdu and English, they have learned norwegian here and we would make an effort to help them learn another language.

4.2.4 Family 4

Family 4 consists of a Canadian mother (M1), a Norwegian mother (M2), and two children, with the participating child being a nine-year-old boy. The non-participating child is a younger sibling, and only the Canadian mother attended the interview, hereafter referred to as “the mother” or M1. Her awareness of the project stemmed from encountering information in the Facebook group “Bergen Expats”, shared by the mother in Family 3. M1 is a university-level professor, and the interview took place at her office with only her and her son in attendance. The audio recording lasted 23 minutes and 9 seconds, yielding six pages of transcription. As with the previous one, this interview was conducted in English.

M1 is Canadian and has resided in Norway for 12 years. She met her wife in North America, and their communication has always been in English. M1 has a multilingual background, having grown up with Hebrew as one of her native languages and acquiring Spanish from growing up in Spain. Additionally, she is proficient in

French and Japanese, as well as Norwegian. Within their home, the parents primarily use English, with intermittent use of Norwegian. The boy is fluent in English and Norwegian, but his dominant language has consistently been English. The mother attributes this to him getting more language input from her, stating:

I'm always B's preferred parent and M2 is C's preferred parent, and I'm also more verbal and talkative than my wife anyway, so I think B has had more language exposure in general.

Additionally, M1 notes that the boy tends to “think in English”, and occasionally incorporates English words when speaking Norwegian, but never the reverse. He will primarily use English with his younger sibling, as this family follows the home language strategy. The mother reflects on the choice between OPOL and home languages, stating that it came as a natural choice as she and her wife already communicated in English. She expresses initial concerns that the children might reject the home language, drawing from her own experience with Hebrew as a child. However, this has not materialised in the boy, as she says “Actually, it's maybe a little too much the other way, like it might be better for B if he wanted to engage more in Norwegian”. She elaborates, stating:

I kind of expected them to be like truly bilingual, like not have a preference, but they both have a preference, and they have different preferences [...] And I don't want to have set up B for disadvantages in that he prefers English over Norwegian.

She defines “true” bilingualism as not having a preference, and further details specific measures taken to uphold their chosen strategy and preserve the child's multilingualism. For instance, the family considered transferring the boy to an international school for its English education and pedagogy but opted against it to prevent a significant loss of Norwegian proficiency. Additionally, they nudge both children towards English media within the home. The mother mentions occasional scepticism from teachers or kindergarten educators, “A personnel who maybe expect us to do one parent one language, or like they have maybe heard of that and heard that's the way to do it”, and she expressed surprise at having to explain and to some extent defend their home language strategy choice.

When asked about the importance of her child speaking her native language, the mother states, “My children will speak my language anyway because English is such a dominant language”. However, she underscores the desire for native fluency in English

to facilitate comfortable communication and acknowledges the social and future career advantages associated with English proficiency.

4.2.5 Family 5

Family 5 consists of an Irish mother, a Norwegian father, and two children, with the participating child being a seven-year-old boy. The child not participating is a younger sibling. The mother, who herself works with young children, reached out after reading information about the project on “Bergen Expats”. The father works at a local university and has recently completed his PhD. The meeting took place at their home and was notably longer than the other interviews, mainly due to the parents’ talkative nature, but also as a result of multiple interruptions. For lengthier interruptions by the children the recording was paused, but in total, the recording was 55 minutes and 8 seconds long, generating twelve transcribed pages. The interview primarily unfolded in English, with some sections in Norwegian due to natural, unconscious linguistic shifts among the parents and the researcher, all proficient in both languages.

This family does not strictly adhere to either OPOL or home language but employs both languages concurrently, with a prevalence of Norwegian use. The mother, originally from Ireland, relocated to Norway in 2012 with her husband. Their relationship began with communication in English, but they now communicate in both languages as the mother has attained fluency in Norwegian. The father is Norwegian and acquired English proficiency during adolescence through school and online gaming. The participating boy predominantly employs Norwegian when communicating with his sibling, father and mother, even though the mother claims to address her children in both languages. She states, “I speak English to him (B), but he won’t start spontaneously himself, or very rarely start speaking it himself”, and supplies that his English proficiency has drastically improved over time. She adds, “You have better luck with him speaking English quicker and early in the morning, in the evening it’s like his brain is tired”, indicating that it takes a more significant mental effort for him to use English than Norwegian. She also mentions that he will more likely spontaneously use English when playing video games.

The boy was initially reluctant to speak English at a younger age and would get upset if his mother used English with him and refused to speak the language. The mother reports that his first English word was spoken around the age of four or five, and

that his use of and attitude towards the language changed after an extended stay in Ireland with the mother's family. Norwegian has always been his dominant language, something the mother attributes to his lack of exposure to English. The impact of COVID-related travel restrictions limited exposure to English-speaking family members. Still, the mother noted that both children's receptive knowledge surpasses their expressive abilities as she stated, "They can understand everything I say to them in English, and how much they decide to... they get plausible deniability." A significant turning point occurred during a visit to Ireland last year (2022), where the boy's English proficiency "exploded", as he started to communicate in full sentences. At the time of the interview, the mother recognised similar English developmental stages in their younger child. As for general language learning the child has faced no challenges, as he was quick to read and write in Norwegian.

Initially, the family's strategy resembled OPOL, but underwent adjustments as the mother found it challenging to adhere to the plan, as she states:

It was, like my plan was to speak English to them so that they would be good at English, and I tried my best, but I did fall out of it. I did as much as I could, and they heard English from me every day, but there was times where I would realise "Oh my god, I've been speaking Norwegian to them for the past 20 minutes, I haven't said anything in English", you know, that happened. But I felt that now as he's (B) gotten older it's been easier and easier to just speak English, like when I come home into the house now I feel like I'm almost exclusively speaking English sometimes, which is a nice feeling.

The mother is honest and transparent about their shortcomings to upkeep the OPOL strategy, and notes instances where she unintentionally spoke Norwegian to the children for extended periods. The father suggests that the children received English input from overhearing the parents' English communication. They primarily looked online for strategy inspiration, where the mother read that "one parent should exclusively speak one language to make it easier for the child, and don't be concerned if it's a bit slow on its way out". They further discuss how their children were early speakers of Norwegian, adding:

M: "I think that's partly why their English like bottlenecked a little bit, it just didn't come out because he had so much Norwegian, English kind of got stuck there, and then I fell by the wayside as well because like sometimes it was just easier for me to, faster to speak Norwegian to him [...]"

Fatigue in both mother and child during daycare pickups often resulted in Norwegian communication, and the mother admitted that as a toddler the boy likely received more

Norwegian input than English. To counteract the overexposure to Norwegian, they attempted to show the boy his TV shows in English, but at that point, the child was not interested.

When asked about the importance of their children speaking their native languages, the mother emphasised communication with English-speaking family members. The boy's enhanced proficiency in English during their last visit to Ireland strengthened connections with his grandparents. Additionally, the mother believed that English proficiency could provide an advantageous foundation for learning a third language later, stating that it would be "that little extra boost of help". Interestingly, when asked about the process of raising bilingual children she states, "I don't really consider him bilingual, but he is, it's- I suppose because the whole house is that it doesn't really occur to me sometimes", with the father chiming in:

It's just been natural for us, and also we were sort of, I guess, I was thinking more that maybe he would be a little confused and the language development would slower. I don't think it has, for our sake. [...] The only thing is, that I've noticed is that when we've been in Ireland, and the first few years was very tiring for him, you know, he got very frustrated and extremely tired because his brain was probably working overdrive trying to translate.

The father elaborates on how he did not read up on any strategies, but that it "was more like intuitively this strategy I thought would be good to follow".

Looking ahead, the parents expressed their intention to focus on enhancing the boy's English proficiency through reading. The mother emphasises the "Harry Potter" books and points out how the father is currently reading him "The Hobbit". The father explains the specific strategy he uses during reading, where he will provide English synonyms or alternative explanations for unfamiliar words, and if needed, Norwegian translations. For a while the parents would translate the boy's Norwegian sentences back to him in English in everyday conversations, to strengthen the language and prompt use of it, a strategy the mother admits having fallen out of quickly. While transparent about the evolving strategies employed for convenience throughout the child's upbringing, overall family communication predominantly occurs in Norwegian, as observed during the meeting.

4.2.6 Family 6

Family 6 consists of an American mother (M1), a Norwegian mother (M2), and three children, with the participating child being a six-year-old boy. The two non-participating children are younger siblings. The meeting took place at their home, with only M1 and their son in attendance. M1 initiated contact after encountering information about the project on “Bergen Expats” and is herself actively working on a Master’s thesis in English. She sympathised with the challenges in securing willing participants for such a project. This interview was the shortest, with an audio recording of 15 minutes and 41 seconds, comprising nearly six transcription pages. Despite M1’s fluency in Norwegian, the interview was conducted in English.

This family adheres to the home language strategy, with English as their home language. Both mothers predominantly communicate in English, occasionally incorporating Norwegian filler words for translation. M1 elaborates on their strategy, stating:

We figured that English would be our home language just because we met in America and we lived there for a few years, so I think just switching over to Norwegian was- just didn’t make sense for either one of us, because our relationship started in English, so we decided that at home it would, we would continue with that.

The choice to maintain English as their home language was reinforced by the children’s exposure to Norwegian in external environments such as school and kindergarten. This decision was made to facilitate communication with American grandparents and others as English also plays a dominant role in Norway. While they did not extensively research language strategies, M1, with her later studies, gained insight into their chosen home language approach. She notes that other bilingual families they know predominantly adhere to OPOL, and states regarding her own children, “I’m surprised that they use as much English as they do, and that they, I guess, sound more American than Norwegian when they speak English as well”.

Their six-year-old started speaking around the age of one, with the mother indicating an initial exposure ratio of 60% English and 40% Norwegian leading up to his first words. Initially, he spoke a language mix with a slight Norwegian dominance, as many Norwegian household terms like “bil, skive, leverpostei” (car, slice of bread, liver paste) were key words in their home. Over time, his dominant language slightly

transitioned to English, but as M1 states, “I would say it’s 50/50, I think his *muntlig Engelsk* (spoken English) is better than his Norwegian, but his reading of Norwegian is better than English”. The boy primarily uses English when communicating with his siblings, except for the mentioned Norwegian key words, and exclusively uses Norwegian with M2’s parents. M1 notes some unconscious mixing done by the boy at home, stating:

“Skal hoppe på coachen!” Like one word, it’s usually about one to two words a sentence or if they don’t know the word they’ll say the English word but put like a Norwegian ending on it.

She further states that the family predominantly watch TV and listen to audiobooks in English at home, an unconscious but natural decision, as M1 states, “That stuff that comes up on Netflix for them is all pretty much English stuff.”

Looking ahead, the mother anticipates challenges associated with the increasing focus on reading and writing in Norwegian at school, stating:

Now that he’s in school, and now it’s really taking off with writing and reading in Norwegian, and we don’t want him to fall behind. I know a lot of bilingual kids who their like writing skills in English just aren’t on par with their reading skills in either language, or like writing skills in Norwegian.

To address this, the family plans to implement various strategies, including acquiring books on reading and learning techniques and seeking online resources to support the boy’s English literacy development. Despite their commitment to English at home, the family adopts a laid-back approach, as the mother notes in a post-interview conversation that they never correct their boy if he uses Norwegian at home.

4.2.7 Family 7

Family 7 consists of a Canadian mother, a Norwegian father (deceased in 2022), and two boys at eight (B1) and six (B2) years old, both actively participating in the study. Both boys were born in Norway. However, the family relocated to Canada when B1 was two years old and B2 was four months old, and just recently returned to Norway in the summer of 2023. During their time in Canada, the children attended a French immersion school program, and currently have language proficiency in English, Canadian French and Norwegian. The mother, actively working at the university level, expressed interest in the project after encountering information on “Bergen Expats”.

