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Assessing how Parent's Language Strategies and The Child's Use of Language
Affects Bilingual Children's Language Development

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Résumé

Introduction : La recherche sur les enfants bilingues démontre que ces enfants risquent de perdre leurs compétences linguistiques dans une langue minoritaire après avoir commencé l'école. Cette recherche est importante à prendre en compte étant donné que le bilinguisme a plusieurs avantages, notamment des opportunités de carrière futures et la communication avec les membres de la famille nucléaire et élargie qui ne parlent pas l'autre langue. De plus, les compétences linguistiques peuvent jouer un rôle important dans l'intégration de la culture dans l'identité de l'individu. De plus, les compétences linguistiques acquises dans une langue peuvent être transférées ou plus facilement apprises dans l'autre. Divers facteurs peuvent influencer sur le développement et le maintien des compétences linguistiques dans la langue de la minorité. Le domaine de la politique de langage familiale (FLP) explore l'influence de ces facteurs sur l'acquisition de la langue dans le contexte des politiques ou stratégies linguistiques de la famille et vice-versa.

Méthodes : Adoptant une approche FLP, ce projet de mémoire explore les influences des stratégies langagières des parents et comment l'enfant utilise leurs langues sur les mesures des compétences langagières. Ces compétences ont été mesurées à l'aide de l'échelle de vocabulaire en images Peabody (ÉVIP - vocabulaire réceptif) et d'une tâche de narration générative (compétences de narration notées à l'aide du Narrative Scoring Scheme - NSS) dans la langue minoritaire de l'enfant [c'est-à-dire l'anglais, l'espagnol, l'arabe, l'italien ou le mandarin]. Les résultats ont été analysés à l'aide d'une approche de méthodes mixtes où les résultats qualitatifs (évalués par une analyse thématique) ont été utilisés pour mieux comprendre les résultats quantitatifs.

Résultats : Les scores ÉVIP ont été convertis en un ratio du score brut divisé par le nombre total d'items à comparer entre les langues. Les scores du PPVT ont été prédits à partir du refus de l'enfant d'utiliser la langue minoritaire, les scores diminuent de 0,112. D'autre part, les scores NSS ont été prédits par l'utilisation de livres dans la langue minoritaire testée, les scores augmentent de 6,508. Aucune tendance

particulière n'a été observée lors de la comparaison des résultats des meilleurs et des plus faibles scores sur les deux tâches linguistiques par rapport à l'analyse thématique des idéologies linguistiques des parents. Cependant, certaines différences dans les réponses ont été observées.

Conclusion : Pour les parents qui souhaitent élever leurs enfants pour qu'ils soient bilingues actifs, ces résultats fournissent des informations préliminaires sur la manière dont leurs approches de l'utilisation de la langue à la maison et la manière dont leurs enfants utilisent leurs langues affectent les compétences linguistiques spécifiques dans la langue minoritaire.

Mots-clés : bilinguisme, langue minoritaire, politique langagier familial, méthodes mixte, vocabulaire réceptif, compétences de narration.

Abstract

Background: Research on bilingual children has found that these children are at risk of losing language skills in the minority language after starting school. This finding is important to consider given that bilingualism has several benefits, including possible future career opportunities and communication with nuclear and extended family members that may not speak the other language. Additionally, language skills can play an important role in integrating the culture into the individual's identity. Additionally, language skills learned in one language may be transferred or more easily learned in the other. Various factors can influence the development and maintenance of language skills in the minority language. The field of Family Language Policy (FLP) explores the influence of these factors on language acquisition in the context of the family's language policies or strategies and vice versa.

Methods: Taking an FLP approach, the present master's thesis explores the influences of parents' language strategies and the child's use of their languages on measures of language skills through Peabody Picture Vocabulary Test (receptive vocabulary) and a generative narration task (narration skills scored using the Narrative Scoring Scheme) in the child's minority language [i.e., English, Spanish, Arabic, Italian, or Mandarin]. The results were analyzed using a mixed-methods approach where qualitative findings (assessed through thematic analysis) were used to understand the quantitative results better.

Results: The PPVT scores were converted to a ratio of the raw score divided by the total number of items to compare between languages. The PPVT scores were predicted by whether the child refused to use the minority language, with scores decreasing by 0.112. On the other hand, NSS scores were predicted by the use of books in the tested minority language, with scores increasing by 6.508. When comparing top scorers and low scorers on both language tasks, no specific trends were observed in terms of the identified themes from the thematic analysis of parents' language ideologies. However, some differences in the responses were observed.

Conclusion: For parents hoping to raise their children to be active bilinguals, these results provide some preliminary insights on how their approaches to language use in the home and how their child uses their languages affect specific language skills in the minority language.

Keywords: bilingualism, minority language, family language policy, mixed-methods, receptive vocabulary, narration skills.

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List of acronyms and abbreviations

Acronyms

GM: Greater Montreal

L1: First language

AoA: Age of Acquisition

AoE: Age of first bilingual language exposure

SES: Socioeconomic Status

OPOL: One Parent, One Language

FLP: Family Language Policy

PPVT: Peabody Picture Vocabulary Test

NSS: Narration Scoring Scheme

CGS-M: Canadian Graduate Scholarship – Master's program

ALDeQ: Alberta Language and Development Questionnaire

C-QUEB: Canadian Questionnaire on Use and Exposure in Bilinguals

MMR: Mixed-methods research

SD: Standard Deviation

Abbreviations

OMin: Official Minority

Min: non-official Minority

*I dedicate this thesis to my late mother,
who always encouraged me to pursue my interests.*

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Chapter 1 – Introduction

In Canada, both English and French are considered the languages of everyday communication, and both hold the official language status at the federal level. English is the majority language in most provinces, and French is the minority language, but the opposite is true in Quebec. Looking more specifically within Greater Montreal (GM), both English and French can be used interchangeably in most of GM without trouble. During the 2016 Canadian census, about 55% of the population in Montreal was bilingual in French and English (Statistics Canada, 2016). Prior to the introduction of Bill 101 in 1977, English skills were needed for social mobility and, therefore, had considerable importance in the city for a long time.

Additionally, Kircher (2014) has found that francophone, anglophone, and allophone Montrealers attribute high status to English, even 30 years after the Bill has come into effect. This large anglophone community, along with the language status, helps promote a more positive attitude towards English and helps create an environment with fewer pressures to reduce the presence of the language. While this is not always the case, English has been more supported in Montreal than anywhere else in the province. However, the sociolinguistic environment is not the same for other minority languages, which may not always be valued. This difference in attitudes can create an environment with little support for the minority language and much pressure to give up said language. Montreal is Canada's 2nd largest city (Statistics Canada, 2017a) and is culturally diverse. During the 2016 census, more Canadians reported having a first language other than the official Canadian languages or indigenous languages than in previous years, increasing by 13.3% (Statistics Canada, 2017b). These individuals are referred to as "allophones" within Canada. There has also been an increase of 0.5% in the number of individuals with more than one first language (Statistics Canada, 2017b). Many are individuals with one of the official Canadian languages (though predominantly English outside of Quebec) and another language as their first language (Statistics Canada, 2017b).

The linguistic environments play an essential role for bilingual families and their language choices. Based on the 2016 Canadian census, fewer allophone Canadians

solely speak their first language (L1) within the household compared to Canadians whose first language is one of the official Canadian languages. While about 28% of allophone individuals only spoke their first language, 83.1% of francophone individuals spoke only French, and 94.3% of anglophone individuals only spoke English in the home (Statistics Canada, 2017b). While these statistics show the importance of the official languages in Canadian households, they also demonstrate the strength of the influences they can have on day-to-day interactions of allophone Canadians and the maintenance of their minority first language. While the census data suggests that 82.6% of allophone Canadians still use their non-official language in the home, the remaining 17.4% do not use their first language at all at home. To put these percentages into perspective, this is about three times the percentage of francophone Canadians (3.5%) that do not use French at home and about 35 times the percentage of anglophone Canadians that do not use English at home (0.5%) (Statistics Canada, 2017b). The processes that may impact the status of the minority first language in the home are multiple and have been studied in various fields. This first section will approach these processes from the point of view of bilingual development. Therefore, Montreal is a fascinating city to investigate bilingualism, given the government support for French and English and the contrast with other languages. Throughout this first chapter of my thesis, I will discuss the factors contributing to bilingual language development, why families may want to transmit the minority language, and family language policies.

Bilingual Research

As mentioned at the beginning of this chapter, various fields have studied bilingualism. The diversity of approaches to assess bilingualism lends itself to the complexity of language itself and the interactions that it permits. For example, psycholinguistics, sociolinguistics, cultural and linguistic anthropology, linguistics, and language education have studied bilingualism. However, these various fields often focus on different aspects of bilingualism. More recently, bilingual researchers have been taking a multidisciplinary approach to understanding bilingualism. This

change in methodology can relate to the complexity of how languages may interact with each other on more specific processes (e.g., linguistic – which is not discussed in this thesis), individual (psychology), and societal (sociology) levels. This thesis uses an interdisciplinary approach to answer research questions but mainly uses psycholinguistic and sociolinguistic perspectives.

Bilingualism has been studied in different fields. These fields often focus on different aspects or features of bilingualism. Further, they may also employ different operationalizations of the terms commonly used across domains. Seeing as the present thesis will be taking an interdisciplinary approach to answer the research questions, I have included below a table with terms and their meanings within the context of this master’s thesis.

Table 1 – Important terms

Bilingualism	Grosjean (2012) describes a bilingual as an individual that “uses two or more languages (or dialects) in their everyday life. This definition leaves room for differing proficiency levels and each language's role in the bilingual’s life.
Active Bilingualism	Can be described as an individual capable of producing spontaneous ‘original’ responses in a second language (Nakamura, 2018).
Receptive Bilingualism	May be used to describe an individual that can understand spoken and/or written forms of another language but may not speak or write it (Nakamura, 2018).
Additive Bilingualism	An additive bilingual context can be described as an environment with support for both languages and little pressure to abandon one of the languages (MacLeod et al., 2013).

Subtractive Bilingualism	A subtractive bilingual context can be described as an environment where there is little support for one of the languages, and there are pressures to abandon the unsupported language (MacLeod et al., 2013).
Minority Language	Minority language can be defined as a language whose speakers hold less power than speakers of the dominant language and generally have fewer speakers (Eisenclas & Schalley, 2020).
Home Language	Home language refers to the language(s) used in the home specifically, while the language(s) may also be used in other contexts. Specifically, this term refers to present use in the home and is appropriate in various contexts as family dynamics may change over time (Eisenclas & Schalley, 2020).
Heritage Language	First introduced in the United States of America and Canada, heritage languages are often associated with the past rather than the present. The broad definition of this term by Polinsky and Kagan (2007) suggests that a heritage language is one where the individual has strong cultural and linguistic heritage ties to the language that was transmitted through family interactions.

Bilingualism at the societal level

Societal bilingualism refers to the presence of more than one language within a broader community. The society and environment where someone lives can significantly affect how members of society interact with one or more languages of the bilingual individual. Attitudes regarding a particular language will depend on the

context in which the various languages present in the community have come into contact. Wei (2013) defines three categories of bilingualism: (1) territorial bilingualism, (2) diglossia, and (3) widespread bilingualism. Territorial bilingualism is used for societies in which the linguistic communities are grouped in different geographical areas. Within these areas, each language is protected by legislation and institutional support. Other languages may be present within these geographical boundaries but are not protected by these same supports. Diglossia is used for language groups that coexist within the society in a complementary way; for example, each language may have different uses and statuses within the community. Widespread bilingualism is used for societies where most of the population speaks two or more languages. Examples for these three kinds of bilingual societies include (1) Canada for territorial bilingualism where French speakers are concentrated within the province of Quebec, (2) Paraguay for diglossia where there is a binary diglossia with Guarani and Spanish, and (3) the Philippines for widespread bilingualism where much of the population knows Tagalog, English, and often another Filipino dialect. Attitudes relating to how bilinguals should use their language may differ based on their type of society and language pairs. Therefore, it is imperative to assess bilinguals at an individual level to understand how language development may change from one context to another.

Bilingualism on an individual level

The contexts through which bilingual individuals acquire and use their languages will vastly differ from one person to another. These different contexts lead to heterogeneity among the bilingual population and make it difficult to study all bilinguals as a single group. This heterogeneity can be described using various characteristics which shape the individual's bilingual experience. As mentioned at the beginning of this introduction, bilingualism is studied in multiple fields (Eisenclas & Schalley, 2020). Seeing as the focus of these fields are different, they often describe distinct aspects of bilingualism. Some commonly described characteristics across areas of study include the age of acquisition (AoA) or the age of first bilingual

language exposure (AoE), the individual's proficiency in each of their languages, and the individual's relationship with each of their languages. While some characteristics are fixed, such as AoA, others may change over time along with the linguistic needs of the bilingual individual. When discussing AoA or AoE, a bilingual is often categorized as a simultaneous bilingual (i.e., significant exposure to both their languages before a cut-off in early childhood, e.g., from birth, within the first year or in some studies before three years old) or a sequential bilingual (i.e., acquiring their second language after the cut-off age) (P. Li, 2013). In terms of proficiency, as mentioned previously, languages can have different roles within a society, and an individual may have other uses for each of their languages. These different purposes can contribute to varying proficiency in each language. For example, an individual may have proficient receptive skills, which means they understand both of their languages but may only have expressive skills in one of them, meaning they can only speak one of the languages. This phenomenon is sometimes referred to as receptive bilingualism. In contrast, an active bilingual refers to an individual that can speak and understand both languages (Nakamura, 2019b). Alternatively, bilingual individuals may have acquired a language earlier in life but may no longer be capable of understanding or speaking one of their languages, sometimes referred to as functionally monolingual (Surrain, 2018). Bilinguals may also speak both languages but be stronger in one compared to the other. This stronger language is referred to as their dominant language.

The characteristic of proficiency is often a point where many definitions of bilingualism differ. Eisenclas and Schalley (2020) discuss some narrower definitions that suggest that proficiency must have "native-like" ability in each language, which is very rarely met, thus excluding many individuals and their experiences with their languages from research. On the other hand, some broader definitions are too comprehensive, including individuals with very minimal understanding of a second language. Grosjean's (2012) definition of bilingualism shifts the focus away from proficiency which may vary widely for everyone, towards everyday use, emphasizing that the languages may have different purposes. Bilingual individuals may also differ

in their relationship with each of their languages. For example, some may have integrated the culture of their language into their cultural identity while others do not (Ramírez-Esparza & García-Sierra, 2014). This integration of culture into one's identity may change how some individuals approach the use of each of their languages. The concept of communicative repertoire, as defined by Rymes (2010), discusses how an individual uses their languages and other forms of communication to function effectively in the different areas of their life. The use of the term is not restricted to bilinguals and is also used to discuss monolinguals. Just as monolingual individuals make stylistic changes when communicating in different areas of life, bilingual individuals' communicative repertoire can include their individual languages and the different language varieties needed in various situations (Rymes, 2010). In summary, these characteristics are not mutually exclusive and may influence each other and thus make 'bilingual' a complex concept.

Language Development

The development of language skills can be influenced by both genetic and environmental factors (Hoff, 2006). This thesis will focus solely on the environmental influences on language development. Beginning with some key factors for general language development and following with the characteristics specific to bilingual language development, this section will discuss the factors influencing bilingual language development.

General influences on language development

Three key factors often come up in language development research in monolingual and bilingual children. These factors include the family's socioeconomic status, reading, and television.

Socioeconomic status

While the influence of socioeconomic status (SES) is not a key variable for this thesis, it would not be appropriate to discuss the influences on language development without considering SES. SES has been defined as a measure of an "individual's level

of income, wealth, education, and prestige” (Boyce, 2008). Within child development research, SES is often indexed using the mother’s level of education. Hoff (2006) summarizes findings that suggest that mothers with higher SES speak to their children in a manner that favors language development compared to mothers of lower SES. The observed differences in communication style involve the type of communication employed and the quantity and diversity of vocabulary used with the child (Pan et al., 2005). However, SES has been found to represent an intermediary variable that cannot explain the variability observed in language development on its own (Hart et al., 1997).

Furthermore, in Canada, many parents that have immigrated to Canada may have higher education than that, which is reflected in their revenue, complicating the assessment of this variable for families that have immigrated (McMullen, 2009). Hart et al. (1997) illustrate this point with the example of a parent with a high SES but speaks little to their child. This seminal study explains the observed SES effects through the child’s linguistic experience. Linguistic experience is composed of 5 features: linguistic diversity, tone of feedback, symbolic emphasis, guidance style, and reactivity. Together, these five features explained the sample’s variability in linguistic skills better than SES. In addition, this study has contributed to developing daycare centers such as the “head start program” that can help fill the gaps in children's linguistic experience from lower SES households.

Reading

Another variable that comes up often in language research in both monolingual and bilingual children. According to Hoff (2006), a parent can provide their child with “speech that is structurally more complex, uses a larger vocabulary, includes higher frequency of questions, includes a higher frequency of a talk about language, and includes a lower frequency of directive or social regulatory speech” (p.55) when reading compared to during play with toys. Studies on monolingual children have shown that vocabulary development can be predicted by the child's amount of time reading books with an adult (Hoff, 2006; Quiroz et al., 2010). Patterson (2002) also

observed similar findings in his study where shared reading was related to expressive vocabulary in the corresponding language. Thus, early in development, this form of interaction can affect language outcomes.

Television

The third variable that is often considered in language development research is the influence of television. Over the last few decades, television has become a big part of everyday life for many children. Generally, watching television has not been described as a significant contributor to the development of language skills in monolingual children (Hoff, 2006; Patterson, 2002). This finding was largely attributed to the fact that the child is not an active participant in the language communication occurring within the television program. However, programs for early childhood such as “Sesame Street” have been found to positively impact vocabulary in children aged 3 to 4 years (Hoff, 2006). These programs often describe the events on screen, including repetition and questions and emphasizing novel words. Additionally, for bilingual children, watching television in English (as a majority language) has negatively impacted vocabulary in the minority language (Dixon et al., 2012). Conversely, watching television in the minority language has been positively related to expressive skills in the minority language (Dixon et al., 2012).

Influences on Bilingual Language Development

Unlike monolingual children, bilingual children split their time between their languages. This division of time can bring about differences in their language outcomes. For example, as seen when the influence of television was discussed, the same variable may differentially affect language development in bilingual children than what was observed in monolingual children. For a bilingual family raising young children, various variables must be considered when deciding how to raise their child. This section will discuss how language exposure, motivation to learn the languages, language status, and parents’ language ideologies may impact language development.

As mentioned earlier, individuals have different uses for each of their languages. Though children may not all need to be fully proficient in both languages, knowing how the following factors may influence bilingual development can allow parents and educators to better guide children towards the proficiency level they need.

Language exposure

As previously mentioned, bilinguals are often categorized based on when they were introduced to the additional language. While some studies approach this categorization using the terms simultaneous and sequential bilingualism, others may compare early bilingualism and late bilingualism. The latter two terms often refer to those who become bilingual in childhood (early bilingualism) and those who become bilingual after childhood (late bilingualism) (De Groot, 2013). The abundant use of such terms indicates how differences in the timing of first exposure may alter language acquisition in a bilingual individual. For example, in terms of vocabulary, with earlier exposure and biculturalism, translation equivalents from one language to another may not indicate the exact same conceptual representations (Grosjean & Li, 2013). In addition to timing, the context of exposure and the quantity of exposure children receive in each language have been assessed in numerous bilingual studies.

Much research has addressed how parents use their languages within the home. Notably, four approaches are often described: (a) “one parent, one language” (OPOL) where each parent speaks a different language to the child, (b) solely using minority language in the home, (c) mixed language use in the home, and (d) solely using majority language in the home (K. King & Fogle, 2006). According to De Houwer (2015), children are more likely to develop and maintain their minority language when both parents speak in that language as much as possible. This approach would allow the child to practice using the minority language more consistently and, in turn, may help them speak the language with more ease. For many bilingual children, the home context may be the only one in which they are exposed to the minority language.

Schooling is another context in which children are significantly exposed to language. Kupisch and Rothman (2018) compared German individuals with either French or

Italian as their heritage language. In this study, the French heritage language speakers attended school in French while the Italian heritage speakers attended school in German. The authors found that the French heritage speakers performed better on the measures of language skills than the Italian heritage language speakers. The schooling context exposes the individual to a more formal variety of the heritage language, which is the variety that is often assessed in language research as well as to other native speakers of the heritage language. Through classes and with peers, this opportunity to use the minority language outside of the home may also help maintain the minority language over time (Hoff, 2006).

Language status

Language prestige or language status is another factor that may influence language development. Language status is more likely to indirectly affect language skills through influencing parents' language decisions (Dixon et al., 2012; MacLeod et al., 2013). Additionally, a language's status depends on the population studied. Taking the example of a French speaker, in North America, French is often a minority language. However, in the province of Quebec, French is the majority language. As discussed at the beginning of this chapter, English is a minority language, but within Greater Montreal, English holds a lot of prestige and high status. In many cases, bilingualism has been viewed as detrimental to the development of English, while this is not the case (Ramírez-Esparza & García-Sierra, 2014). Due to this, some parents may opt to only use the majority language in the home due to these ideologies and the implicit pressures of society (K. King & Fogle, 2006; MacLeod et al., 2013).

Bilingual children with a minority language are at a greater risk of losing their L1 (MacLeod et al., 2019; Surrain, 2018). For some children, starting school implies learning a new language in a new environment while taking in what is taught in class (Quiroz et al., 2010; Ramírez-Esparza & García-Sierra, 2014). Some of these children may have parents who do not speak the schooling language. Some studies have reported that children can acquire the schooling language over time while attending school (Nicoladis & Genesee, 1997). Allophone children also tend to lose competency

in their L1 after starting school (Guardado, 2006; MacLeod et al., 2013; Park & Sarkar, 2007). Moreover, some studies have shown that these children tend to lose their expressive skills in their L1 after starting school while retaining their receptive capacity (K. King & Fogle, 2006; Surrain, 2018; Tseng & Fuligni, 2000).

Research designs often assess the bilingual individual's languages separately. However, findings in bilingual research have established that by no means is the bilingual individual's language system composed of two separate monolinguals in one. The concept of plurilingualism has been used to capture this nuance. As defined by Cummins (2021), plurilingualism refers to "the mutual influence, interconnections, and dynamic relations among languages, registers, and dialects within the individual" (p.120). Previous studies have demonstrated that language skills from the minority language can be transferred to a new language, such as phonological awareness (Barac & Bialystok, 2012). Additionally, language skills acquired in the L1 have been shown to be learned with more ease in a new language than completely new skills (Dixon et al., 2012; Quiroz et al., 2010). For example, Quiroz et al. (2010) mention that the "central processing" framework states "language tasks such as recognition strategies, intra-textual perceptions, meta-cognitive strategies, prior knowledge, and schema formation" as transferable skills between languages. This transfer of skills makes the development and maintenance of the minority language even more important to prepare the children and their families for school.