The interview occurred at their home, with the mother and both boys present. The audio-recorded interview, entirely conducted in English, spans 37 minutes and 5 seconds, generating nine transcription pages.

The mother is a native English speaker, has some knowledge of French, and is in the process of acquiring Norwegian, a language she, at the time of the interview, feels takes a lot of mental effort to use. Additionally, she spent one and a half years in Papua New Guinea doing fieldwork, where she acquired a local language to the point of being able to conduct her daily life using it. Her husband was Norwegian, but they communicated in English as he spoke it fluently. She notes that he would occasionally use Norwegian with her. She states laughingly that he used it if “[...] he didn’t want the other people in the room to hear [...], it was kind of like a secret language, but because my Norwegian was so poor it didn’t always work out”. At the time of the interview, the children had only spent around half a year in Norway, apart from the period before they initially moved to Canada, but already displayed an impressive understanding of the language considering their low to non-existing use before the move. The mother remarks that their native Norwegian sports-coaches will reinforce instructions in English if necessary, and that both children naturally have gravitated towards other bilingual children upon their return to Norway.

Prior to the father’s passing, this family has over time attempted both OPOL and home language as strategies, adapting them based on their residence in Norway or Canada. As the mother’s Norwegian is “so poor”, as she states herself, the parents’ communication has always been predominantly in English, naturally choosing English as their home language when residing in Norway. During their first period of living in Norway, B1 mixed English and Norwegian freely and had equal proficiency in both languages, as he got Norwegian from kindergarten and his Norwegian family. B2 was considerably younger when relocating to Canada and never acquired the same level of Norwegian as B1, as English is and has always been B2’s dominant language. With the move B1’s dominant language transitioned to English, as he spent more time in English daycare. The mother suspects the father spoke less Norwegian to the children when he finished his parental leave and returned to work. However, their initial plan was to adopt OPOL when relocating to Canada, but as she states:

Realistically, as he and I were always speaking in English together, and we were sitting around the dinner table, like it’s a bit awkward if he’s speaking Norwegian to the kids, so you know, we ended up just having English as our home language and they weren’t getting Norwegian obviously during their

school days or daycare when they were younger, so it kind of fell apart at that point, although we had the idea of one parent one language [...] daytime language is Norwegian, home language is English, but we really couldn't make that shift effectively in Canada.

The mother states that she thought her children “would maintain or learn more Norwegian even though we were in Canada from their dad speaking to them”. However, upon reaching school age, neither of them could speak Norwegian. They did have some Norwegian understanding, B1 more than B2, and the family's decision to spend a year in Norway was partially driven by the desire for the boys to gain proficiency in Norwegian, something both parents valued. When the father passed, the mother felt a “strong obligation to see the plan through to make sure my kids felt connected to Norway”, and states that as she has a strong network of support in Norway, she felt capable of making the move without her husband. Acknowledging that she cannot fully speak on her husband's behalf, the mother is certain that it was meaningful for him that his Norwegian born children would acquire and be proficient in Norwegian. As for herself, she emphasises the importance of her children speaking her native language, as she would “find it very weird if my kids didn't speak the same language as me”. She shared her emotional perspective on language ties, recognising the importance of language in family connections, particularly following the loss of her husband.

The mother has observed differences in the acquisition of Norwegian between the boys, with B1 finding it more natural due to his early exposure in Norway. B2, having to “start from scratch” faced more challenges, as she states:

We were doing some Duolingo in Canada before we came and I could see that B1 really actually understood the syntax and grammar of Norwegian quite naturally, and again, I think that early exposure like helped him to recognise the ways in which it's different from English, like where you put the pronoun or the article, like he just kind of got that. Whereas for B2 it was much more like strenuous for him to kind of think about the ways in which the syntax is different.

Currently, the boys will communicate with their mother 95% in English. Still, she notes that B1 occasionally will speak to her in Norwegian, like he did with French when residing in Canada. Although English is predominantly used at home and is the boys' default language, they have started using some Norwegian with each other, “playing with the language”. As for French, they progressed fairly equally, with B1 naturally acquiring more due to his age. Upon returning to Canada after this planned year in

Norway, the mother plans to put both children back in the French immersion program. She hopes that both boys “feel entirely comfortable in Norwegian” by then.

Literacy development, particularly reading in English, took time for both boys. B1 became comfortable reading at nearly eight years old, and B2 still does not read comfortably in English. The mother attributes their delayed reading abilities in English to their primary focus on learning to read and write in French in Canada, stating:

So, I do feel like having that other language in education in some ways slows down a few of their maybe language milestones in their mother language, but it never gave me any concern because I knew they would catch up.

Both parents are avid readers, with the father reading the boys both the “Narnia Chronicles” and “Harry Potter” in English when they were younger. He also read them Norwegian books, and the mother specifically notes him watching the Norwegian classic “Flåklypa” with his children. The mother drew strategy inspiration from academic sources and friends in international relationships raising multilingual children. To reinforce Norwegian language input going forward, the mother jokingly states that she, “force them to sometimes watch their shows in Norwegian”, as they mostly enjoy watching English YouTube-videos. Additionally, she has instructed the father’s family to transition from communicating with the boys in English to Norwegian and hopes this will maintain their Norwegian when moving back to Canada.

4.2.8 Family 8

Family 8 consists of a Canadian mother, a Chilean-Norwegian father, and an eight-year-old girl. The father has an older child who did not participate in the study. Having moved from Chile to Norway at eight years old, the father has recently undertaken the task of teaching his daughter Spanish. The mother, similar to previous families, volunteered the family for participation after encountering information about the project on “Bergen Expats”. The meeting took place at their residence, with all three family members present, and the parental interview occurred during dinner preparation. The audio recording of the interview is 23 minutes and 33 seconds long, generating six pages of transcription. The father joined towards the end, switching from English to Norwegian as the language of conversation.

This family adheres to the OPOL strategy. The mother exclusively uses English with her child, while the father employs a combination of primarily Norwegian, in

addition to English and Spanish. Although they considered having the father speak only Spanish with the girl, this was not implemented due to the father's lack of comfort with the language. The parents initially spoke Norwegian between themselves before the girl's birth, but now engage in a blend of Norwegian and English. In her earliest years, the girl spoke English to her father, as it was her dominant language at first. Over time, the dominant language shifted slightly to Norwegian due to increased exposure. Before starting school, the girl attended a kindergarten with international staff and other multilingual children, before transitioning to a daycare with more Norwegian staff, which accelerated her Norwegian and brought it up to an equal footing with English. The mother notes that the girl's vocabulary and language use reflect her input sources, stating:

What she knows in English is reflective of that she speaks with me mostly [...] She speaks some differently, like reflectively of where she speaks them (the languages) you know, so she can talk to me in a way that you know, you can speak with your mother, but like she, for example speaks to her friends, like when they kind of boss each other around or are playful I think she speaks that Norwegian in a way that she wouldn't necessarily do in English.

To balance this, the mother encourages exposure to English children's TV to foster a more youthful English vocabulary. Interestingly, the girl only realised a few years ago that her mother could speak Norwegian, and continued using English with her mother after learning they had another common language.

Regarding Spanish, the family recently intensified their focus. The father still feels hesitant to teach his daughter himself, as he has forgotten some of his Spanish as he has been primarily using Norwegian after moving from Chile at eight years old. They utilise Spanish books, music, and a learning app to facilitate learning. While the mother emphasises the importance of Spanish proficiency for their daughter's future job opportunities and enhanced communication and connection with paternal grandparents, the father expresses a more indifferent stance, saying "I don't really care".

During the mother's pregnancy she looked for resources on Facebook groups for parents of multilingual children and read up on the OPOL strategy. She found that OPOL would be the best strategy to give her daughter native proficiency in English, stating, "[...] she's quite capable of separating the two (languages) and that was what I read about OPOL, was that it makes it easier to separate the languages." She also read books, highlighting one called "Third Culture Kids". According to the mother, the child exhibited early language development, speaking her first words at around 12 months,

and had no notable delays, as the mother states, “I know that that’s a challenge for some children with multiple languages”. She later clarifies by saying:

[...] but from everything I’ve read, if children speak later or write later it tends to work itself out a later age, so there’s never anything that led me to believe that it would be a long-term challenge, and it hasn’t turned out to be any challenge.

The mother supplies that her daughter has a natural ability to teach herself skills, like reading English.

When discussing the significance of her daughter speaking the mother’s native language, the mother lists several reasons. She draws on personal experiences with her stepchild and explains how the language barrier limited the growth of their relationship when C was a teenager as it kept them from being “as personable”. The mother also notes the challenge of expressing emotions in a second language and underscores the importance of linguistic control as a parent. Language connects the daughter to the mother’s family, and the mother hopes the global significance of English will provide her daughter with “that step up for later in life”. Furthermore, the child’s English proficiency allows them to share cultural aspects from the mother’s childhood, like movies and music, an essential factor as the mother cannot provide her daughter with Norwegian culture in the same manner. Looking ahead, the mother envisions her daughter continuing to develop her Spanish, potentially receiving specialised training in school. Additionally, she hopes the school can provide advanced English teaching, as she does not want her daughter to lose her desire to learn.

4.2.9 Summary of the parental interviews

This section will serve as a summary of notable commonalities and differences found across the parental interviews, incorporating insight from the preceding condensed transcriptions and relevant non-interview-related themes. Sections 4.4 and 4.6 will follow with a more comprehensive comparative analysis and overarching discussion addressing the research questions.

A shared characteristic across the families is the absence of native Norwegian parents’ outreach, as exclusively non-Norwegian parents made contact, all of them being mothers. While this may allude to the mothers’ active roles in their children’s language acquisition or stem from personal interests, it is a notable aspect. As mentioned, most of those who volunteered for the study had affiliations with academia

or education, indicating empathy and understanding for the challenges associated with participant recruitment. An observation regarding non-Norwegian parents pertains to their occasional mixing of Norwegian words into conversation, particularly the word “barnehage”. Furthermore, many of the parents reported employing a variety of correction techniques with aimed at encouraging the use of English or other minority languages among their children. While these techniques were not explicitly identified by their scientific terms, the interviews underscore the particular use of the MGS, AR and MOS techniques (De Houwer & Nakamura, 2021: 33) throughout the participating families.

Regarding differences, variations emerge in the parents’ adherence to their selected language strategy and the methods employed to foster the use of Norwegian, English or other languages within the household. Certain families, such as Family 8 and 3, face differences of opinions within the home, while families such as Family 2, 3, 5 and 7 illustrate the dynamic structure of languages strategies, subject to shifts over time influenced by everyday convenience.

Concerning the reported language development of the children, no instances of late talkers were identified; conversely, many parents stated how their children were early talkers. However, the parents in question reported their children spoke their first words at approximately 12 months, aligning with the normal age range for the emergence of first words (Feldman, 2019). Initial stages of language acquisition often involved the free mixing of both or all the children’s languages, with them subsequently demonstrating the ability to distinguish and separate languages. Various parents, exemplified by Family 7, 2 and 5, underscored the role of YouTube as a source of English language exposure and learning, observed not only in their multilingual children but also in neighbouring Norwegian children from monolingual families.