Benefits of maintaining the minority language

Maintaining receptive and expressive skills in the minority language can have several benefits. A benefit of bilingualism that parents often mention is the economic opportunities that it can bring in the future (Surrain, 2018). For example, language skills in another language can offer them a chance for advancement or positions that would not otherwise be available. Another benefit that has been mentioned in the literature is improved academic performance. Particularly, studies have found improved performance in mathematics as well as a higher cumulative average (K. King et al., 2008). This same study suggests that speaking in the minority language

allows the parents to engage their children in more complex and stimulating conversations. These conversations would enable the children to develop their linguistic and cognitive skills, thus performing better academically. Generally, these findings were observed from self-assessed questionnaires, thus making it difficult to ascertain the direction of causality. Another benefit to mention, which may sound a little self-evident, is the ability to better communicate with family members who may not speak the other language. When comparing Spanish-speaking families whose children were able to maintain Spanish capacities after starting school to families who were not, Guardado (2006) found that the parents whose children could maintain Spanish fluency tended to be more culturally aware and were able to impart their home culture in their children. Other studies have also shown that adolescents whose cultural identity incorporates the home language culture have a greater tendency to maintain the minority language in the long-term (Nicoladis & Genesee, 1997; Park & Sarkar, 2007; Ramírez-Esparza & García-Sierra, 2014). These linguistic capacities can also positively affect family cohesion (De Houwer, 2015; Surrain, 2018; Tseng & Fuligni, 2000). Additionally, Tseng and Fuligni (2000) have found that parent-adolescent dyads that speak the same language had higher scores in the measure of affective distance with their mother, particularly for those using the minority language. This same study has observed that these adolescents with higher scores of affective distance had more discussions with their mothers.

The availability of a community that speaks the minority language is an important factor contributing to many opportunities for the concrete use of the minority language (Nicoladis & Genesee, 1997; Park & Sarkar, 2007). Additionally, Hoff (2006) explains that a child who hopes to master a language needs peers who speak the target language as their L1. These peers offer the opportunity for the child to practice using the language in a social context, all while providing a language model from which the child may learn (Hoff, 2018). While this may facilitate the development and maintenance of the minority language, the presence of such a community may not lead to the maintenance of the minority language (Guardado, 2006).

Language ideologies

Like language status, language ideologies are an indirect form of influence on language development. In linguistic anthropology, very simply put, ideology arises from repeated associations of events to meaning and is executed through practice and performance (Bucholtz, 2004). Together, the repetition of these develops into an individual's identity. What can influence language-specific ideologies has been summarized by Curdt-Christiansen (2009) as macro factors, such as political, socio-cultural, economic, and sociolinguistic environment conditions, as well as micro factors, which are more specific to the home environment. Of the macro factors, the economic factors relate to the economic influence of language. In their study, Curdt-Christiansen (2009) found that the Chinese-immigrant families placed great value in French, English, and Chinese knowledge given the economic opportunities this knowledge may bring for their children in the future. Additionally, some macro factors influencing ideologies include (a) what society considers to be a "good parent" (K. King et al., 2008; K. King & Fogle, 2006), (b) the parent's personal experience with bilingualism (K. King & Fogle, 2006), (c) the parent's level of education (Dixon et al., 2012), (d) the parent's evaluation of their children's language skills (Schwartz & Moin, 2012) and (e) the bilingual research presented in the media and parenting books (K. King & Fogle, 2006). These influences can go in either direction. Therefore, a Family Language Policy can influence the policies used by future generations. Language ideologies can then influence parents' language practices or strategies. However, language ideologies form but one portion of a family's language policy and how they interact with their languages.

Family Language Policy

The study of Family Language Policy (FLP) assesses how language policies and language acquisition can affect one another. Specifically, FLP studies how daily use of language within the family and parent perceptions can influence children's language development (K. King et al., 2008). On the one hand, language policies study the ideologies and beliefs related to language. That is, what do people do with

language, and what do people want to do with language. On the other hand, language acquisition assesses the mechanisms and conditions through which children learn one or multiple languages. By integrating these two fields of study, FLP studies language development from a holistic point of view while considering how the family context and language context in which the families live impacts language development. Mainly, FLP studies three features of language planning in a household. These features include status, corpus, and acquisition (K. King et al., 2008). Status planning involves when to use each language and for which purposes the languages will be used. Corpus planning involves deciding the language register to use within the household. Finally, acquisition planning involves decisions regarding when and how to teach each language. Parents may not explicitly plan how to apply these three features but display them implicitly through their actions and decisions (language practices). Only using the minority language in the home (status) with a familiar register but not allowing code-mixing (corpus) and introducing the majority language at the start of school (acquisition) is an example of FLP decisions a family can make. These features can be influenced by different aspects of language development as well as the ideologies and beliefs relating to language. Taking the previous example, the parents may have decided to speak the minority language only in the home but feel societal pressure and pressure from their children to use the majority language in the home, especially after the first child has started attending school. How these strategies are applied and the values they instill can largely influence the child's bilingual development as well as their probability of maintaining competence in both languages.

Measuring Language Skills

Language itself is quite complex and can be dissected into a multitude of different components. However, in a more general sense, language skills or competence can be divided into listening comprehension, reading, speaking, and writing (Ramírez-Esparza & García-Sierra, 2014). These skills can be classified as receptive skills (listening comprehension and reading) and expressive skills (speaking and writing).

While measuring these skills as a whole is quite difficult, it is possible to measure features of the skills. Particularly, this thesis will focus on vocabulary and narration skills.

Vocabulary development

Vocabulary is the base of language and essential for literacy acquisition (Quiroz et al., 2010) and is divided into categories: receptive and expressive vocabulary. Additionally, vocabulary can be used as a predictor of language development (Milton, 2013). Vocabulary is composed of (1) breadth, which indicates the number of words an individual knows regardless of how well; (2) depth which indicates the degree to which the word form, meaning, and use are mastered; and (3) fluency which indicates the automaticity with which known words can be recognized and processed (Milton, 2013). Different measures can evaluate these various aspects of vocabulary. Within language development research, vocabulary breadth is the feature of vocabulary most commonly measured. One of the measures widely used to assess receptive vocabulary breadth is the Peabody Picture Vocabulary Test (PPVT), an oral picture selection task (M. Li & Kirby, 2015).

Expressive Narrative Skills

Narration skills are an ecologically valid way to assess an individual's communication capacity (Botting, 2002). Narrative skills have been seen to be correlated to various pragmatic skills, including everyday conversation (Botting, 2002; Heilmann et al., 2010). Telling a story involves multiple components of language, such as planning and executing the story's plot while also using the proper vocabulary, grammar, and syntax (Heilmann et al., 2010). There are various ways that narrative skills have been measured. One of these methods includes generative storytelling, which involves providing a picture book as a prompt and asking the child to tell the story spontaneously. This story can then be scored based on different criteria. The Narrative Scoring Scheme (NSS) has been described as a sensitive measure of children's narrative organizational skills (Heilmann et al., 2010). It comprises seven

sections divided into three different features of narrative organization: story grammar, use of literate language skills, and cohesion. Each section is scored between 1 and 5, and total scores range from 0 to 35.

Project Aims and Objectives

Based on the presented literature review, my master's thesis aimed to fill a gap in the literature regarding the impacts of parents' strategies regarding language, their language ideologies, and the child's pattern of language use on a child's language development in a minority language. This thesis was supported by the Canadian Graduate Scholarship – Master's program (CGS-M) Joseph-Armand-Bombardier.

Project context

My master's thesis is based on data collected in the context of the research project called "3D Transition Bilingue," approved by the research ethics board of the Sainte-Justine Hospital (project number 2019-2029). The 3D study was an interdisciplinary study that sought to better understand the effects of various situations on the child's development and ran from the gestation period until the child became two years old. The "Transition study," a follow-up study, was then started to evaluate the degree of preparation of these children and their families at school entry. The "3D Transition Bilingue" study is a sub-project of this longitudinal follow-up study and seeks to assess the trajectory of oral development as well as identify characteristics of language learning difficulties in allophone bilingual children in Montreal upon school entry. Particularly, this study assesses which factors contribute to the acquisition of the schooling language and continued development of the home language and identifies the characteristics of language learning difficulties in children from minority language homes.

Research Aims

Under the supervision of Dr. MacLeod and Dr. Rezzonico, this thesis explores how parents' language strategies relate to language development in a minority language

during the first years of elementary school. See table 2 for a summary of the key variables. More specifically, this thesis has the following four objectives:

1. Describe how parents’ language strategies relate to minority language development in bilingual children.
2. Describe how the bilingual child’s pattern of language use relates to their language development in a minority language.
3. Explore how parents’ linguistic ideologies and beliefs may relate to (1) the strategies parents adopt and (2) the child’s pattern of language use.
4. Explore how (1) the strategies adopted by parents and (2) the child’s pattern of language use may differ in households with a non-official minority language and households with only official languages.

Table 2 – Key variables

<i>Variable</i>	<i>Type of variable</i>	<i>Operationalization</i>
<i>Parent language strategy</i>	Independent variable	A parent’s approach to language use in the home at the time of testing and whether they have used specific strategies (e.g., One Parent One Language).
<i>Child’s pattern of language use</i>	Independent variable	Represents the child’s pattern of language use within the home (i.e., among family members, language used for different media, and whether they regularly refuse to use one of their languages).
<i>Language development</i>	Dependent variable	Measured through the assessment of receptive and expressive vocabularies in the home language.
<i>Parent language ideology</i>	Covariable	The importance parents attribute to their child learning their mother tongue and how they envision their child using their languages in the future, and what the parent thinks they can do to help a child learn a language.

Language status

Covariable

Assesses whether the child's languages include a language that is not an official Canadian language.

Hypotheses

Based on the above objectives, we hypothesize the following:

Objective 1

The strategies that prioritize the use of the minority language in the home will best aid in developing the minority language for both receptive and expressive vocabularies

Objective 2

Children who use the minority language frequently and consistently will develop their expressive vocabulary better than those who do not use the minority language frequently or consistently.

Objective 3

- 3.1. Parents with specific expectations of their child's language development are more likely to have specific strategies to attain these expectations and more likely to apply them more specifically.
- 3.2. Parents with ideologies that place importance on the use of the minority language within the home or in particular spheres of life are more likely to have children that use the language more frequently and consistently.

Objective 4

- 4.1. Parents of children competent in a non-official minority language are more likely to have concrete strategies than the parents of children competent in the official languages.

4.2. The differences found in the patterns of language use are more likely to be more pronounced in the group of children bilingual with a non-official minority language than children bilingual in both official languages.

Chapter 2 – Methods

Participants

Bilingual children participating in the Transition study between the ages of 5;3 and 7;6 years were recruited for the Transition bilingual sub-project. The sub-project was approved by the institutional ethics board at the Sainte-Justine Hospital in Montreal, Quebec (CRCHU Ste-Justine project number 2019-2029). A total of 49 bilingual children living in the Greater Montreal Area, where English is the official minority language, were tested between December 2018 and January 2020. Eleven children were excluded from analysis due to: missing data ($n = 2$), no reported use or exposure to a minority language at the time of testing ($n = 3$), testing in English, but no English was used at home ($n = 5$) or, not the main language used at home ($n = 1$). Thus, a total of 38 children were included in the analysis. For most of the sample, the language used at school was French ($n = 31$); however, two children attended school in a setting where French was just slightly more present than English, and five children attended bilingual schools where French and English were used equally during the school week.

To be considered for the 3D transition bilingual study, children participating in the 3D transition study needed to have been exposed to more than one language. The bilingual children with a language that we could not test due to a lack of fluent research assistants or translated measures were recruited for testing if the parent judged that the child would be able to complete the measures in English and French. Children were divided into two groups depending on their spoken languages. The children who were only exposed to the official Canadian languages (i.e., French and English) formed the majority/ official minority language (OMin) group ($n = 21$). The children who were exposed to a language other than English and French formed the majority/ non-official minority language (Min) group ($n = 17$). Three of the children in the OMin group were reported to have been exposed to a non-official minority language. However, current language exposure practices showed that they were only exposed to French and English at the time of testing; thus, they were grouped in the OMin group. Within the Min group, 14 children were tested in their non-official

minority language, and three were tested in English as the minority language used in the home. See table 3 for a summary of participant characteristics.

Table 3 – Participant characteristics

Characteristics	Total Sample (n=38)	OMin group (n=21)	Min Group (n=17)
Age (months)			
Mean	80.97	81.10	80.82
Standard deviation	5.77	5.21	6.57
Range	63-90	68-90	63-90
Age of first exposure to minority language			
Mean	2.29	3.57	0.71
Standard deviation	6.95	8.87	2.91
Range	0-36	0-36	0-12
Gender			
Girls	24	14	10
Boys	14	7	7
Schooling			
French	31	16	15
Bilingual	7	5	2

Procedures

A research assistant visited recruited children in their homes for two one-hour sessions. However, this thesis will focus solely on the first session results. Each session consisted of tasks completed in the home language (either: French, English, Spanish, Arabic, Mandarin, or Italian) and school language (either: French or English). Before commencing the battery of tests, the Information and Consent form was completed with the child’s parent.

Battery of Tests

The first half of the tasks were completed in the home language to help the children feel comfortable using the home language, which tends to be the minority language, before continuing with tasks in the school language. The home language tasks included a receptive vocabulary task and a narration task. In contrast, the tasks in the school language included a receptive vocabulary task, a narration task, and a nonword repetition task. See table 4 for the order of the tasks. Children were able to

take breaks between tasks as needed. Once all five tasks were completed, the children received a gift to thank them for their participation. Research assistants then completed two questionnaires with the child's parent regarding language development, use, and exposure. Within the context of this master's thesis, solely the receptive vocabulary task and narration task in the minority language (whether assessed as the home language or school language) will be the dependent variables. The questionnaire responses will also be used to assess other variables of interest for the independent variables and covariable. See table 4 for the measures assessed in this master's thesis and what they are used to assess.

Table 4 – Visit task order

Home language		Schooling language	
Order	Task	Order	Task
1	Receptive vocabulary task	3	Nonword repetition task
2	Narration task	4	Receptive vocabulary task
		5	Narration task
Completed with parents			
6	Questionnaire regarding language and development		
7	Questionnaire regarding language use and exposure		

Receptive vocabulary

The receptive vocabulary task consisted of the Peabody Picture Vocabulary Test (PPVT) and its equivalents in French [170 items], Spanish [125 items], Arabic [73 items], Mandarin [125 items], and Italian [175 items]. See table 3 for the characteristics of the receptive vocabulary tasks. During this task, the experimenter presents the child with four black and white pictures and asks the child to point to the image corresponding to the word said aloud. This task will allow us to better understand how children acquiring a minority language may differ in their acquisition of this language by being able to compare if there are differences between minority languages with and without official status. To achieve the baseline more directly, the research assistants began the tasks at the item corresponding to one year younger than the child's age at the time of testing. Due to the large difference in item

numbers between tests, the raw scores for each of the tests were calculated then divided by the total number of items in the test to obtain a ratio of correct responses. This ratio will allow us to compare results obtained across languages.

Table 5 – Receptive vocabulary task characteristics

Language	Task name	Number of items	Base	Ceiling
English	Peabody Picture Vocabulary Test	175 items	Highest 8 consecutive correct responses	6 incorrect responses within a series of 8 items
Spanish	Test de Vocabulario en Imágenes Peabody	125 items	Highest 8 consecutive correct responses	6 incorrect responses within a series of 8 items
Arabic	لقة القراءة اختبار المفردات (Arabic vocabulary subtest)	73 items	N/A Task begins at item #1	8 consecutive incorrect responses
Mandarin	修訂畢保德圖畫詞彙測驗 – Form M	125 items	Highest 8 consecutive correct responses	6 incorrect responses within a series of 8 items
Italian	Peabody Test di Vocabulario Recettivo	175 items	Highest 8 consecutive correct responses	6 incorrect responses within a series of 8 items

Narration task

The second task is a narration task using two variations of the frog stories: “A boy, a dog and a frog” and “A boy, a dog, a frog and a friend.” Narrative ability has been used to assess communicative competence and is a skill that starts developing during the preschool years (Heilmann et al., 2010). The “Frog Stories” are a series of wordless picture books that have been widely used in the assessment of narrative ability (Botting, 2002). The narration task in the current study asks the child to generate a story based on the book’s illustrations. Children are presented with one of the frog

story books and are asked to look through the images to understand the story. The child then tells the story to a parent or the experimenter.

In most cases, the child told the story of “A boy, a dog and a frog” to their parents in the minority language. Four children who used both English and French in the home completed the English narration task as part of the school language tasks. Thus, these four children’s narration skills were assessed using the “A boy, a dog, a frog and a friend” story directed to the experimenter. The narration task was scored using the Narrative Scoring Scheme (NSS) (Heilmann et al., 2010). The NSS is composed of 7 components that assess story grammar (introduction, conflict resolution, and conclusion), use of literate language skills (mental state and character development), and cohesion skills (referencing and cohesion). Each of the seven components is scored from 1 to 5. The sum of the scores for the seven components forms the NSS score. This task will allow us to understand better the development of expressive language skills in the minority language and the child’s ability to use various language skills. Within the context of this thesis, 8 children that were tested in Spanish and one child tested in English were not assessed for the NSS task but were included for the remaining analyses. The Spanish children were not assessed due to our inability to have the task translated in time. As for the child tested in English, the recording of the task is missing and thus could not be assessed.

Parent questionnaires

The two questionnaires in this battery of tests include the Alberta Language and Development Questionnaire (ALDeQ – Paradis et al., 2010) and the Canadian Questionnaire on Use and Exposure in Bilinguals (C-QUEB – MacLeod, 2021). The ALDeQ will be used to capture parent perspectives on their child’s language development. The C-QUEB assesses various aspects of past and present exposure and current language use. Eight variables of interest are assessed from questions from the C-QUEB: (1) the child’s pattern of language use, (2) the language used for TV or reading books, (3) whether the child refuses to use a minority language, (4) whether the child engages in dual language conversations, (5) the use of One Parent, One

Language (OPOL), (6) exposure ratio to the tested minority language, (7) language status, and (8) parent ideologies.

Table 6 – Measures and their purpose

Measure	Purpose	Respondent
Peabody Picture Vocabulary Test (English, Spanish, Arabic, Mandarin, Italian)	Assessing receptive vocabulary in the home language.	Child
Frog stories	Assessing narrative ability in the minority language.	Child
ALDeQ	Ensuring typical development and parent satisfaction with language development.	Parent
C-QUEB	Assessment of language group, child’s pattern of language use, parent language strategy, and parent language ideologies.	Parent

Data Analysis

The impacts of the two independent variables (1) parent language strategies and (2) the child’s use of their languages on the dependent variables PPVT scores and NSS scores will be assessed. Table 7 summarizes the variables and how they are measured.

The parent language strategy variable is composed of (1) the ratio of exposure in the minority language by the child’s parents and (2) the use, past or present, of the OPOL language strategy. These responses will be extracted from a question in the C-QUEB. In this question, parents estimate how frequently they use each language with the child, the frequency the child responds in each language, and the number of hours the parents typically spend with the child. Another question in the C-QUEB asks whether parents ever used OPOL, if yes when it started, and the duration of use. The child’s pattern of language use variable is composed of how the child responds to their parents, the languages used for different media, whether they refuse to use a minority language, and whether the child engages in dual language conversation. How the child responds to their parents and the use of dual language conversation were

measured using the same question as the one used for the exposure ratio in the minority language. Another question from the C-QUEB, which asks which languages the child uses different media (i.e., reading, television, movies, and tablet), was used to assess the languages used for various media. A question from the C-QUEB asked whether the child ever refuses to use a language, if yes, which one(s), the frequency, and the reason for refusal to use the language. Additionally, three questions from the C-QUEB were assessed to parents' language ideologies. The first of these questions asked parents if and why it was important for their child to learn their languages. The second asked how parents envisioned their children using their languages in the future. Finally, the third question asked what parents believe a parent can do to help their child learn a language.

Table 7 – Measures of each variable

<i>Variable</i>	<i>Measures of the variable</i>
<i>Parent language strategy (Independent variable)</i>	Strategies will be assessed based on the ratio of exposure parents provide in the minority language and the use (past or present) of OPOL
<i>Child's pattern of language use (Independent variable)</i>	The pattern of language use is measured in three components: 1) response to family members, 2) media use, 3) language refusal, and (4) whether dual language conversations occur.
<i>Language development (Dependent variables)</i>	Language development will be assessed in two parts: 1) receptive vocabulary as measured through the ratio of raw scores divided by the total number of items on the PPVT and its equivalents, and 2) expressive vocabulary as measured through the frog story in the minority language and scored using the Narration Scoring Scheme (NSS).
<i>Parent language ideology (Covariable)</i>	Parent language ideology is measured with three long answer questions which cover a) importance of learning the language, b) expectations relating to language use, and c) what parents can do to help a child learn to speak a language.
<i>Language status (Covariable)</i>	Language status is extracted from a C-QUEB question asking how the family uses language with the child daily. Children are then categorized into two groups: OMin group and Min group.

A mixed-method analysis was used to assess quantitative measures (i.e., PPVT scores and NSS scores) and qualitative measures (i.e., language strategy and pattern of language use) to understand better how the independent variables may influence language development.

Qualitative analyses

Three long answer questions from the C-QUEB questionnaire were assessed to better understand parents' language ideologies. A thematic analysis, as defined in Braun and Clarke (2006), was used to find the underlying themes within each of the assessed questions. A deductive approach was used for the question on the importance of the child learning the parents' languages. Four themes were identified from the literature, and additional themes were added as identified. The remaining questions were analyzed using an inductive approach to find the underlying themes. A first coder went through the responses, identified the codes of interest, and extracted broader themes. The first coder (Aguila) then compiled a codebook explaining the themes and codes extracted from the parents' responses. This codebook was then shared with a second coder (MacLeod), who used these themes and codes to verify that the codes were correctly identified. Both coders met partway through and at the end of the coding process to discuss and come to an agreement on passages that were not coded the same. Finally, the responses to a follow-up question regarding why children may refuse to speak a language were also analyzed, and themes were extracted from the responses.

Quantitative analyses

Quantitative analyses were conducted using JASP (version 0.14.1, 2021). The following variables were added to a correlation matrix to assess the relationship between the variables: (1) use of OPOL, (2) exposure ratio to the minority language, (3) language used for TV and Books, (4) refusal to use a minority language, (5) language status, (6) use of dual language conversation, (7) PPVT score ratio in the

minority language, and (8) NSS scores. The variables that were significantly correlated to the PPVT score ratio were added to the null model of a linear regression that was later compared to an alternate model with all the variables. Dummy coding was used to add the categorical variables to the correlation matrix and linear regression. See table 9 for the coding scheme of the categorical variables.