Most parents cited inspiration for their language strategy from friends and other families they perceived to be “successfully” raising multilingual children. Additionally, some reported exploring and reading about diverse strategies and theories on the internet, while some went instinctively and unconsciously with the most natural strategy for their family. The challenge of expressing themselves fully in a second language emerged as a common concern among non-Norwegian mothers, motivating them to instil their native language in their children. Other recurrent motivators are communication with non-Norwegian family members, and the future potential career and social advantages of English proficiency. Many parents expressed the challenge of

ensuring a balanced and varied linguistic exposure to all their languages. Lastly, a shared aspiration among the non-Norwegian parents is the goal of reading the “Harry Potter” books to their children in English.

4.3 Children interview summaries

This section will account for any possible discrepancies from the answers provided by the parents. Additionally, it will summarise the children’s views and reflections on their own multilingualism, account for their language preferences during the interview process, and discuss overarching themes and potential patterns. Given the relatively short duration of the children’s interviews, three to seven minutes each, individualised summaries will not be presented. Instead, a comprised overview of their answers is displayed in Table 2.

Each interview yielded two to three pages of transcription. The two participating girls emerged as the most talkative among the children, while the younger boys from Family 1 and 6 were significantly less talkative. While all children displayed a tendency to digress and provide of-topic answers, the majority adhered to simple “yes”, “no” or one-word answers. The children were afforded the choice of the language in which the interview would be conducted, and five opted for Norwegian (Family 1, both from Family 2, Family 3 and 5), while the remaining five chose English. Presumably, those selecting Norwegian did so due to an understanding of the interviewer’s native language and due to Norwegian being their strongest and overall preferred language.

Among the five choosing English, four (Family 4, 6 and the two from Family 7) belonged to households predominantly adhering to the home language strategy. The girl from Family 8, adhering to the OPOL strategy, also selected English for her interview. I suspect her choice was partially made for her amusement, given that the non-interview conversation took place predominantly in Norwegian. The boy from Family 6, being less talkative and adhering to the home language strategy, likely chose English due to his preference for the language and as the preceding interview with his mother, in which he was present, transpired in English. In contrast, the boys from Family 7 preferred English both during the interview and in general conversation, and the boy from Family 4 was, as his mother states, is more comfortable with English compared to Norwegian in general. While the selected language did not impact their responses, it does offer insight into their linguistic situation.

Table 2 Overview of children's interviews

Children	Notes on interview
Fam. 1: Boy, 6 y/o	Interview and other conversation conducted in Norwegian. Speaks «litt engelsk, masse norsk» (a little English, a lot of Norwegian). Uses some English with his siblings, finds Norwegian easiest. Switches languages unconsciously. Very tired during interview, wandered off during the last questions.
Fam. 2: Boy, 9 y/o	Both interview and other conversation conducted in Norwegian. Uses both Norwegian and English with M. Thinks there are benefits to being multilingual when traveling. Finds it a bit hard to learn multiple languages at once but has heard that it is easier to learn as a child than an adult.
Fam. 2: Boy, 7 y/o	Interview and other conversation done in Norwegian. Speaks English with M, a little Norwegian with her as well. Switches languages without thinking. Not very talkative.
Fam. 3: Girl, 6 y/o	All communication done in Norwegian. Uses mostly English at home, a little Urdu. Mostly Norwegian with C, in addition to some English and Urdu. Does not have to think about switching between languages. Finds English-class boring because she already knows a lot. Gave a lot of of-topic responses, very talkative.
Fam 4: Boy, 9 y/o	Introductions done in Norwegian, everything else in English. Switches unconsciously between languages. Knows more English words than Norwegian, likes English more but Norwegian writing and spelling is easier. He thinks a disadvantage to being multilingual is mixing the languages up, and an advantage is being able to make more friends.
Fam 5: Boy, 7 y/o	All communication done in Norwegian during the meeting. Speaks mostly Norwegian with sibling, some English. Does not find any of the languages harder than the other and does not have to think about switching. Remarks that the tone of his voice shifts when switching language.
Fam 6: Boy, 6 y/o	Introductions done in a mix of Norwegian and English, the rest conducted in English. Uses English with both mothers, feels most

	comfortable in English generally. Switches unconsciously. Not very talkative.
Fam 7: Boy, 8 y/o	All communication done in English. Uses English with M, some Norwegian and French, both Norwegian and English with brother. Switches happen naturally, he is aware that he is learning, and feels that learning languages is easy. English is the easiest, Norwegian harder. Uses 50/50 English and Norwegian at school with teachers and friends. An advantage with being multilingual is that he can order food in Canada. Negative aspect is that one “gets stuck”, says he does not really remember French anymore.
Fam 7: Boy, 6 y/o	All communication done in English. Uses English with M and brother, some Norwegian here and there. Not hard to switch, feels he is good at languages and can learn quickly. English and French are easier, Norwegian harder. Uses mostly Norwegian at school, to learn. Says it is hard to speak a lot of Norwegian over a longer period of time. A lot of his English learning has come from YouTube.
Fam 8: Girl, 8 y/o	Communication before and after interview done in predominantly Norwegian, interview in English. Asked for a translation when I used the word “sibling”, understood “søsken”. Uses mostly English with M, Norwegian if a friend is over. Mostly Norwegian with D, but also English and Spanish. Does not need to think about switching. Spanish is the hardest, English the easiest, so many “new words” in Norwegian each day. She sometimes mixes Norwegian and English with friends and family. An advantage of being multilingual is that she can speak to people in other countries. I found that she had some Norwegian sentence structures in her English, such as: “daddy speaks the most to strangers <i>cus he can full Spanish</i> ”.

All the children uniformly assert that they do not consciously switch between their languages, and that switching occur intuitively. Both nine-year-old boys from Family 2 and 4 emphasise that Norwegian writing is easier than English. Particularly, the boy from Family 4 states that he has a larger English vocabulary but finds Norwegian spelling simpler and more straightforward. Both girls (Family 3 and 8) expressed finding English classes at school “boring”, due to their advanced proficiency

relative to their classmates. Additionally, the girl from Family 8 asked for clarification on the term “sibling” during the interview and understanding when receiving the Norwegian translation. I would assert that this aligns with the mother’s observation that the girl’s vocabulary reflects her primary sources of linguistic input, given the absence of siblings in the same household. The term “søsken” is potentially used more frequently amongst friends and at school and belongs in her Norwegian vocabulary.

In summary, the children’s responses provided no remarkable discrepancies and largely aligned with the accounts provided by their parents. Still, B2 from Family 7 contributed a quote representative of the study and encapsulates the overall positive and adaptive linguistic attitudes demonstrated by all the great children I were lucky to interview; “I can speak any language, it’s just that I didn’t learn them yet”.

4.4 Findings related to RQ 1 and RQ 2

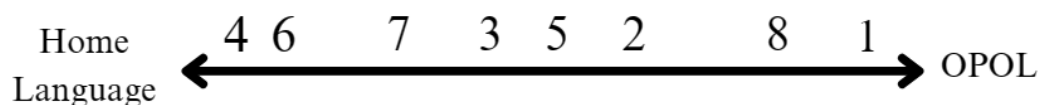
The interviews conducted with both parents and children aims to address RQ’s 1 and 2:

RQ 1: What language acquisition strategies do parents of multilingual children in Bergen utilise?

RQ 2: Do parents of multilingual children in Bergen have deliberate approaches and set goals for their children’s language acquisition?

In the context of RQ1, it becomes evident that the classification of families into distinct categories, such as OPOL or home language strategy, presents challenges. Their chosen strategies appear to constitute a spectrum, wherein the home language strategy and OPOL represent the extremes. While a few families demonstrate a clearer adherence to one strategy over the other, the majority fall in intermediate positions along this spectrum. To visually illustrate this spectrum, Figure 2 has been constructed.

Figure 2: Visual representation of the families on a spectrum of strategies



As observed in the summarised interviews, several families have experimented with both language acquisition strategies over the course of their parenting journey. Nonetheless, Figure 2 is intended to depict the current use of strategies among the families. Family 7 is particularly challenging to categorise, given plausible arguments for adherence to either strategy. While the mother predominantly employs English with her sons, both within the household and in external contexts, she states how they implemented the home language strategy during their residence in both Norway and Canada. Moreover, the boys receive linguistic input from only one parental source and will occasionally use Norwegian and French at home as well. Considering these factors, I have positioned them towards the middle, leaning slightly toward the home language strategy, aligning with their present circumstances.

In the case of Family 8, the mother exhibits a clear commitment to OPOL, whereas the father employs all his languages in everyday speech, placing the family slightly toward the middle in Figure 2. Family 6 is positioned slightly toward the middle as well, as they exhibit less stringency in enforcing the home language strategy compared to Family 4. Family 1 is situated proximate to OPOL; however, they diverge from the textbook definition outlined in Chapter 2, as the parents communicate in a third language and the children are aware of the father's proficiency in Spanish.

Overall, there is a relatively equal distribution between those primarily adhering to OPOL and the home language strategy. The remaining families appear to align with a third category, Mixed-Language Policy (MLP), where both parents generally use both languages with the children in the same conversations, even in the same sentences (Ruiz Martin, 2017: 127) exemplified by Families 2, 3, and 5. This trend somewhat coincides with the posited hypotheses,

- H1:** Parents of multilingual children in Norway have set approaches and goals for their child's language, and have strategies to either
- (i) support proper and equal development of both/all languages in the household.
 - (ii) focus on the minority language(s) at home, as the dominant language of the community will naturally develop through exposure outside of the home.
- H2:** Most families use a mix of methods - not strictly adhering to one.

Regarding H1, the second component (ii) appears predominantly supported, as none of the families articulated a deliberate emphasis on Norwegian language acquisition at

home beyond what is necessitated by the immigrant parents' personal learning. Moreover, many parents expressed confidence in their children's natural development of English, considering its presence in Norway and early introduction in school. Families closely adhering to textbook definitions of the language strategies seem to have a slightly higher focus on the development of both languages at home. In contrast, those employing a mix of strategies seem to rely more on organic language acquisition through schooling and daily interactions. As for H1 (i), equal support of all languages is less apparent in some families, regardless of their chosen strategy, notably in Family 3, where one language (Urdu) is deliberately put aside to focus acquiring other languages. H2 finds support in the parental interviews, as no family strictly conforms to textbook definitions of either language strategy. Even families at the peripheries of the spectrum in Figure 2 demonstrate deviations from their chosen strategies, often due to one or both parents' lack of native fluency in all languages spoken within the household.

These hypotheses were formulated assuming that parents would not harbour concerns regarding potential linguistic or cognitive development delays due to multilingualism, thereby fostering equal support for acquiring multiple languages. The interviews largely align with this expectation, despite some parents expressing past or present apprehensions regarding simultaneous language acquisition. Such concerns, both internal or raised by educators and others, primarily appear to revolve around late onset of language production rather than confusion or code mixing by the children. While multiple parents noted language mixing in the initial stages of acquisition, none reported confusion or significant concerns, although some occasional worries about language proficiency "lagging behind" or delayed speech onset.

4.5 Results from Test 1, 2 and 3

As stated in the chapter outline, this section will present the results of Test 1, 2 and 3, which will facilitate the following comparative discussion in section 4.6. The combined efforts of the tests aimed to determine a representative assessment of the children's proficiency in both English and Norwegian. Through this effort, a dataset was compiled to facilitate conclusions regarding their overall language competence in both languages.

4.5.1 Test 1a and 1b

In Test 1a, the children were tasked with providing English translations for Norwegian sentences. Several of the older children, specifically the eldest boy from Family 2, the boy from Family 4, and the girl from Family 8, independently wrote their own translations. As the focus of the analysis does not centre on spelling, the children's self-written responses are transcribed in the tables, with their original spellings provided in brackets to account for any disparities. The original spellings could also provide insight into potential similar challenges encountered by the children and whether their proficiency in spelling is equal or stronger in Norwegian or English. The remaining children provided spoken translations, which were transcribed verbatim during the meeting. Some of the children did not provide translations for all sentences due to factors such as fatigue, limited attention span or finding the sentences too difficult, thereby accounting for the incomplete data presented in Table 3 and Table 4. Notably, the eldest boy from Family 7 wrote some independently, while some were transcribed by the researcher, marked with [R]. The Norwegian sentences presented for Test 1a were:

1. Adrian er rask og sterk.
2. Han løper og klatrer i et tre.
3. Samuel kunne ikke klatre i trær.
4. Bjørnen er veldig nære.
5. Mens bjørnen lukter på ham, holder Samuel pusten.
6. Han ligger helt stille.
7. Adrian kikker bort på vennen sin.

Table 3 Test 1a results

Child	Sentence	Translation
Fam. 1, B6	1.	Adrian
	2.	He is climbing. Run
	3.	Samuel don't can climb
Fam. 2, B9	1.	Adrian is fast and strong
	2.	He runs and climbs up in a tree [<i>Hi runs and klains up in a tree</i>]
	3.	Samuel can't climb in the tree [<i>Samuel kant klaim in the tree</i>]
	4.	The bear is very near [<i>The bear is veri nir</i>]

	5.	While the bear smelled on him, holds Samuel his breath [<i>vel the bear smeld on him, hols Samuel his bres</i>]
Fam. 2, B7	1. 2. 3. 4. 5.	Adrian is fast and strong He runs and climbs up in a tree - The bear is very close While the bear smells on holds breath
Fam. 3, G6	1. 2. 3. 4. 5. 6. 7.	Adrian is fast and strong He runs and he climbs in a tree Samuel can not climb in the tree The bear is very near While the bear is smelling him he holds his breath He lies all quiet He looks at his frein
Fam. 4, B9	1. 2. 3. 4. 5.	Adrian is fast and strong He runs and climbs up in a tree [<i>He runs and climbs upp in a tree</i>] Samuel can not climb in trees [<i>Samuel kan not climb in trees</i>] The bear is very close While the bear is smelling him, Samuel is holding his breath [<i>Wyle the bear is smelling him, Samuel is holding his breath</i>]
Fam. 5, B7	1. 2. 3. 4. 5. 6. 7.	Adrian is fast and strong He springs and climb up in a tree Samuel can not climb in trees Bear is very close Bear sneeze on him, held Samuel He lie hilt still Adrian looking on his friend
Fam. 6, B6	1. 2. 3. 4. 5. 6. 7.	Adrian fast and strong He's running and climbing up in a tree Samuel could not climb in trees Bearen is really close When the bear is smelling on him, Samuel holds his breath He's laying all the way still Adrian looks right at his friend
Fam. 7, B8	1. 2. 3. 4. 5.	Adrian is fast and fit He is running and laying up in a tree [<i>He is raning and lehing up in a tre</i>] Samuel can't climb in a tree [R] The bear is very near [<i>The ber is veri nir</i>] But when the bear smelled him he holded [R]

	6. 7.	He is lying super still Adrian is at his friend [<i>Adian is at his friend</i>]
Fam. 7, B6	1. 2. 3. 4. 5. 6. 7.	Adrian is riding He runs and goes up in a tree Samuel could not get up in a tree Bear is very near When the bear smelled himself Samuel He is very quiet Adrian
Fam. 8, G8	1. 2. 3. 4. 5. 6. 7.	Adrian is fast and strong He is running and climbs up in a tree [<i>He is running and klimbs op in a tre</i>] Samuel can not climb [<i>Samuel kan not klib</i>] Bears are very close [<i>Bers are verri klos</i>] While the bears smell him he holds his breath [<i>Well the bers smel him he holds his breht</i>] He lays still [<i>He lays stil</i>] Adrian is looking at his friend [<i>Adrian is looking at his friend</i>]

In Test 1b, the children were presented with English sentence to translate into Norwegian. As in Test 1a, certain older children independently wrote their translations, while other verbally provided their translations for transcription, as seen in Table 4. The English sentences presented in Test 1b were:

1. Suno and Rina run out to play.
2. The kitten is looking at a big rat.
3. Rina saw a tiny ant.
4. A very big eagle comes down to the wall.
5. They clap their little hands.
6. The ant picked it up.
7. The three kids play with her.

Table 4 Test 1b results

Child	Sentence	Translation
Fam. 1, B6	1. 2. 3.	Suno og Rina løper ut til å leke Katten lukter på den store rotten Rina så en maur
Fam. 2, B9	1. 2. 3. 4. 5.	Suno og Rina løper ut til å leke Kattungen ser på en stor rotte [<i>Katteongen ser på en stor råtte</i>] Rina så en miniliten maur [<i>Rina så en miniliten meur</i>] En veldig stor engel kommer ned til veggen De klappet deres små hender [<i>Di klapet dies små hender</i>]
Fam. 2, B7	1. 2. 3. 4. 5.	Suno og Rina løp ut til å leke Den katten ser på den store rotta Rina så en liten maur En veldig stor kommer ned til veggen De klapper med deres lille hender
Fam. 3, G6	1. 2. 3. 4. 5. 6. 7.	Suno and Rina løpte ut og lekte Katten ser på den store rotten Rina så et lite maur En veldig stor måke kommer ned til veggen Han klapper lille hendene Mauren plukket det opp De tre barnene lekte med henne
Fam. 4, B9	1. 2. 3. 4. 5.	Suno og Rina løper ut og leker [<i>Suno og Rina løper utt og leker</i>] Katten ser på en stor rotte [<i>Katen ser på en stor råte</i>] Rina så en liten maur En veldig stor fugl kommer ned til veggen [<i>En veldig stor full komer ned til veggen</i>] De klapper de små hendene [<i>De klaper de små hendene</i>]
Fam. 5, B7	1. 2. 3. 4. 5. 6. 7.	Suno og Rina løper ut for å leke Katten ser på den store rotten Rina så en liten ant En veldig stor øgle kommer ned til veggen De klapper de små hendene Det ant plukket dem opp De tre barna lekte med hun
Fam. 6, B6	1. 2. 3. 4. 5.	Suno og Rina går ut og leker Katten ser på en stor rotte Rina så en liten maur En stor ørn kommer ned til veggen De klapper sine små hender

	6. 7.	Mauren plukket den opp De tre barn leker med hun
Fam. 7, B8	1. 2. 3. 4. 5. 6. 7.	Suno og Rina går ut og leker Katten ser på en stor rat Rina ser en små and En veldig stor fugl kom ned på vegg De klapper de littel hender En små and plukk det opp De tre barne leker med hun
Fam. 7, B6	1. 2. 3. 4. 5. 6. 7.	Suno og Rina springer ut og spiller En katt ser på en grå mus Rina så en liten En grå kommer ned til veggen Han klapper hander Ant En gutt spiller med en jente
Fam. 8, G8	1. 2. 3. 4. 5. 6. 7.	Suno og Rina løper ut Katten ser på en stor rotte Rina så en liten rotte En veldig stor ørn kommer ned De klapper [<i>De klapar</i>] Mauren plukket den opp [<i>Muren pluket den opp</i>] De tre barna leker med henne [<i>De tre barna leker med hene</i>]

Test 1 offers insight into the children’s lexical knowledge in both Norwegian and English, as well as their receptive and productive language skills. An inherent challenge in analysing this test is distinguishing whether translation difficulties stem from a lack of comprehension in the original language or the absence of suitable translation equivalents in the target language. Nevertheless, the analysis of their translations must be contextualised within the findings of Test 2 and 3 to provide a comprehensive assessment of the children’s bilingual proficiency. For instance, the heightened English proficiency observed in the boys from Family 7 is evident in their grammatically correct responses in 1a, compared with their relatively limited Norwegian vocabulary in 1b.

Overall, the children provided mostly accurate translations with appropriate vocabulary and sentence structures. However, there were some notable challenges, such as in Test 1a, where sentence 5 posed grammatical challenges for many participants. Additionally, intrasentential code switching (Mahootian, 2020: 57) was observed, exemplified by the boy from Family 6 in sentence 4 (Bear+en). However, in the

following sentence he demonstrated a correction to standard English (the bear). Noteworthy code mixing includes the boy from Family 5's use of the term "hilt" in sentence 6, where he pronounces the Norwegian word "helt" with an English accent. This participant also omits a few determiners in other instances, i.e. "the" in s S4 and 5.

In Test 1b, several of the children encountered difficulties in translating the words "eagle", resulting in some participants omitting the word entirely or proposing alternative translations such as "fugl", "måke", "øgle" and "engel". This illustrates the complex relationship between their receptive and productive language knowledge, wherein some participants recognise the word "eagle" as a type of bird or winged creature yet encounter challenges in providing an accurate translation. In the translation into "øgle", homophonic translation is exemplified, which is a tendency to select a similar-sounding word the target language in translation, focusing on the sound over the lexical meaning (Bernstein, 1998). Despite these challenges, the children demonstrated overall success in translating sentences in both Test 1a and 1b.

4.5.2 Test 2a and 2b

In Test 2, the children were instructed to identify and underline English words within predominantly Norwegian sentences (2a), and conversely, Norwegian words within predominantly English sentences (2b). The provided sentences are available in Appendix 4. Each test had twelve target words for identification. Table 5 depicts the children's performance in underlining the target words in each test. In total, there were twelve words changed in each test, i.e. twelve target words. Like Test 1, some of the older children completed the test independently (Family 4 and the eldest boy from Family 7), while others completed it partially independently, with some sentences read aloud by me (the eldest boy from Family 2 and Family 8). The remaining children received assistance as I read the sentences aloud for them to point out the words or underline themselves.

In retrospect, it would have been prudent to ensure that all sentences were read aloud for every participant to ensure an equal understanding of the task across the participants. However, considering the older children's inclination towards self-reliance and certain time constraints, I allowed those who requested it to complete the task independently, partially to boost their motivation to complete the tasks. This approach may have introduced some variability in the dataset, which must be carefully considered

during analysis. For instance, the written Norwegian terms “kom”, “familie”, and “min” might be perceived by the children as their English counterparts “come”, “family” and “mine” given their level of literacy. Furthermore, Norwegian words such as “at”, “stolen”, “fire”, and “and” are homonyms in English, possibly leading to oversight during translation if not audibly presented. Nevertheless, any potential confusion stemming from homonyms should be avoided if participants pay proper attention while reading the sentences. To mitigate such issues, future possible repetitions of Test 1 and Test 2 should ensure that all participants have each sentence audibly presented or do their best to avoid sentences containing potential word overlaps in spelling or pronunciation in the tested languages.

Tables 5 and 6 present the number of target words the children underlined in each test, along with missed words and instances of underlining of non-target words. The tables also specify the sentences in which each words appears, denoted by “S”.

Table 5 Test 2a results

Child	English target words identified	Overlooked target words	Norwegian non-target words identified
Fam. 1, B6¹	x	x	X
Fam. 2, B9*	11	S4: and	-
Fam. 2, B7	10	S3: could	S5: kom
Fam. 3, G6	10	S1: steal S4: from	-
Fam. 4, B9*	11	S4: and	-
Fam. 5, B7	12	-	S4: å
Fam. 6, B6	8	S1: steal S4: from S4: and S4: away	S1: var S4: stolen
Fam. 7, B8*	9	S1: certain S4: from S4: tried	S1: at S3: dresen S5: kom
Fam. 7, B6	9	S3: he S3: could S4: and	-
Fam. 8, G8*	12	-	-

¹ The boy from Family 1 wandered off early in the process and did not complete Test 2a and 2b. As he displayed no interest and a high degree of fatigue, I deemed it best for both his comfort and the potential results to not push him to complete the tests. The family is still included in the project as the child provided some answers for Test 1, Test 3, and the parents gave a detailed interview.