Table 8 - The coding scheme of categorical variables

Variable	Coding
Use of OPOL	Yes = 1; No = 0
Language used for Books and/or TV	Yes = 1; No = 0
Refusal to use a minority language	Yes/Sometimes/Little = 1; No = 0
Language Status	OMin = 1; Min = 0
Use of dual language conversation	Yes/Sometimes = 1; Little/No = 0

Chapter 3 – Results (article)

Impacts of parent's language strategies and everyday language use in bilingual school-age children

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Abstract

The current study sought to explore how parents' language strategies and the child's use of their languages affects language development in bilingual children in Montreal, Canada. Additionally, the influence of parents' language ideologies and the minority language's official status was assessed. Language development was assessed through a minority language Peabody Picture Vocabulary Task (PPVT) and a wordless picture book narration task scored using the Narration Scoring Scheme (NSS). Parent language strategies, the child's use of language, and parent language ideologies were assessed by analysing questions from the Canadian Questionnaire for Use and Exposure in Bilinguals (C-QUEB). A mixed-methods approach was used to better understand how qualitative findings relate to the quantitative outcome measures. Results suggest that PPVT scores were predicted by whether the child refuses to use their minority language. NSS scores were predicted by the child's use of books in the minority language. Regarding PPVT, the parents of top-scoring children mentioned the future opportunities bilingualism could bring. In contrast, the parents of the lower-scoring children cited reasons related to social expectations for why it is important that their child learn their language. Regarding the NSS, parents of the highest-scoring children tended to say they hope that their child becomes completely bilingual, while this was not the case for the parents of lower-scoring children. Additionally, parents differed in what they suggested a parent can do to help the child learn a language. While parents of top-scoring children tended to suggest reading, parents of lower-scoring children suggested speaking the language. Top-scoring

children in both the PPVT and NSS tended to respond to their parents in the language spoken to them, while lower-scoring children tended to respond in French, irrespective of the language. Finally, official language status was not a predictor of language scores. These findings bring interesting insights into the influences of minority language development.

Introduction

Estimates suggest that more than half the world's population is bilingual (Ansaldo et al., 2008; Grosjean, 2010). Individuals become bilingual for various reasons. These reasons can affect the timing in their life during which they learn their languages and their motivation to acquire each language. For young children who begin learning two or more languages, several factors can contribute to the acquisition of both of their languages and how they continue to use them later in life. The children of bilingual households that later become functionally monolingual often retain the language spoken by the majority of the community in which they live (De Houwer, 2007). To best understand why this may be the case, taking an interdisciplinary approach to bilingual development can provide points of view that could not be assessed otherwise. For example, the field of Family Language Policy (FLP) integrates elements of language policy from sociolinguistics and language acquisition from psycholinguistics, taking an interdisciplinary approach to understanding language development and language transmission (K. King et al., 2008). This article will assess language development from an FLP perspective and will focus on minority language development in bilingual school-age children from Montreal, Canada.

For young bilingual children and their families, the linguistic environment in which they are raised can impact how they interact with language. Environmental influences such as the language's status, the schooling experience, and the use of the language in the home may affect an individual's language experience. These elements will be reviewed in the following sections.

Language Status

Not all languages have equal status or importance within different societies or communities. Bilingual societies have been typically classified as territorially bilingual, a diglossia, or widespread bilingualism (Wei, 2013). Based on these classifications, relationships between languages will differ and may change based on the language combination considered. For example, in an area where there is territorial bilingualism like in Canada, the status of the language can differ from one region to the other. These differences at the societal level impact whether someone may experience an additive or subtractive environment for each of their languages. An additive environment is one where language development is supported and where there are no strong pressures to reduce the presence of the language (MacLeod et al., 2013). On the other hand, a subtractive environment has little support for the development of that language, and there is strong pressure to give up the language (MacLeod et al., 2013).

The current study will assess the influences of parents' language strategies and the child's use of their languages on the development of minority languages within Greater Montreal (GM) in Quebec, Canada. Therefore, it is important to understand the sociolinguistic context in Canada and specifically GM to understand how the minority languages can be viewed differently. Canada is a bilingual country with two official languages. Both English and French have official language status at the federal level. This official status means that Canadians have a right to access services offered by the federal government in both languages. As mentioned earlier, Canada is a territorial bilingual society. The province of Quebec is the only Canadian province where French is the only official language. Language dynamics within the province of Quebec have been quite complex and continue to be a topic of contention to this day. The province of Quebec has a series of legislative bills devoted to protecting the strong presence of the French language across different spheres of life. These bills affect the language within the workplace, the language of schooling, and signage language, among other areas (Busque, 2006). However, within the province's largest city, Montreal, the two languages coexist despite the sociolinguistic context of the province.

According to the 2016 Canadian census, over half of the population of Montreal was bilingual in both French and English, and 7% spoke English only (Statistics Canada, 2017b). This large community who can speak English and the protections for the English language at the federal level help create a more positive environment for the development of English skills. This positive environment for the development of English can be framed as an additive environment compared to other minority languages within the province. The Greater Montreal (GM) area is also home to a culturally diverse population. During the 2016 census, about 22.5% of the population had a first language other than English or French within GM. This cultural and linguistic diversity and the high rate of official language bilingualism make GM an interesting area to study the impacts of Family Language Policy (FLP) in school-age children.

Schooling experience

On a more specific level, language development can be affected by children's schooling experience and their peer groups. In monolingual studies, children were seen to develop language fastest when children were in school compared to when not in school (Hoff, 2006). Kupisch and Rothman (2018) compared minority language skills between (a) German-French bilinguals who attended school in French and (b) German-Italian bilinguals who attended school in German. The results showed that the German-French bilinguals performed better on measures of their minority language skills than the German-Italian bilinguals. The authors suggested that formal schooling in the minority language may provide individuals with a different context in which they can learn and practice the formal variety of the language, the variety often assessed in bilingual research. This exposure to formal language would allow the heritage speakers to develop a 'broader range of lexical domains' (p.573) and from various individuals. Additionally, conversing with native speakers in the minority language provides the child with opportunities to use the language outside of the home, which can help with maintaining the minority language over time (Hoff, 2006). Particularly, peers can be another form of language model and provide the

opportunity for language socialization. However, Hoff (2006) states that peers alone are insufficient to support language acquisition and necessitate large amounts of input from expert speakers.

Language use within the home

Language use within the home has also been seen to impact language development. In bilingual language development, some of the most studied strategies include (1) One Parent, One Language (OPOL), where essentially each parent speaks to their child in a different language, (2) a strategy where parents only speak the minority language, (3) a strategy where parents use both languages, and (4) a strategy where solely they use the majority language (Slavkov, 2017). According to De Houwer (2015), bilingual children with a minority language are most likely to develop and maintain both languages when both parents speak the minority language as much as possible in the home. With this strategy, the child would most likely be able to learn the majority language at school and through the wider community (Nicoladis & Genesee, 1997). However, the minority language has been seen to be lost, particularly after schooling has begun (Guardado, 2006) and, at times, when an older sibling starts school (Bridges & Hoff, 2014). According to parents, developing and maintaining the minority language can be beneficial for the child because of future opportunities and communication between family members (Surrain, 2018). Additionally, maintaining bilingualism may help establish their cultural identity (Tseng & Fuligni, 2000).

Family language policy

Family language policy (FLP) is an emerging field of research that allows the study of these levels of influence, with a particular focus on language use within the family context. To understand better how language development is affected by different situations and processes, FLP combines elements of language acquisition from psycholinguistics and elements of language policy from sociolinguistics and anthropology (K. A. King & Fogle, 2013). A family's choices regarding language use within the home and when to use and introduce them to their children can be influenced by various factors. These influencing factors include the political

environment, digital media (Lanza & Gomes, 2020), the parent's personal experiences with their languages (K. King & Fogle, 2006). In the King et al. (2008) review of FLP research, the authors described a simplified model of the relationship between parents' ideologies and their impacts on their child's language development. The ideologies affect the parents' linguistic choices and the way they apply their language strategies within the family, affecting the child's language development. This model, while quite simplified, illustrates the indirect impact the parent's ideologies can have on the child's language development. It then becomes important to understand what influences the parent language ideologies. King and Fogle (2006) stated three particular areas from which the parents in their study used to guide their language decisions. These areas included (1) what was mentioned in the popular press or parenting advice literature, (2) comparing language outcomes in other bilingual families such as extended family, and (3) their personal experiences with language learning. Additionally, Schwartz and Moin (2012) have found that the immigrant parents in their study often overestimated their child's general language skills in the second language (L2) to justify their family language policies. However, Nakamura (2018) summarizes the difficulty of assessing the impacts of ideologies on parents' language strategies because the attitudes assessed through surveys and interviews may only be part of the larger picture of their language ideologies as a whole. Seeing as a parent's child-rearing practices have important impacts on their child's language development, it is then essential to understand how these strategies can be influenced and how the strategies then influence language development. Slavkov (2017) assesses the characteristics of Canadian families where active bilingualism was achieved. These families did not all use the same language strategy within the home. Rather they found significant predictors such as being enrolled in a heritage language school, using the minority language with siblings, and developing literacy skills in a minority language. The use of the minority language between parents was also a positive predictor of active bilingualism. These studies show the importance and potential impacts of family language policies on language outcomes. Still, few studies address

how both parent language strategies and the child's use of their languages impact measures of language skills of the bilingual child.

Language development

Assessing receptive and expressive skills can be a good way to understand general language development. Milton (2013) describes receptive skills (reading and listening) as the capacity to call the meaning of words to mind when encountered in others' speech or writing, while expressive skills (writing and speaking) involves easily and quickly calling to mind the words that are needed when writing and speaking. The various elements discussed above can affect these two types of skills differently. For example, various studies investigating receptive language development have shown that bilingual children can develop similarly to monolinguals in the majority language (Dixon et al., 2012; Mieszkowska et al., 2017; Smithson et al., 2014). Although these results did not assess a minority language, receptive vocabulary is generally thought to be acquired more easily than expressive skills (Yan & Nicoladis, 2009). Expressive skills generally seem to require more exposure than receptive skills because of the need for more in-depth knowledge of the meaning of words and how to use them (Milton, 2013). The assessment of oral narration skills allows evaluating expressive skills, including the planning and execution of telling a story while using correct vocabulary, grammar, and context (Heilmann et al., 2010). Oral narrative skills are also seen to be strongly related to literacy skills which develop later in life (Botting, 2002).

This study aims to:

1. Describe how parents' language strategies relate to aspects of language development in the minority language for bilingual children in Montreal;
2. Describe how the child's pattern of language use relates to their language development in the minority language;
3. Explore how the parents' language ideologies or beliefs relate to (a) the language strategies adopted and (b) the child's pattern of language use;

4. Explore how (a) the language strategies adopted and (b) child's the pattern of language use may differ in households with solely languages with an official status and those with a language without official status.

Regarding the parents' language strategies, we hypothesize that (1) the strategies that prioritise the use of the minority language in the home will best aid in developing the minority language for both receptive and expressive vocabularies (De Houwer, 2015). Additionally, (3.a.) parents who have specific expectations of their child's language development are more likely to have strategies to attain these expectations (K. King & Fogle, 2006). Also, we expect (4.a.) that parents of children competent in a non-official minority language are more likely to have concrete strategies than the parents of children competent in the official languages. These different strategies may be related to the awareness that it can be more difficult to maintain a minority language without an official status (Curdt-Christiansen, 2009). Regarding the child's pattern of language use, we hypothesize that (2) children that use the minority language frequently and consistently will have higher narration scores than the children that do not use the minority language frequently or consistently (Hoff, 2006; Thordardottir, 2011). Furthermore, (3.b.) the parents with ideologies that place importance on the use of the minority language within the home or in particular spheres of life are more likely to have children that use the language more frequently and consistently. Finally, (4.b.) we expect that the differences found in the patterns of language use are more likely to be more pronounced in the group of children bilingual with a non-official minority language than children bilingual in both official languages.