The children marked with * partially or entirely completed their tests independently. As illustrated in Table 5, the boy from Family 5 and the girl from Family 8 successfully identified all English target words, with the former underlining one non-target word. Both nine-year-old boys from Family 2 and 4 identified eleven target words each, with a shared omission of the word S4: and. Sentence 4 yielded the highest frequency of missed target words across the children. On average, 10,2 out of 12 target words were identified, indicating an 85% success rate in target word recognition. Notably, the children's differing ages did not significantly impact their performance, as those at the same age had varying results, and some of the younger were able to identify more target words than the older children. Overall, S4: "and" and S4: "from" were the most overlooked target words. No discernible pattern emerged among the non-target Norwegian words, although S5: "kom" was most frequently misidentified as a target word.

Table 6 Test 2b results

Child	Norwegian target words identified	Overlooked target words	English non-target words identified
Fam. 1, B6	x	x	X
Fam. 2, B9*	10	S1: fire S2: passe	-
Fam. 2, B7	12	-	-
Fam. 3, G6	11	S2: min	S2: the S2: house
Fam. 4, B9*	10	S1: familie S2: på	S2: the S2: house
Fam. 5, B7	11	S2: min	-
Fam. 6, B6	10	S2: min S3: hjelper	S3: when
Fam. 7, B8*	11	S1: familie	-
Fam. 7, B6	11	S3: jeg	-
Fam. 8, G8*	11	S2: min	-

As displayed in Table 6, the average number of underlined target words is higher and more evenly distributed compared to Table 5, registering at 10,7 out of 12, with no participant identifying fewer than ten target words. This results in a word-spotting rate of 89%, indicating a high level of lexical comprehension and separation of the

languages in both Test 2a and 2b. Moreover, there are fewer missed target words and instances of non-target English words being underlined. Notably, the girl from Family 3 and the boy from Family 4 identified the same two non-target English words. The most frequently overlooked target word was S2: “min”, with sentence 2 presenting the highest frequency of missed target words overall. Like Test 2a, the children’s ages do not appear to significantly impact the results. However, it is plausible to speculate that the outcomes might have diverged had the older children not completed the tests independently, as discussed previously.

These subtle variations in results between spotting English words in Norwegian sentences and vice versa may indicate that the children possess different proficiency and literacy levels across the two languages. They seem to recognise the Norwegian words more easily in Test 2b, although this could be attributed to a process of elimination, where they simply identify non-English words. Given the marginal difference in spotting rates of just 0.5%, no definitive conclusions can be drawn from this test regarding overall competence in one language over the other. However, that was not the aim, rather this test aimed to assess the children’s ability to distinguish between the languages, which it appears they can do to a considerable extent, regardless of their family’s language strategy. The children from Family 2, 3 and 5 adhering to the mixed approach (MLP), achieve scores that are as high as, if not higher than, those following the HL or OPOL strategy. This coincides with and supports my third posited hypothesis, which states:

H3: The children will have no problem separating English words from Norwegian words.

4.5.3 Test 3

The data collected from Test 3 was recorded and transcribed (cf. Appendix 6). Since most picture descriptions were elicited through conversational exchanges, presenting the results through a visual summary or table-representation would not suffice. Therefore, complete transcriptions, spanning approximately ten pages, have been included for a comprehensive portrayal of the findings. The analyses and discussion in section 4.6 will rely on the findings derived from all tests, but primarily Test 1 and 3. There are no disparities and external variables in the test administration process of Test 3, thereby laying a solid groundwork for comparative assessments.

As evident from Appendix 6, the children provide varying responses to the different pictures, influenced to some extent by the language used. Notably, the boy from Family 1 demonstrates a preference for Norwegian, which aligns with his established lesser competency in English. He is hesitant and provides short responses when prompted in English, whereas he demonstrates more ease and elaboration when describing pictures in Norwegian. Regarding Family 2, both boys provide the same level of detail in Norwegian and English without apparent difficulty in grammar or vocabulary, and they smoothly transition between the two languages. On the other hand, the girl from Family 3 displays some unconscious intrasentential and intersentential code switching (Mahootian, 2020: 57), evident in her descriptions of Picture 4 and 5. When prompted in Norwegian she states, “I can, jeg kan se [...]”, and similarly corrects herself when later asked in English, “Jeg kan se, nei, I can see [...]”. It is worth noting that the girl was significantly more talkative and had a faster speech rate than the other children, potentially affecting her transition between languages. Despite this, she demonstrates competence in both languages, offering detailed descriptions without other lexical or grammatical difficulties.

Similarly, the boy from Family 4 displays equal proficiency and an extensive vocabulary in both Norwegian and English. Conversely, the boy from Family 5 is not as detailed in his descriptions, but exhibits a stronger proficiency in Norwegian, evidenced by his difficulties with certain English words and grammar. This can be observed in his responses to Pictures 2, as he answers “hop!” when asked what the frogs are doing, and under Picture 5, where he sees “a man with a *bu* (bow)”. Meanwhile, the boy from Family 6 demonstrates no apparent preference or higher proficiency in either language, confidently providing descriptions to all pictures. Both boys from Family 7 exhibit a higher proficiency in English, evident in their confident and detailed English responses compared to the Norwegian ones. They occasionally mix English when hesitant or thinking aloud under the Norwegian prompts before reverting to Norwegian. Lastly, the girl in Family 8 provides equally descriptive and imaginative descriptions in English and Norwegian. Still, a brief instance of intrasentential mixing can be observed under Picture 2, where she initially pronounces “water” with a /t/, followed by a fast self-correction to an American pronunciation of the /t/ when between two vowels as a soft /d/.

Overall, six of the ten children display equal proficiency in spoken Norwegian and English, while two have a higher proficiency in English and two in Norwegian. The implications of these findings will be discussed in the following section.

4.6 Findings and discussion related to RQ 3

This section aims to analyse and discuss the data presented in the preceding sections within the context of RQ 3:

RQ 3: Are some approaches to raising multilingual children more effective/successful than others?

The parental interviews reveal that a common goal among the participating parents was the attainment of multilingual proficiency for their children in the respective languages of the parents. The conducted tests are designed to assess the outcomes of these set goals, and to construct a comprehensive portrayal of each child's proficiency in both Norwegian and English. The data aims to facilitate conclusions of the correlation between parental language strategies and the children's language competence.

In Table 7 I attempt to visually summarise each child's language skills in Norwegian and English. Based on Test 1-3 and supplementary observations made during the interview and interactions, the children's lexical and grammatical knowledge in English and Norwegian are evaluated utilising a graduated scale: "High – Moderate – Limited", similar to a Likert scale, a rating system widely used in educational research (Jamieson, 2024). The assessments are based upon the comfort level the children displayed with each language when spoken, in addition to their written results in Test 1 and 2. It is important to note that these evaluations are not based on the volume of language production, as talkativeness do not necessarily indicate a higher language proficiency. Furthermore, the column furthest to the right indicates the level of separation of the languages the children have displayed, i.e. how much they mix languages across the interviews and tests. Denoted as "Some – Low – None", the column indicating whether there was some, low, or no presence of language mixing. The table indicates which strategy the family adheres to, with OPOL (One Parent One Language), MLP (Mixed Language Policy) and HL (Home Language), in addition to the languages included in the strategy.

Table 7 Summarised overview of language skills and mixing

Child	Strategy	English proficiency	Norwegian proficiency	Mixing
Fam. 1, B6	OPOL (Span+Lit)	Vocabulary: Limited Grammar: Limited	Vocabulary: High Grammar: High	None
Fam. 2, B9	MLP (Nor+Eng)	Vocabulary: High Grammar: High	Vocabulary: High Grammar: High	None
Fam. 2, B7	MLP (Nor+Eng)	Vocabulary: High Grammar: High	Vocabulary: High Grammar: High	Low
Fam. 3, G6	MLP (Eng+Urdu)	Vocabulary: High Grammar: High	Vocabulary: High Grammar: High	Low
Fam. 4, B9	HL (Eng)	Vocabulary: High Grammar: High	Vocabulary: High Grammar: High	Low
Fam. 5, B7	MLP (Nor+Eng)	Vocabulary: Moderate Grammar: Moderate	Vocabulary: High Grammar: High	Some
Fam. 6, B6	HL (Eng)	Vocabulary: High Grammar: High	Vocabulary: High Grammar: High	Low
Fam. 7, B8	HL (Eng)	Vocabulary: High Grammar: High	Vocabulary: Moderate Grammar: Moderate	Some
Fam. 7, B6	HL (Eng)	Vocabulary: High Grammar: High	Vocabulary: Limited Grammar: Moderate	Low
Fam. 8, G8	OPOL (Eng+Nor)	Vocabulary: High Grammar: High	Vocabulary: High Grammar: High	None

Upon initial examination, no pattern indicates a higher efficiency of one strategy on the children's language proficiency. Except for the boy in Family 1, all children exhibit either "Moderate" or "High" levels of vocabulary and grammatical skills in both English and Norwegian. Language mixing is observed among the children, though not significantly, with a few instances of partial mixing evident in both vocabulary and grammar, such as incorporating Norwegian words into English sentences, or adding Norwegian affixes to English words, as previously discussed. Regarding sentence structure, no mixing is suspected or evident, as English and Norwegian are both SVO-languages and share the same basic word order rules.

These findings align to some extent with the remaining hypotheses posited regarding RQ 3, which reads as,

H4: The children prefer the dominant language of the community (Norwegian).

H5: The parent's choice of strategy reflects in the child's proficiency of the languages.

H6: OPOL is the most effective and “successful” strategy.

Concerning H4, the findings only partially support it, as certain children either exhibit no language preference or favour English. However, Norwegian writing and spelling seems to be preferred by some of the older children, and naturally by those with a lower proficiency level in Norwegian. The assertion posited by H5 remains unsupported in its original form, as no pattern emerges regarding differing effects of strategies on children's language proficiency. Nonetheless, the parents' adherence and consistent upkeep of their chosen strategy, regardless of which, is reflected in the proficiency levels of the children and their active or passive multilingualism.

Furthermore, as De Houwer (2007) underscores, if children from the same multilingual family differ from each other in their language use it would constitute an argument against the importance of parental input patterns. Her 2007 study on parental language input patterns and children's language use reveals that siblings in multilingual families usually exhibited equal language use patterns. Language pattern comparison among siblings was not the primary focus of the present study, but noteworthy differences in language preference among siblings were observed in certain families. For instance, in Family 2, the younger sibling not participating in the study favours English, compared to the brothers' preference for Norwegian, according to parental reports. Such variations may suggest that factors beyond parental language input significantly influence the children's language acquisition, or it could reflect a shift in language dynamics within the household following the birth of an additional child. Nonetheless, sibling comparisons in Families 2 and 7 demonstrate relatively equal language patterns, except for a higher Norwegian proficiency in the older brother from Family 7, due to natural reasons previously discussed. As stated, this was not the focus of the present study but could indicate interesting finds in future studies on multilingual sibling dynamics in Norway.

Regarding H5, compelling evidence from the gathered data supports the idea that parental approaches to children's language acquisition significantly influence their

language proficiency. Family 1 presents an intriguing case study. Due to limited personal competence in Spanish and Lithuanian, I hesitantly make assumptions of the boy's proficiency in the respective languages. However, from observations of his effortless switching in interactions with the parents and parental reports of his language situation, it is evident that the child has equal, native like competence in both Spanish and Lithuanian, and he exhibits no language confusion. Additionally, passive exposure to English from listening to his parents communicate appears to have contributed to the child's English language development to some extent, as his proficiency displayed in the tests appears to surpass that of monolingual Norwegian peers. Monolingual children in Norway do not commence English learning until the 1st grade. The competence goals posited by the Directorate of Education states that after the 2nd grade students should be able to ask and answer simple questions, follow instructions, and use certain expressions of politeness (Utdanningsdirektoratet, 2024). Considering the boy's age compared to his ability to comprehend and to some extent answer questions in English, he exceeds the English competence goals of most monolingual Norwegian six-year-old children, demonstrating how passive English input has resulted in some language acquisition. However, his knowledge is limited compared to the other participating children, emphasising the necessity of direct language input. As for the other six- and seven-year-old participants, they all exceed the competence goals for second graders in Norway, demonstrating how the parents' various use of English has had an effect. Similarly, the children in Families 5 and 7, where the parents are transparent of their shortcomings to maintain English or Norwegian (the minority language) at home, exhibit moderate or lacking proficiency in their respective languages, furthering underscoring the influence of consistent adherence to strategies on language outcomes.

H6, positing that OPOL will be the most efficient strategy, finds only limited support in the data. While the children adhering to OPOL demonstrate high proficiency levels in both parents' languages, a limited number of the participating families in the study adhere to this strategy. Families aligned with MLP, without clear adherence to either OPOL or the home language strategy, still produce children with high proficiency levels in Norwegian and English, as evidenced by Families 2 and 3. These children are assessed to have "high" lexical and grammatical knowledge in both languages and demonstrate "low" to "none" on mixing in Table 7. Moreover, children from families following the home language strategies (Families 4 and 6) also exhibit high proficiency in both languages. Notably, children strictly adhering to either OPOL or the home

language strategy (including Family 7 and excluding Family 1), preferred conducting the interviews in English despite awareness of the interviewer's native Norwegian background.

The evidence presented in this study does not strongly favour one language strategy over another regarding efficacy and success rate in English-Norwegian bilingual acquisition. Parental language input significantly influences the children's language skills and emphasise the importance of consistent direct exposure to all languages spoken in the home for comprehensive language acquisition. Various everyday factors and fluctuations in motivation over time can influence the parents' efforts in maintaining language balance, potentially leading to the mentioned hybrid approach where all languages are used concurrently, or the minority language may diminish in favour of easier communication in the dominant community language. The structured nature of OPOL or the home language strategy may make them more manageable compared to the more fluid, mixed approach resembling Ruiz Martin's (2017) mixed language-policy, which could be more susceptible to being overshadowed by the majority language, as observed in Family 2, and particularly in Family 5.

Regarding English acquisition, no parents exhibited any concerns of the language not developing properly, as they assume the children will acquire it over time through schooling. As Juan-Garau & Perez-Vidal write in their study of Spanish-English bilingual children, establishing productive bilingualism as the main providers of input in the minority language can be a difficult task for parents (2001: 60), but may also serve as a catalyst for motivation. This may explain the greater success of Family 1 in adhering to a more traditional OPOL approach, as Lithuanian and Spanish are not languages their children will naturally acquire at school in Norway from an early age. Motivation may stem from the parents' awareness of being the primary or sole source of language input, and that their children's acquisition in their respective languages mostly relies on their efforts. Conversely, English-Norwegian bilingual families may lack such motivation, given children's extensive exposure to both languages in everyday life, school and media.

As language exposure to multilingual children often shifts after they begin kindergarten or school, with increased exposure to the majority language, OPOL might be more effective before this transition. Assuming both parents are equally present, OPOL ensures balanced input from both languages, potentially mitigating the risk of children rejecting the minority language to conform once exposed to the public

language in educational settings. However, this family language policy is an option restricted to a particular category of multilingual families, characterised by parents who possess different first languages but are proficient in each other's languages, or have an additional language in common.

Overall, neither OPOL nor the home language strategy is universally suitable for all multilingual families in Norway, including English-Norwegian bilingual families. Each family must consider their goals and abilities to maintain specific strategies and select the one best suited to their circumstances. For instance, OPOL may be well suited for families with parents proficient in different first languages, while the home language strategy may be preferable for families where the parents share the same minority first language. Alternatively, a more flexible, mixed strategy could benefit families with varied proficiency levels in the family languages, provided overall language balance is maintained. There are no implications in the dataset for the present study that suggests a superior success rate associated with one strategy over the other in the acquisition of multiple languages during childhood.

5 Conclusion

This chapter revisits the research questions and hypotheses and highlights the most central findings of my study. Also addressed in this chapter are the study's limitations along with suggestions for further research in the field of childhood multilingualism and family language policy.

5.1 Revisiting the research questions and hypotheses

Through the analysis of interviews with eight multilingual families, both with parents and children, alongside test data evaluating the children's proficiency in Norwegian and English, this study has provided insight into the dynamics of family language policies among multilingual families in Bergen. RQ1 sought to explore the language strategies employed by parents raising multilingual children in Bergen. The corresponding hypothesis suggested that most families would not strictly adhere to either the OPOL strategy or the home language (HL) strategy, but rather adopt a customised mix of strategies tailored to the families' circumstances. The findings revealed that most families attempted to adhere to one of the strategies (OPOL and HL). At the same time, a third conformed to a set of families where all languages within the household were used interchangeably by both parents to some extent, without rigid patterns or rules. This aligns with observations in bilingual families in Spain, where a survey indicated that a mixed approach of the two primary strategies ranked as the second most utilised method by parents, surpassed only by OPOL (Ruiz Martin, 2017: 127).

Furthermore, RQ2 aimed to investigate whether parents of multilingual children in Bergen had specific goals for their children's language acquisition. Through interviews the study discovered that several families did not have specific plans or goals, yet all parents expressed a desire for their children to achieve native-like proficiency in the family's languages, predominantly English and Norwegian. The participating parents shared a common aspiration for their children to communicate with non-Norwegian family members and highlighted the potential academic and professional advantages of English proficiency later in life. Many of the participating parents had ties to academia and were knowledgeable about the home language and OPOL strategy. Others chose an approach that felt most natural to their family's

circumstances without conducting extensive research on their chosen strategy or exploring alternatives.

Lastly, RQ3 focused on assessing the children's language proficiency in relation to their family's chosen language strategy, aiming to determine whether one strategy proved more efficient in multilingual acquisition. Through comparisons of various language tests administered to the children and the parents' reported strategies, the study concluded that no strategy demonstrated greater efficiency than the other, as the children predominantly exhibited high vocabulary and grammar skills in English, regardless of their family's chosen strategy. Still, consistent exposure to both languages emerged as the key to successful acquisition and active multilingualism, as the varying levels of consistency in adhering to the chosen strategy by parents were notably reflected in their children's proficiency. Children who received more consistent exposure to English tended to score higher in the language tests than those whose parents admitted to shortcomings in maintain consistent English exposure.

Overall, no universal recommendation favouring one strategy over the other can be made, as each family is unique and should select a strategy best suited to their individual needs and circumstances. Additionally, the children's language exposure will likely evolve over time, necessitating adjustments to accommodate their changing needs.

5.2 Limitations

Ideally, a larger participant pool encompassing a broader representation of the spectrum of language strategies could have enhanced the insight derived from this study.

However, due to the constraints of a limited research project such as the present one, compromises were necessary between ideal procedures and feasibility, with the project designed to be completed within a ten-month timeframe. Securing suitable participants proved challenging and time-consuming, resulting in a somewhat restricted participant pool. Moreover, some children were unable to fully complete all the administered tasks due to various reasons. Consequently, the data and findings of the study are not intended for generalisation beyond the specific cases studied. Still, the findings can serve as a foundation for identifying tendencies relevant for future research.

During the study's initial, time limited phases, the construction and selection of tests were made without an exhaustive exploration of all available options suitable for

such research. In hindsight, employing standardised testing tools such as Cross Linguistic Lexical Tasks (CLT) or Multilingual Assessment Instrument for Narratives (MAIN) may have been beneficial for assessing the children's language proficiency. CLT and MAIN are components of the Language Impairment Testing in Multilingual Settings (LITMUS) battery, designed to improve language assessment of minority language children (LITMUS in Action, 2024). CLTs are standardised picture-choice and picture-naming tasks aimed at assessing the comprehension and production of nouns and verbs via subtasks (Universytet Warszawski, 2024), and MAIN is an instrument for assessing narrative skills in simultaneous multilingual children (What is MAIN, 2024). However, acquiring access to LITMUS tools for this study would have been time-consuming, and these tools are primarily focused on comparing multilingual acquisition to monolingual acquisition, which was not within this project's scope. Nonetheless, some aspects of the tests developed for this study align with those in the LITMUS battery. For instance, the parental interviews conducted in this study parallel the parental questionnaire included in LITMUS, and Test 3 resembles both CLT and MAIN, as it requires the children to describe pictures and narratives in their own words. Additionally, word-spotting tests like Test 2 are also proven to be a frequent testing tool within psycholinguistics. In retrospect, Test 1 could have been replaced with another narrating-test, as it posed challenges for independent analysis and did not provide significant additional data beyond what was obtained from Test 2, Test 3 and the children's interviews.

Furthermore, constricting the age group criteria to encompass lower primary school, such as second to fourth grade, could have provided a more homogenous group for comparison, particularly considering that all children would have commenced English education at school by this stage. In comparative studies of this nature, it would be preferable for all participants to exclusively have English and Norwegian as the languages spoken within the household. However, given the mentioned challenges in participant recruitment, even assembling such a specific age group would have been unfeasible with the constraints of this project's size and timeframe. I was pleased to work with the families who generously volunteered to participate in the study.

5.3 Suggestions for future research

This study has revealed several interesting tendencies that can be further explored in future research projects. While this project remains relatively small and constrained, it has contributed to a deeper understanding of the dynamics within multilingual families in Norway. Future research could delve deeper into the diverse array of mixed approaches parents utilise and their potential advantages, as this study suggests that mixed approaches rival or even surpass the standard OPOL and home language strategies in popularity. Such a project could encompass multilingual families of varying linguistic backgrounds, thereby expanding the participant pool beyond the confines of this thesis, where the obligatory inclusion of English as a household language may have imposed limitations. Conversely, a focused examination of mixed strategies could take the form of a case study involving a select number of families, enabling observations over time to provide a more nuanced depiction of the family's language dynamics, strategy mixing levels, and children's language proficiency.

Moreover, future research could also focus on comparing young multilingual children to older multilingual individuals who were raised using similar strategies, to investigate how the strategies maintain multilingual proficiency over time and into adulthood. Although this approach was contemplated for the present thesis at some point, it was set aside due to time constraints and the project's overall scope. Nonetheless, such investigations could allow for comprehensive comparison of the long-term advantages and disadvantages with both OPOL, the home language strategy and mixed strategies.

Additionally, comparative studies examining siblings raised under the same language strategy could offer valuable insight into the influence of language strategies compared to individual factors, like the work of De Houwer (2007). Do siblings from multilingual families in Norway undergo identical language acquisition processes, and if not, what factors contribute to their differences? As seen in some families in the present study, some variation in language preference was observed among participating and non-participating siblings, indicating a promising starting point for further research. Furthermore, several participating parents expressed interest in studies exploring YouTube and self-regulated language learning, both in multilingual and monolingual family contexts. Various studies have explored YouTube's role in language learning, such as the works of Wang & Chen (2020) on Taiwanese university student's self-

regulated learning outside of the classroom and Alwehaibi's (2015) study on YouTube as a learning tool in the EFL college classroom in Saudi Arabia. However, to my knowledge, no studies have been conducted in Bergen, focusing on YouTube and language learning in young children, particularly outside of the classroom. Hence, this presents an intriguing idea for future research projects, both larger-scale projects and potential Master's theses.