Methods

Children recruited for this study were part of a cohort from a larger longitudinal study. The research was approved by the institutional ethics board (CRCHU Ste-Justine project number 2019-2029) in Montreal, Quebec. To be included in this study, parents of the child must have responded in the survey from the larger study that their child had been exposed to more than one language. The research team then

contacted the families to confirm whether they wanted to participate in this smaller study and to confirm the child's spoken languages. Children whose home language is a language other than English or French were included in the study if we had research assistants and translated measures for those languages. If the child spoke a language that we could not test, they could be included if their parent judged they were fluent enough to complete the tasks in English, the official minority language in the province.

Participants

Forty-nine typically developing children aged between 63 and 90 months old were recruited from this larger study cohort. All children were living in GM at the time of the visit, which was between December 2018 and January 2020. Eleven children were excluded from analysis due to: missing data ($n = 2$), no reported use or exposure to a minority language at the time of testing ($n = 3$), being tested in English with no English use at home ($n = 5$), or not the main language used at home ($n = 1$). Thus, a total of 38 children were included in the analyses. For most of the sample, the language used at school was French ($n = 31$); however, two children attended school in a setting where French was just slightly more present than English, and five children attended bilingual schools where French and English were used equally during the school week.

These 38 children were divided into two groups depending on their spoken languages: (1) children who were only exposed to the official Canadian languages (i.e., French and English) formed the majority/ official minority language (OMin) group ($n = 21$) and (2) children who were exposed to a language other than English or French formed the majority/ non-official minority language (Min) group ($n = 17$). Three of the children in the OMin group were reported to have been exposed to a non-official minority language. However, current language exposure practices reported by parents showed no exposure to a third language in their environment. These children were thus grouped with the English-French bilingual children as they were only exposed to these two languages. We were able to test 14 of the children in the Min group in their

minority language. The remaining 3 Min group children were tested in English and used English in the home. See Table 1 for a summary of participant characteristics.

Table 1 – Participant characteristics

Characteristics	Total Sample (n=38)	OMin group (n=21)	Min Group (n=17)
Age (months)			
Mean	80.97	81.10	80.82
Standard deviation	5.77	5.21	6.57
Range	63-90	68-90	63-90
Age of first bilingual language exposure (AoE) to minority language (months)			
Mean	2.29	3.57	0.71
Standard deviation	6.95	8.87	2.91
Range	0-36	0-36	0-12
Gender			
Girls	24	14	10
Boys	14	7	7
Schooling			
French	31	16	15
Bilingual	7	5	2

Materials

Children were visited in their homes by research assistants for two 1-hour sessions. The results of this study focus on the data collected in the home language from the first visit. Each visit consisted of tasks completed in the home language, either French (n = 4), English (n = 20), Spanish (n = 9), Arabic (n = 3), Mandarin (n = 1) or Italian (n = 1). The children then completed tasks in the school language, either French or English. The visit was divided into three components. The first component was comprised of 2 tasks in the home language. The second component was comprised of 3 tasks in the language of schooling. The final component consisted of completing two questionnaires with the children's parents at the end of the visit. The first and second components included a receptive vocabulary task and a narration task. Additionally, the second component included a nonword repetition task. The four children whose home language was tested as French also used English in the home. The current study will focus on the tasks completed in the minority language and the questionnaires completed by the children's parents.

Receptive Vocabulary

The receptive vocabulary task used in this study was the Peabody Picture Vocabulary Task 4 (PPVT-4) [175 items] and its equivalents in Spanish [125 items], Arabic [73 items], Mandarin [125 items], and Italian [175 items]. During this task, children were presented with four black and white images and were asked to point to the image representing the target word. For the English, Spanish, Mandarin, and Italian tasks, the ceiling was achieved when the child made six errors in a series of 8 consecutive responses. The base is achieved in the highest series of 8 consecutive correct answers for these tasks. Research assistants started the task at the item 1 year earlier than the child's age at testing to find the base. In the Arabic version of the task, the task was administered from the first item, and the ceiling was achieved when the child made eight consecutive errors. In all cases, the raw score consisted of subtracting the number of errors from the ceiling. Due to the large difference in item number across languages, the raw score was then transformed into a ratio (raw score ÷ total number

of items) to be able to compare across languages. This task allowed us to understand better how receptive vocabulary acquisition in a minority language may differ for a language with an official status compared to those without for children in Montreal.

Narration Task

The narration task was a story-generating task using the wordless picture book “A boy, a dog and a frog” from the Frog series by Mayer (1967). The child was given the book and was asked to look through the pages to understand the story to be able to tell the story to their parent or, in some cases, to the research assistant. The child could use the book while telling the story. The four children whose home language was French completed the “A boy, a dog and a frog” story in French. Seeing as this study focuses on the development of the minority language, for these four children, the schooling language narration task “A boy, a dog, a frog and a friend” was analysed to assess development in their minority language. The narration task was scored using the Narrative Scoring Scheme (NSS) (Heilmann et al., 2010). The NSS is composed of 7 different components that assess story grammar (introduction, conflict resolution, and conclusion), use of literate language skills (mental state and character development), and cohesion skills (referencing and cohesion). Each of the components is scored from 1 to 5. The sum of the scores for the seven components forms the NSS score. This score will allow us to understand the child’s capacity to organize a narrative in their minority language better and subsequently their ability to use various language skills such as the use of abstract language features, the use of cohesive devices, and key story grammar components (p.7) (Heilmann et al., 2010). The scores range from 7 to 35 for children who complete the task, while a score of 0 is given to those who do not complete the task while having the opportunity to do so. Of the 9 participants who were tested in Spanish, 8 participants were not included in the analysis. Additionally, one of the children’s recordings was lost, so the task could not be assessed. Therefore, the analyses for the NSS included the data for 29 children.

Parent Questionnaires

We used two questionnaires to gather information about the child's development, and their language use and exposure patterns. The first questionnaire was the "Alberta Language and Development Questionnaire" (ALDeQ). This questionnaire was used to provide an overview of the children's development. The second questionnaire was the "Canadian Questionnaire on Use and Exposure in Bilinguals" (C-QUEB), which assessed past and present exposure and current language use. Eight variables of interest include (1) the child's pattern of language use, (2) the language used for TV or reading books, (3) whether the child refuses to use a minority language, (4) the use of dual language conversations, (5) the use of One Parent, One Language (OPOL), (6) exposure ratio to the minority language, (7) language groups and (8) parent language ideologies were assessed through responses from the QUEB questionnaire.

Analyses

The variables of interest are qualitative and quantitative data, so a mixed-method research (MMR) approach was taken to analyse data. This study uses a QUANTITATIVE → qualitative approach with the goal of better understanding how the qualitative measures may relate to outcomes on the quantitative measures of vocabulary and narratives.

Qualitative analyses

Thematic analyses were used to assess the parents' language ideologies and the reasons why children were refusing to speak a language. A deductive approach was adopted to determine the importance parents attribute to their child's learning of their first language. The responses were coded based on six themes identified from the literature. An inductive approach as defined by Braun & Clarke (2006) was adopted to find underlying themes within the question regarding (1) how parents hope their children use their languages in the future, (2) what a parent can do to help their child learn to speak a language. A first coder went through the responses and identified codes of interest and extracted broader themes from the codes. The first coder (i.e., first author) then compiled a codebook explaining the themes and codes

extracted from the parents' responses. This codebook was then shared with a second coder (i.e., last author) who used these themes and codes to verify that the codes were correctly identified. Both coders then met partway through, and at the end of coding, each question adjusted the codebook as necessary. After all the responses were coded, both coders met, discussed the passages that were not coded the same, and came to an agreement. Both coders were aware of the objectives of this study prior to the commencement of the thematic analysis. Some parents provided responses containing more than one theme, and some utterances were categorized into two different themes. Responses from parents were compared between parents from the OMin group and the Min group. Where differences between the two groups were observed, comparisons will be discussed in the results section. When these differences were not observed, results were discussed as a group. Finally, the first author translated examples in the results section if they were not originally in English.

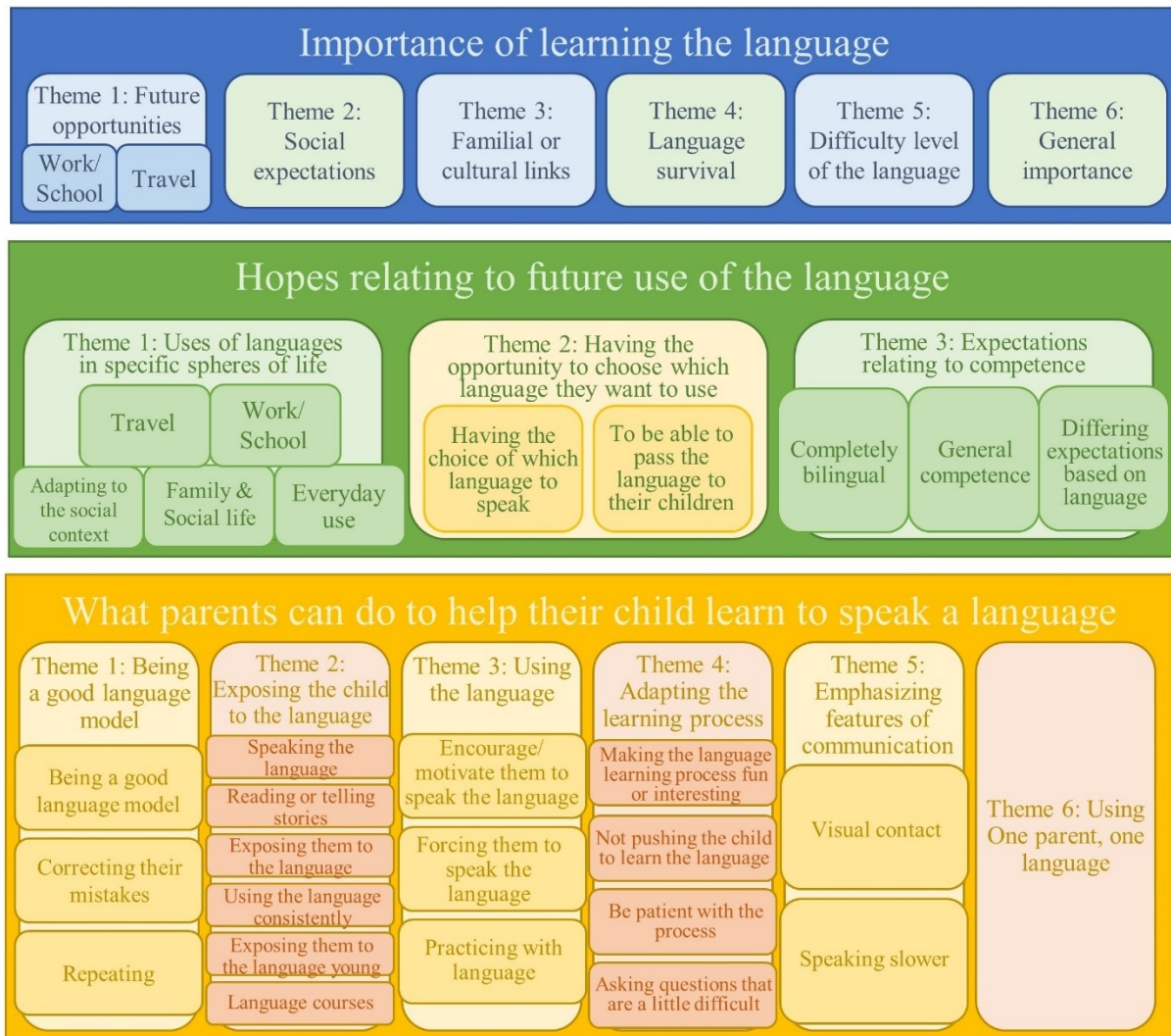
Quantitative analyses

Quantitative analyses were conducted using JASP (version 0.14.1, 2021). The following variables were added to a correlation matrix to assess the relationship between the variables: (1) use of OPOL, (2) exposure ratio to the minority language, (3) language used for TV and Books, (4) refusal to use a minority language, (5) language status, (6) use of dual language conversation, (7) raw PPVT scores in the minority language, and (8) NSS scores. The variables that were significantly correlated to the PPVT scores were added to the null model of a linear regression that was later compared to an alternate model with all the variables.