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Appendices

Appendix 1 Interview guide parents

Interview guide – Parents / caretakers

The parent's language(s)

- Do both parents have the same first language?
 - If different, which parent speaks which language?
 - If different, what language do the parents use between them?
- If parents speak more than one language each, when did they acquire their second/third language?
- What languages are spoken in the household?
- Which language is used by parent (a) and which is used by parent (b)?

The child's language acquisition process

- How old are the child/children in the household?
- Leading up to the child's first words, which languages were they exposed to? (including parents, siblings, extended family)
- When did the child start to speak?
- Which language was dominant first (if any)?
- Has the dominant language shifted over time?
- Does the child seem to master the languages differently?
- What languages is the child exposed to?
 - Which arenas outside of the home is the child exposed to other languages?
- Does the child seem to prefer different languages for different situations?

The language dynamics within the home

- Which languages does the child use within the home, with each parent?
- If there are two or more children in the family; what language do the children use amongst themselves?
 - Do the languages alternate?
 - Which appears dominant?
- What language does the child use when meeting a new person?
- Are there any topics that impact the language choice of you or your child?
- Have noticed situations where the child uses their different languages for a specific purpose?

The parent's attitude towards the child's language

- Has there been any conscious decisions made from the parents' side on how the different languages should be used in the home?
- Did you plan any strategies for your child's language exposure and development before your child was born?
 - What expectations did you/do you have regarding your child's language repertoire?
- How important is it for you that your child speaks your native language?
 - Why/ why not?
- How has the process of raising a multilingual child been?
 - What has been challenging?
 - Does the reality of the situation meet your initial expectations?
- How do you plan on maintaining your child's bi- / multilingualism?

Lastly...

- Is there anything you would like to add regarding the different topics we have discussed in this interview?

Appendix 2 Interview guide children

Interview guide – Children

*questions may vary / be asked in a more simple manner depending on the age of the child and their language skills. The interview will be conducted in either English or Norwegian, depending on the child's choice.

Their own language experience – inside the home

- What languages do you speak?
- Which language do you speak with parent (a) and parent (b)
- Which language do you speak with your siblings when your parents are around?
 - Which language do you speak with your siblings when your parents are not around?
- Do you feel like you have to consciously switch languages, or does it happen naturally?
- Do you think one language is easier/harder than the other(s)?
 - If so, why?
- Are there any specific situations where you would only use Norwegian / English / language x?

Their own language experience – outside of the home

- Do you go to school / kindergarten?
- What language do you use at school/ kindergarten when talking to your teachers and other adults?
- What language do you use with your friends at school/kindergarten?
- What language do you use with your friends outside of school?
- What different languages do your friends speak?
- Do you mix your languages when speaking to your friends, or do you speak strictly one language at a time?
- Do your friends mix their languages, or do they speak one language at a time?

General thoughts on being multilingual

- Do you think there comes any advantages with being able to speak multiple languages?
- Do you think there are some disadvantages to being multilingual?
- In your own opinion, have your parents impacted how you use your languages?

Appendix 3 Test 1

Test 1a: Norwegian -> English

1. Adrian er rask og sterk.

2. Han løper og klatrer opp i et tre.

3. Samuel kunne ikke klatre i trær.

4. Bjørnen er veldig nære

5. Mens bjørnen lukter på ham, holder Samuel pusten.

6. Han ligger helt stille.

7. Adrian kikker bort på vennen sin.

Test 1b: English -> Norwegian

1. Suno and Rina run out to play.

2. The kitten is looking at a big rat.

3. Rina saw a tiny ant.

4. A very big eagle comes down to the wall.

5. They clap their little hands.

6. The ant picked it up.

7. The three kids play with her.

Appendix 4 Test 2

Test 2a: Underline the English words

1. Han var certain på at han kunne steal noe.
2. One day la tyven merke til det.
3. Tyven pønsket ut how he could stjele dressen.
4. Han reiste seg from stolen and tried å komme seg away.
5. He kom aldri tilbake

Test 2b: Underline the Norwegian words

1. We are a familie of fire.
2. It is min duty to passe på the house.
3. When Chinku is at school hjelper jeg mamma.
4. I do not scare vekk katter.
5. Jeg will learn something nytt.

Appendix 5 Test 3

Test 3: describe the pictures

Picture 1



Picture 2



Picture 3



Picture 4



Picture 5



Appendix 6 Transcriptions of Test 3 Results

Test 3 transcriptions

Abbreviations

E: Eline, student and researcher, **B:** Boy, **G:** Girl, **M:** Mother

– indicates a quick change

... indicates hesitation

Family 1: Boy, 6 y/o

Picture 1: Norwegian

B: En ku, jeg ser et hus, og jeg ser en jente, ser en bøtte, ser en stol, og eg ser gress, og et lite eple eller tomat, og himmel og by og tre og en busk og bakke

Picture 2: English

B: Four frog

E: Wow, you counted that super-fast! And what are they doing?

B: Jumping.

M: Jumping in the water.

B: Jumping in water.

M: What is this one doing? What did you do yesterday?

B: Swimming

E: They're swimming, yes.

Picture 3: English

E: Okey, let's do one more in English, what do you see in this picture?

B: Aah. I see eeg... eggs. Egg..

E: Eggs? Yes, there are many eggs.

B: Aaand, and more egg.

E: She has a lot of eggs, yes.

M: more egg *slight laugh*. And what is this?

B: aah.... uhm...

M: We have boys and we have also? Boys and... you remember? No.

Picture 4: Norwegian

E: Den er grei, da kan vi ta en på norsk. Hva har skjedd på det bildet her?

B: Jente løpt i et tre.

E: Ja, hvem som ser på henne?

B: En hund, mmm...

E: Ser du hvilken farge hun har på klærne sine da?

B: Rosa, lilla, hvit, *playing with his Lego*

M: Og hva er det?

B: Et hus, trære, to hus, masse trær, og busk og gulv og trær.

E: Veldig bra.

Picture 5: English

E: And then there's just one more picture, this is the last picture, and maybe you can tell me in English what is happening in this picture?

B: mmm *thinking noises* ... *silence*

E: Eller så kan du fortelle det på norsk, om det er lettere.

B: Okei, det e en jagar som skyter en ørn.

M: *In spanish, motivating*

E: Det her er aller siste bilde, er det noe mer du ser på bildet?

B: Jeg ser masse buskar og gulv og trær og himmel.

M: Hva er det?

B: En type ørn

M: En elg? Also, I'm not an expert.

E: Er det rudolf, julenissen sitt reinsdyr?

B: Det e et reinsdyr.

Family 2: Boy, 9 y/o

Picture 1: Norwegian

E: Da ser vi på det første bildet, kan du fortelle meg hva du ser? Du kan gjerne, istedenfor å si «bil, båt», så kan du gjerne si «Jeg ser...», en setning liksom.

B: For eksempel, jeg ser en ku?

E: Ja! Eller bare snakk vanlig, sånn du vil snakke.

B: Okei så, jeg ser en dame som melker kuen, jeg ser en rød ku, jeg ser... vet ikke hva det heter, vet ikke helt hvordan- høyballer?

Picture 2: English

E: And in this one, you can tell me in English, what you're seeing here.

B: I see lots of trees, and grass, and lots of hopping frogs.

E: Do you see how many frogs there are?

B: Four.

Picture 3: English

E: And then, another one in English, what's happening here?

B: The girl is taking all the chickens' eggs, the chicken- the chickens are looking happy

E: Yeah? Why do you think so?

B: I don't know, looking happy *inaudible* look sad.

E: And the girl?

B: Happy.

Picture 4: Norwegian

E: Så, kan vi ta en på norsk. Hva skjer her?

B: En dame som krasjer i et tre, en katt som ser veldig for- forvirret ut. Også ser jeg to hus og masse gress og *inaudible*.

Picture 5: English

E: And then the last picture, in English

B: Ehm.. I see a man holding a bow and an arrow and trying to shoot the little deer.

E: Anything else you want to add to that picture?

B: Lots of flowers grass and trees.

Family 2: Boy, 7 y/o

Picture 1: Norwegian

E: Så da kan jo du si hva du ser, på det bildet hva du ser der

B: Ku, en ku. Et tre. Et hus. Høy. Menneske. Bøtte. Havet. Og et blått tre.

Picture 2: English

E: We can do one in English, what's happening here?

B: The frogs are jumping in the water.

E: How many frogs are there?

B: Four.

E: Do they look- how do they look? On their faces.

B: Crazy.

Picture 3: English

E: Ok, one more in English, what's happening here?

B: The kid is getting all the eggs.

E: And, what are these?

B: Chickens.

E: Do you see anything more in this picture or should we go to the next?

B: Next.

Picture 4: Norwegian

E: Vi kan ta en til på norsk her da, hva har skjedd der?

B: Et menneske krasjer i et tre.

E: Ser du noen andre ting på bildet da?

B: Et hus, gress, et til hus, og noen tre. Og busker.

Picture 5: English

E: Ok, last one, and in English, what do you see here?

B: A deer, *inaudible*

E: What's he doing?

B: Trying to shoot the deer.

Family 3: Girl, 6 y/o

Picture 1: Norwegian

E: Da kan du først begynne å si, på norsk, hva du ser på det bildet her?

G: Jeg kan se en ku, også kan jeg se en jente, også kan jeg se trær, der borte, også kan jeg se gresset, og så kan jeg se busker. Også kan jeg se himmelen.

E: Hva gjør jenten?

G: Hun... jeg kan se en bøtte.

Picture 2: English

E: And then, we can do one in English, and you can tell me, what's happening here?

G: I can see a frog, I can see grass, and I can see some bushes, and I can see the water.

Picture 3: English

E: And then one more in English, what's happening here?

G: I can see... Hva heter det.. I can see a girl, I can see eggs, I can see trees, I can see the grass, and I can see chickens.

E: Anything else?

G: Ingenting.

Picture 4: Norwegian

E: Også kan vi ta en på norsk, hva har skjedd her?

G: I can- jeg kan se trær, og jeg kan se en jente som dunket seg i tre- i en tre. Også kan jeg se en hund, jeg kan se et hus, jeg kan se gresset, jeg kan se blomster, og jeg kan se flere trær, jeg kan se noen busker.

Picture 5: English

E: And then last one, in English, what do you see here?

G: Jeg kan se, nei, I can see a reindeer, I can see bushes, I can see flowers, I can see trees, and I can see a man, and I can see a arrow.

Family 4: Boy, 9 y/o

Picture 1: Norwegian

E: Kan du fortelle meg på norsk hva du ser på det bildet her?

B: En jente som melker en ku, som er rosa, og jenten har på en shorts, og det ser ut som det er en litt natursk område, og hun spiser mat og har en bjelle på seg, og jenten har på seg blåe... Hun har blåe sko på og sitter på en sånn melke... stol.

Picture 2: English

E: And then in English, tell me, what's happening here?

B: A bunch of frogs jumping to the water, in the pond, and... they're green.

E: Do they look happy, or scared, or...?

B: Happy, or uh... I don't know, most of them happy, those two look happy.

Picture 3: English

E: And then we can continue in English, what do you see here?

B: I see the same girl picking eggs, and the chickens, there are two chickens that are yellow and one chicken that's red. And the girl has orange hair, and has blue shoes.

Picture 4: Norwegian

E: Bra, da tar vi en til på norsk. Hva skjer her?

B: Denne personen har krasjet- løpt i et tre. Og ser ikke glad ut, en katt som ser på. Jenten har oransje hår igjen, rosa skjø- kjole, og rosa sko. Og en hytte, eller to faktisk.