Results

Qualitative results

Figure 1. – Identified Themes



Is it important for you that your child learns your languages?

For the first question relating to the importance that the child learns the parent's language, a total of 9 themes were identified among the parents' responses. All the parents mentioned that it is important for their child to learn their language(s). However, one parent who speaks Twi but has not taught it to their child mentioned that it is not important to teach their child Twi because all family members also speak English. Five themes were identified before conducting the thematic analysis, including (1) future opportunities related to bilingualism, (2) social expectation related to language(s), (3) developing a "bilingual advantage", (4) parent's personal

experiences with bilingualism, and (5) maintaining cultural and familial links. The theme of future opportunities relating to the language was later subdivided into two sub-themes: opportunities related to work and school and opportunities relating to travel. In addition to these themes, three other themes were identified: (1) language survival, (2) difficulty level of the language, (3) general importance.

Most parents in the sample stated reasons relating to maintaining familial and cultural links as a reason they want their child to learn their language. Of these responses, many of the parents mentioned the importance for the child to be able to communicate with family members, some specifying that some family members do not speak the child's other language. Additionally, some parents mentioned the importance for them that the language plays in the child's cultural identity or the cultural roots relating to the language. Some parents also accompanied these specific reasons with a more general statement to support their reasoning. For example, one parent said, "yes, because it's their roots, to be able to talk to family in Italy, it's an asset to speak more than one language" or "yes, because otherwise, he won't be able to speak with my parents. It is also an asset". One parent also mentioned that the minority language is not difficult to learn as an additional reason why they find it important for their child to learn their language. One parent also mentioned the importance of learning French, stating the importance of tradition, familiarity, and the survival of the French language. Parents of the children in both the OMin group and Min group mentioned similar themes for the reasons for the importance of learning their language except for the social expectation theme. Several parents from the OMin group mentioned reasons relating to the bilingual Canadian context or the importance of French in Quebec as reasons why it's important for them that their child learns their language. In comparison, only one parent of the OMin group and one parent of the Min group mentioned a reason relating to being able to communicate with their minority language community.

How parents hope their child uses their languages

For the second question relating to how parents envision their child using their language, a total of 3 themes were identified, with each theme containing at least two subthemes. The three themes are (1) use of the languages in specific spheres of life, (2) having the opportunity to choose which language they want to use, and (3) expectations relating to competence.

Use of the languages in specific spheres of life

The first theme, the use of languages in specific spheres of life, has five subthemes. At least one parent of the children in both the OMin group and the Min group mentioned a response for each subtheme and will thus be discussed as a whole. The subtheme mentioned by the most parents was that they hoped that their child would use their languages for work or an advantage in the future. Generally, the parents did not specify a language, but a few parents specified being bilingual at work. Responses related to schooling were also categorized with the work-related uses subtheme. One parent mentioned that they hoped their child would be able to study in both English and French. Another parent said they would like their child to continue studying in French until high school. The next most mentioned subtheme was related to using the language during travel. While most parents mentioned travel very generally, two parents mentioned the specific language which they hope their child uses during travel, and one parent mentioned that the knowledge of Spanish would allow them to travel anywhere in South America. The same number of parents mentioned the subtheme relating to language use with family and in their social life. Some parents specified the language they wanted their child to use in their social life. For example, one parent mentioned that they wanted their child to use English in her personal life, while another parent mentioned that they wanted their child to make friends in both languages. The next subtheme mentioned was related to everyday use. Additionally, two parents mentioned language use to adapt to the provincial context or social context, and one parent mentioned that Spanish is an asset.

Having the opportunity to choose which language they want to use

This theme has two subthemes. The first of these themes is that they want their child to have the choice of which language to speak. For example, the parent who hoped their child continued to study in French until high school also mentioned that they could choose if they would like to study in English or French after that point. Another parent said they hoped their child would use their languages, but it is their choice. Additionally, the other subtheme was only mentioned by one parent in the Min group. This parent wanted their child to be able to pass on Arabic to their future child.

Expectations related to proficiency

The third and final theme for this question has three subthemes. Complete bilingualism was the first subtheme that many parents of children in the OMin and Min groups mentioned. Most parents mentioned general abilities when talking about their expectations relating to proficiency. For example, one parent said they want their child to be “completely bilingual” or “perfectly fluent”. Some parents also specified that they wanted their children to have equal proficiency in both languages. Additionally, other parents specified that they wanted their child to have literacy skills in both languages. The second subtheme was of more general competence and was mentioned by a few parents of the children in the Min group and one parent of a child in the OMin group. One example from this subtheme is that the child is “comfortable in both languages”. The final subtheme was only mentioned by one parent for a child in the Min group and differed based on the language. This parent’s full response was the following: “hopes that French is mastered, and that Chinese is good enough to communicate with others”.

What a parent can do to help their child learn to speak a language

For the third question relating to what parents can do to help their child learn to speak a language, a total of six themes were identified. These themes are (1) being a good language model, (2) exposing the child to the language, (3) use of the language, (4) adapting the learning process, (5) emphasising different features of communication, and (6) using a language strategy like OPOL. Parents of children in

both the OMin group and Min group mentioned similar themes for this question apart from theme four which was discussed mainly by parents of the Min group.

Being a good language model

This first theme for this question was the second most mentioned theme by parents and is composed of 3 subthemes. The subtheme that was most mentioned was being a good language model. For most parents, this was to set a good example. One parent mentioned that parents should use varied vocabulary, and another mentioned communicating in full sentences. The second subtheme was to repeat what was said. One parent specifically mentioned repeating the words while another specified repeating the sentence in the right grammar. The last example was also categorized as part of the final subtheme: correcting the child's mistakes. One parent also specified that in addition to correcting the child, a parent could also make the child aware of their mistake.

Exposing the child to the language

This second theme was mentioned by most parents and consists of 8 subthemes. The most mentioned subtheme was speaking the language. Most parents mentioning this theme referred to talking to the child. Most of these parents emphasised talking with the child in general, while other parents also specified that a parent should speak to the child in their language. For example, one parent said, "speak to them in your first language". The next most mentioned subtheme was to read or tell the child stories. While many parents mentioned reading generally, two parents mentioned reading with the child. The next most mentioned subtheme was exposing the child to the language. Some of the parents who mentioned this subtheme included exposing the child to the language through TV and movies, while for others, this was a more general concept of exposure. Other subthemes parents mention include using the language consistently, exposing the child to the language at a young age, and enrolling the child in a language course.

Use of the language

Fewer parents mentioned the third theme. This theme is composed of three subthemes. Of the parents that mentioned this theme, four parents mentioned encouraging or motivating the child to speak the language. Additionally, one parent mentioned the second subtheme, which was to make the child speak the language. The third subtheme was also mentioned by one parent, which was to practice with the language.

Adapting the learning process

The fourth theme was mentioned most by a few parents in the Min group. This theme is composed of three subthemes. The parents in the Min group mentioned different ways to make the language learning process more fun or interesting. For example, by making them work their imagination or through nursery rhymes. Another subtheme was not to push the child too much to learn the language. The final subtheme for adapting the learning process was mentioned by a parent of a child in the OMin group. This subtheme involved asking the child questions that are a little difficult.

Emphasising different features of communication & Language strategies

Two parents discussed the emphasis theme in the sample. This theme involved making visual contact with the child or speaking more slowly. On the other hand, the theme discussing language strategies involved the OPOL strategy alone and was mentioned by three parents.

Responses from the OMin group and Min group parents were generally quite similar across questions. Most parents stated reasons relating to family and culture as reasons they find important that their child learns their language. Some parents envision their child using languages in specific contexts, while some wanted their child to have the choice in the future, and others had hoped their children attain a specific level of proficiency. Finally, parents suggested different ways a parent could help their child learn to speak a language. Of these methods, responses classified as exposing the child to the language were the most commonly mentioned. Many parents suggested exposing the child by speaking to the child or reading stories. Another

popular theme that parents mentioned was being a good language model. One of the only themes where parents of OMin and Min groups differed was on suggesting ways to adapt the learning process. While a few parents of the Min group mentioned ways to adapt the learning process for the child, there was only one parent from the Min group that suggested an adaptation.

Quantitative Analyses

Relationship between vocabulary, parent strategy and child language use

To be able to describe the differences across the languages of the receptive vocabulary tasks, a ratio of the raw scores of the PPVT task over the total number of items for the task was calculated to be able to compare between languages. Overall, the sample score ratios ranged between 0.07 and 0.65 with a mean of 0.406 (SD = 0.14), while the OMin group score ratios ranged between 0.13 and 0.58 with a mean slightly higher at 0.416 (SD = 0.12) and the Min group was slightly below the sample mean at 0.394 (SD = 0.16) with score ratios ranging between 0.07 and 0.65. The parent strategy variables, the child's language use variables, and the PPVT scores were added to a correlation matrix to assess how they relate to one another. Due to the complexity of responses for parent ideologies and the child's pattern of language response to their parent, these two variables were not added to the correlation. The responses were coded as follows: language status, 0 = non-official language and 1 = English; OPOL use, 0 = never used OPOL and 1 = has used OPOL; Language refuse, 0 = little to no refusal and 1 = some to frequent refusal, use of books/ TV, 0 = does not use and 1 = does use; dual language conversation, 0 = never engages in dual language conversations and 1 = engages in dual language conversations. Results of the correlation showed that the refusal to use a minority language and the use of books in the minority language were significantly correlated with PPVT scores.