Picture 5: English

E: Okey, last picture, in English please, what's happening here?

B: Uhm, hunter is looking at a deer, trying to- aiming at it with its bow, and the deer is looking back in a frightened way. And the hunter is hiding in the bush, or I don't know if he's hiding but he look like hiding, but he's standing in the bush, with green clothes and a green hat, and a moustache.

Family 5: Boy, 7 y/o

Picture 1: Norwegian

E: Så, på det første bildet her, på norsk, kan du fortelle meg hva du ser?

B: En bjelle.

E: Bare si alt du ser på bildet!

B: Hus, tree [English pronunciation]

E: Du kan si alt på norsk.

B: Høyt tre, busker, horn, jente, bøtte, skyene, og høy.

Picture 2: English

E: Then in English, maybe you can tell me what you can see here?

B: Frog, water, plants, land, tree.

E: What are the frogs doing?

B: Hop!

Picture 3: English

E: So, another one in English, what do you see here in picture 3?

B: Eggs, chickens, girl, trees, and... sky.

Picture 4: Norwegian

E: På norsk, kan du fortelle meg hva som har skjedd her?

B: Katt, hus, trær, krasj!

E: Hvem krasjet? *laughter*

B: *Laughing* Jente

E: Hvordan klarte hun det? Hva har jenten på seg da?

B: Sko, uhm, himmel, sky.

Picture 5: English

E: The last one, and then you can tell me in English, what's happening here?

B: Reindeer, bushes, plants, a man with a bu, trees and sky, and flowers, and a hat.

Shooting, the man.

Family 6: Boy, 6 y/o

Picture 1: Norwegian

E: Okei, så her på det første bildet kan du si, på norsk, hva ser du her?

B: Okse, ku!

E: Bare si alt du ser!

B: Ku, og... menneske, og en krakk, og en hytte, og en bøtte, og.. trær og gress og tomat? Og himmelen.

Picture 2: English

E: And then, in English, you can tell me, what's happening here?

B: Frog, frog... water, grass, and...

E: What are they doing?

B: Hopping!

Picture 3: English

E: One more in English, what do you see here?

B: Chickens, eggs, and a human, grass and the sky, and... a grey chicken and a yellow chicken and a red chicken.

Picture 4: Norwegian

E: Så kan vi ta en til på norsk, hva har skjedd her?

B: Mmm... det er en hund, og hus, og noen som krasjet i et tre, og en trehytte. Og himmelen, og trær, og gress, og uhm... Blad, og en skål.

Picture 5: English

E: And then the last one, in English please, what's happening here?

B: Uhm, someone shooting a deer with a *sound*.

E: What's that called?

B: Arrow!

E: Do you see anything else?

B: Mmm, bushes, and a reindeer, and trees, and the sky.

Family 7: Boy, 8 y/o

Picture 1: Norwegian

E: So, here are some pictures, and for the first one så vil jeg at du på norsk forteller meg hva du ser på det bildet.

B: Jeg ser en jente, og jeg ser en, en... Jeg ser, en jente og... jeg ser... vann og jeg ser... ehm, en cow. Can we go to picture two now?

E: Yes we can!

Picture 2: English

E: In this one you can tell me in English, what's happening here?

B: A bunch of frogs and grass and dirt and water and like a ocean, lake, I don't know, and trees.

E: Yeah, what are the frogs doing?

B: Jumping, and he looks scared. Next picture.

Picture 3: English

E: Okey, and this one in English too, what's happening here?

B: I see, I see a lot of eggs, and three chickens, and the same girl in the picture with the cow. Next picture.

Picture 4: Norwegian

E: Og her kan du fortelle på norsk, hva skjer her?

B: Uhm, en jente som går inn en tre, og en hutt, og en katt.

Picture 5: English

E: And then the last one, you can tell me in English, what do you see here?

B: A hunter, and a deer.

E: Anything else? You can just name things.

B: Flowers, bushes, ehm, he's got a red nose, he's got a moustache and he's wearing green.

Family 7: Boy, 6 y/o

Picture 1: Norwegian

E: Ok, so for this first picture så vil jeg at du skal fortelle på norsk, hva du ser på bildet her.

B: En ku.

E: Bare si alt du ser!

B: En ku, en jente, en... What's, I can it, en tre, en hus.

Picture 2: English

E: And here you can tell me in English, what's happening here?

B: Four frogs, some trees, water, grass, I see grass, uhm...

E: What are they doing?

B: Diving.

Picture 3: English

E: And this one in English too, what do you see here?

B: Eight eggs, tree chickens, one girl, uhm, and trees.

Picture 4: Norwegian

E: Og her kan du fortelle på norsk, hva har skjedd her?

B: En jente går på en trær, en katt, en hus, tu hus, uhm, tre, trær, uhm... stein.

Picture 5: English

E: The last one, in English please, what do you see here?

B: A archer, trying to shot the deer. And the bushes, with- with trees, the guy has a moustache, uhm, yeah...

Family 8: Girl, 8 y/o

Picture 1: Norwegian

E: Da kan du fortelle meg, hva ser du på det bildet?

G: Jeg ser en rød ku, og mamma. Det ligner på mamma, hun har *inaudible* masse mamma. Så jeg ser en rød ko- ku, så ser jeg mamma.

E: Ser du noe mer da?

G: Jeg ser gress, jeg ser et hus, jeg ser en, trær, så ser jeg en blomst, så ser jeg... jeg vet ikke hva det heter på norsk...

Picture 2: English

E: Next one, in English, what do you see?

G: I see frogs, and I see wat- water *corrects her pronunciation from /t/ to a soft /d/ in "water"* , and I see like what's under the grass, and I see grass, and clouds.

Picture 3: English

E: Okey, next one.

G: I see eggs, and I see chickens, and I see mom, and grass and bushes.

Picture 4: Norwegian

E: Den er på norsk, hva har skjedd her?

G: Jeg ser mamma som dunker seg i hodet på en, på et tre. Så ser jeg en hund, jeg ser et hus, to hus, så ser jeg noen blomster og trær.

Picture 5: English

E: And then the last one in English, what do you see here?

G: I see a hunter, I see Rudolf, and then I see a few flowers, and bushes, and I see a very mean hunter trying to hunt down Rudolf.

Appendix 7 Information letter to participants

Do you want to participate in my research project?

“How to raise multilingual children: a study on parental language strategies and childhood multilingualism in Norway”

The purpose of my project is to

- investigate the different parental strategies in raising bilingual/multilingual children.
- gain insight into how children perceive their own bilingualism/multilingualism
- test whether or not acquisition in children is impacted by the simultaneous acquisition of two or more languages.
- investigate choices and attitudes regarding language parents/caretakers in multilingual homes make, and how these choices and attitudes can influence the child’s acquisition process

Why I approach you to participate

- You live in Norway with children between 5 – 10 years of age who grow up in a bilingual or multilingual household.

Who is responsible for the research project?

The University of Bergen (UiB) is responsible for the personal information processed in the project, and the Faculty of Humanities-/-Institute for Foreign Languages at UiB is responsible for handling and processing the data collected.

Your participation in my research project

- is completely voluntary.
- can be withdrawn at any point in time (this entails the deletion of all data).

What your participation involves

- You will be invited for a personal interview, which will be audio-recorded (both parents and children)
- Your child/children will be asked to complete practical tests.

- The gathering of data will take place in one single session per family, with a time frame of about 1,5 hours.
- The personal information that will be collected is age, gender and languages spoken in the household/family.
- The data will be stored electronically.
- You will have access to the tests and interview guides intended for you and your child/children beforehand.

Briefly on privacy

I will use your data only for the purposes specified in this information letter. All personal data is processed confidentially and in accordance with the privacy regulations. You can read more about privacy under*.

With best regards

Eline Skare Vorren

MA-Student

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Dagmar Haumann

Professor and supervisor

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Expanding on privacy – how we store and use your information

- The University of Bergen, and student Eline Skare Vorren will have access to your personal information.
- To prevent anyone unauthorized to get access to your personal information, names and other contact information will be replaced by codes stored separately from the original data.
- Participants will not be recognizable in any possible publications, and the information which will be published is age, gender and language spoken.

What gives us the rights to process your personal information?

We will only use your personal data for the purpose(s) specified here and we will process your personal data in accordance with data protection legislation (the GDPR). On behalf of the University of Bergen, the privacy services at Sikt (the Knowledge Sector's service provider) have assessed that the processing of personal data in this project is in accordance with the privacy regulations.

Your rights

You have the right to access your data, rectification, erasure, restriction of processing and data portability (a copy of your data). As long as you can be identified in the data, you have the right to protest, ask for insight, and for corrections and deletion of your information being processed. You will then hear from us within a month. We will give you a good reason if we believe that you cannot be identified, or if we believe that your rights cannot be exercised. You also have the right to complain to Datatilsynet on how we process your information.

What happens to your personal information when the project is done?

According to plan, the project will end in May 2024.

Your personal information will then be deleted from all platforms.

Questions

If you have any questions or would like to exercise your rights, please make contact with:

- Janecke Helene Veim, data protection officer on University of Bergen
personvernombud@uib.no

If you have any questions regarding Sikt's evaluation of the project, you can make contact through email: personverntjenester@sikt.no, or through phone: 73 98 40 40.

Declaration of consent

I have received and understood information about project "***How to raise multilingual children: a study on parental language strategies and childhood multilingualism in Norway***", and have had the opportunity to ask questions. I consent to:

- participate in interviews
- let my child(ren) participate in language tests
- let my child(ren) participate in interviews

I consent to my information being processed until the end of this project

.....

(Signed by project participant, date)

Appendix 8 Project information to schools and kindergartens

Hei! Jeg sender denne mailen til ulike skoler i Bergensområde i håp om å samle informanter til min masteroppgave. Jeg håper å kunne nå potensielle familier gjennom Bergens barneskoler, og hadde satt stor pris på om denne meldingen kunne blitt delt videre til deres ansatte og foresatte ved skolen. Gjerne ta kontakt om det skulle være noen spørsmål!

Hei! Jeg heter Eline Vorren, og studerer ved Universitetet i Bergen. Jeg skal i år skrive masteroppgave i Engelsk lingvistikk om «Cross linguistic influence and language acquisition in multilingual children in the Norwegian setting». Formålet er å forske på språktilegningsprosessen hos barn/unge som vokser opp i flerspråklige hjem. Jeg leter derfor etter flerspråklige familier med barn i alderen 5–10 år, som vokser opp med og til en viss grad mestrer flere språk, hvor Engelsk må være ett av disse. Prosjektet mitt innebærer datainnhenting gjennom intervjuer og tester i løpet av September/Oktober 2023. Hvis du eller noen du kjenner passer denne beskrivelsen, og kunne tenke seg å delta i et slikt prosjekt, så gjerne ta kontakt med meg!

//

Hello! My name is Eline Vorren, and I am a student at the University of Bergen. I am currently working on my Master's Thesis in English linguistics on «Cross linguistic influence and language acquisition in multilingual children in the Norwegian setting». The aim of my project is to study language acquisition in children growing up in multilingual/bilingual homes. Therefore, I am on the lookout for multilingual families with children between 5 –10 years of age, who are growing up and are somewhat fluent in two or more languages, with English being one of these. My project entails some data collection through interviews and tests in September/October 2023. If you or anyone you know are eligible and interested to participate in a study like this, please make contact!

Du kan nå meg gjennom // You can reach me at;

Tlf: +47 481 36 069

Mail: evo010@uib.no

Facebook: Eline Skare Vorren

Mvh

Eline Skare Vorren