Table 2 – PPVT Correlations

		PPVT	Language Status	Exposure Ratio	OPOL Use	Language Refuse	Use of Books	Use of TV
PPVT	Pearson's r	—						

	p-value	—						
Language	Pearson's r	0.080	—					
Status	p-value	0.632	—					
Exposure	Pearson's r	0.194	-0.202	—				
Ratio	p-value	0.243	0.224	—				
OPOL Use	Pearson's r	0.042	0.156	-0.099	—			
	p-value	0.802	0.350	0.554	—			
Language	Pearson's r	-0.421**	-0.304	0.002	-0.099	—		
Refuse	p-value	0.008	0.064	0.990	0.554	—		
Use of	Pearson's r	0.341*	0.573***	0.038	0.002	-0.251	—	
Books	p-value	0.036	< .001	0.820	0.990	0.129	—	
Use of TV	Pearson's r	0.097	0.593	-0.238	0.038	-0.014	0.553***	—
	p-value	0.561	< .001	0.150	0.820	0.934	< .001	—
Dual	Pearson's r	-0.122	-0.410	-0.410	0.068	0.163	-0.388	-0.355*
Language	p-value	0.465	0.011	0.011	0.685	0.328	0.016	0.029
Conversation								

* p < 0.05, ** p < 0.01, *** p < 0.001

Next, a linear regression was used to assess which variables predict PPVT scores. The significant variables from the correlation matrix were added to the null model, which included language refusal and the use of books in the minority language. The alternate model contained all the variables from the correlation matrix. The null model (H0) was then compared to the alternate model (H1) to assess which model best predicts PPVT scores. From this, the H0 model [$F(2,35) = 5.413$, $p < 0.009$] with an R^2 of 0.193 was a better predictor of PPVT score than the alternate model (H1) [$F(7, 30) = 1.819$, $p = 0.106$] with an R^2 of 0.144. The predicted PPVT score is equal to $0.392 - 0.112$ (language refusal), where language refusal was coded as 0 = little to no refusal and 1 = some to frequent refusal. Using books in the minority language was not a significant predictor in the model ($p = 0.109$). PPVT scores decreased by 0.112 when children refused to speak the minority language compared to those who did not refuse to speak the minority language. Refusing to use the minority language was the only predictor of PPVT scores.

Parent's ideologies as extracted from the thematic analysis were compared between parents of children whose PPVT scores were 0.5SD above and below the mean score

ratio. Regarding the importance for parents that their child learns their language, responses from parents of children whose scores were 0.5SD below the mean (-0.5 SD group) had more dispersed responses than the response of the parents of children whose scores were 0.5SD above the mean (+0.5SD group). The parents' responses of the -0.5 SD group tended to be more concentrated on the social expectation theme and the family and cultural link theme. On the other hand, responses of parents of the +0.5SD group tended to be more concentrated on the future opportunities related to work and school, and family and cultural links. When looking at the second question, parents' responses of both the -0.5SD group and +0.5SD group tended to focus on the completely bilingual theme. Finally, for the third question, responses from parents in both groups tended to mention Theme 2, "Exposure to the language", where many parents mentioned the subthemes "Speaking the language" and the "Reading or telling stories". Some of the responses of parents of the +0.5SD group also mentioned the subtheme "Being a good language model", which was not mentioned by any of the parents of the -0.5SD group.

Similarly, the response pattern for the children in the -0.5SD group and those in the +0.5SD group were compared to assess whether these two groups tended to differ in how they responded to their parents. When looking at the response patterns of the -0.5SD group, the mode response was responding only or mainly in French no matter the language that was spoken to them, which was the response pattern of 3 of the 9 children in the group. Conversely, the mode response for the +0.5SD group was more mixed, with 7 of the 12 children responding to their parents in the language spoken to them. While refusing to use the minority language was found to be a significant predictor of PPVT scores, comparing the frequency and reason of refusal between the -0.5SD group and +0.5SD group did not show any specific tendencies. The mode response was to never refuse to use the minority language for both groups. For the remaining children in the -0.5SD group, 3 of the 4 children refused to use the language often, and one refused rarely. Reasons included shyness or lack of proficiency. For the remaining children from the +0.5SD group, one child often refuses because they prefer

the other language and because they know their father does not like it, two sometimes refused due to shyness, and one rarely due to lack of proficiency or motivation.

Narration skills

The children who scored 0 on the NSS task (n = 6) were excluded when calculating the mean score on the task. Twenty-three participants were included in the calculation of the mean. The sample scores ranged between 7 and 19 with a mean of 13.087 (SD = 3.33), the OMin group scores ranged between 9 and 19 with a mean of 13.353 (SD = 3.21), and the Min group scores ranged between 7 and 17 with a mean of 12.333 (SD = 4.08). The parent strategy variables, the child's language use variables, and the NSS scores were added to a correlation matrix to assess the relationship between these variables. Parent ideology as assessed through the thematic analysis and how the child responds to their parent was analysed separately due to the complexity of the responses. The remaining categorical variables were dummy coded to be able to insert them into the matrix. Of the variables added to the correlation matrix, refusal to use a minority language, the use of books in the minority language, and watching TV in the minority language were significantly correlated with NSS scores.

Table 3 – NSS Correlations

		NSS	Language Status	Exposure Ratio	OPOL Use	Language Refuse	Use of Books	Use of TV
NSS	Pearson's r	—						
	p-value	—						
Language Status	Pearson's r	0.239	—					
	p-value	0.211	—					
Exposure Ratio	Pearson's r	0.207	-0.094	—				
	p-value	0.281	0.623	—				
OPOL Use	Pearson's r	0.192	0.270	-0.161	—			
	p-value	0.318	0.149	0.395	—			
Language Refuse	Pearson's r	-0.409*	-0.327	-0.096	-0.017	—		
	p-value	0.028	0.078	0.615	0.928	—		
Use of Books	Pearson's r	0.529**	0.428*	0.194	0.066	-0.202	—	
	p-value	0.003	0.018	0.305	0.730	0.284	—	

Use of TV	Pearson's r	0.412*	0.582***	-0.070	0.145	-0.118	0.641***	—
	p-value	0.026	< .001	0.713	0.443	0.534	< .001	—
Dual Language Conversation	Pearson's r	-0.326	-0.365*	-0.035	0.048	0.155	-0.428*	-0.400*
	p-value	0.085	0.047	0.854	0.803	0.414	0.018	0.028

* p < 0.05, ** p < 0.01, *** p < 0.001

As with the vocabulary analysis reported above, a linear regression was used to assess which variables predict NSS scores. The significant variables from the correlation matrix were added to the null model. These variables included language refusal variables and the use of books. Seeing as the use of TV was highly correlated with the use of books, only the use of books was added to the null model as it was more strongly correlated with NSS scores. The alternate model contained all the variables from the correlation matrix. The null model (H0) was then compared to the alternate model (H1) to assess which model best predicts NSS scores. From this, the H0 model [F(2,26) = 7.381, p < 0.003] with an R2 of 0.313 was a better predictor of NSS score than the H1 model [F(7, 21) = 2.604, p = 0.042] with an R2 of 0.286. The predicted NSS score is equal to 6.508 + 6.435 (books in minority language), where the use of books was coded as 0 = no use of books in the minority language and 1 = use of books in the minority language. Refusal to use the minority language was not a significant predictor in the model (p = 0.078). NSS scores increased by 6.508 when children read books in the minority language compared to the children that did not read books in the minority language. The use of books in the minority language was the only predictor of NSS scores.

Parent ideologies were compared between children who could not complete the task (score 0 group) and the children who scored 0.5SD above the mean (+0.5SD group). Regarding the importance for parents that their child learns their language, most of the parents of both the score 0 group and +0.5SD group stated reasons relating to family and cultural links for why it is important for them. Within the group of children with a score of 0, some parents also mentioned reasons relating to language survival or social expectation and the future opportunity it could give the child. Some parents of the +0.5SD group mentioned other themes, including the future opportunities that

knowing the language can bring, the social expectations related to language, and the difficulty level to learn the language. Regarding the question asking parents how they hoped their child would use their languages in the future, the parents' responses of the score 0 group were quite dispersed and showed no particular trend. Most parents from the +0.5SD group had a response relating to wanting the child to be completely bilingual. The remaining responses were dispersed over several subthemes and did not show any trend. Regarding what parents can do to help their child learn to speak a language, most parents of the score 0 group mentioned a response suggesting parents speak the language, while the remaining responses did not show any other trends. On the other hand, several parents of the +0.5SD group suggested parents read or tell the child stories. The remaining responses did not show any other trends. Similarly, the language the child uses to respond to their parents was compared between the score 0 and +0.5SD groups. When looking at the score 0 group, half of the six children respond mainly or only in French even if spoken to in the minority language. Two of the remaining children also tended to sometimes respond in French when spoken to in the minority language. For the +0.5SD group, 5 of the eight children respond in the language spoken to them. Two of the three remaining children respond in English when spoken to in English, while the remaining child responds half of the time in English and the other half in French regardless of the language spoken to them.

Discussion

This article aimed to assess how parents' language strategies and the child's use of their languages affect minority language development in bilingual children in Montreal. Additionally, the effects of language status and parents' language ideologies on language outcomes were also assessed. Previous research has suggested that family language policies can play a role in language development, particularly for children with a minority language (Slavkov, 2017). The current study took a mixed-method approach to assess how these various variables affect language outcomes.

Results of the current study did not find any considerable relationship between the language's status and language outcomes for the receptive vocabulary task nor for the oral narration task. While it may be difficult to generalise the results due to the sample size, these findings can be suggestive of a more general additive environment for bilingualism in GM. Generally, the parents from this study were quite in favour of bilingualism. When looking at the thematic analysis for parents' ideologies, we did not observe any differences in trends of responses between parents of the OMin group and the Min group. However, parents from the OMin group did not mention any responses regarding how they could adapt the language learning process for their child. On the other hand, a few parents from the Min group mentioned different ways to adapt the learning process for their child. This difference could reflect the difficulty relating to developing and maintaining a minority language (Smithson et al., 2014), particularly those without official status. Some parents teaching their child a non-official minority language may have experienced a need to adapt the learning process to get the child engaged in learning the minority language. This may not have been the case for parents teaching English. Alternatively, parents teaching a non-official minority language may be more invested in teaching the language and may have experimented with or researched different methods to achieve this. Parents also stated various reasons why they find it important for their child to learn their language. Similar to Park and Sarkar's (2007) study conducted in Montreal, many parents have stated reasons that show that knowing another language is an asset that the parents can help their child develop and may give the child an advantage in the future. Interestingly, parents in the current sample did not mention any reasons for importance relating to their personal experiences with bilingualism as described in previous studies (Surrain, 2018). This finding or lack thereof, along with the optimism towards bilingualism, may be related to the high rate of bilingualism in the GMA. According to Statistics Canada, during the 2016 census, over half of the GMA's population is bilingual in the official Canadian languages (Statistics Canada, 2017b). Considering the role schooling may play in language development, it is important to consider this factor for the children in the study. The children attending French

schools may have weekly English classes. However, these classes may not be challenging enough for children who speak English at home at their grade level. However, these weekly classes allow the child to practice language use outside of the home. Comparatively, of the seven children school in a French-English bilingual setting, four children, including one tested in Mandarin, scored 1SD above the mean, two children scored above the mean, and one scored below the mean. Regarding the NSS scores, all children were able to complete the task. Kupisch and Rothman (2018) mention that having the minority language as the means of instruction rather than the subject studied also provides the child with exposure and practice in a more formal language that is not always experienced at home. At the same time, as the data was collected for a larger study, we cannot confirm whether the children took extracurricular language courses in their minority language.

Parent ideologies as measured through the thematic analysis did not seem to particularly show trends or patterns of response among parents of children with lower scores that differed from parents of higher scoring children. However, trends were at times observed among parents of children with higher scores for both the PPVT task and NSS task. This lack of pattern among parents of children with the lowest scores could be due to the difficulty of capturing ideologies through questionnaires, as Nakamura (2019) mentioned. These questions were completed with at least one of the parents by the research assistant. The research assistant may have summarized or interpreted certain parts of parents' responses due to the limited space in the form or the remaining time left for the visit. Alternatively, these trends could only be appearing for the parents of higher scoring children as they take particular care for the development of the minority language. Moreover, while parents may hold these ideologies, it may not always be possible for them to apply them as they wish due to various life circumstances.

Considering the role book use plays in predicting scores for the narration task, which allows us to assess various language skills, the availability of books in the minority language is a particularly important factor to consider. For example, English books

are quite easily found in bookstores and municipal libraries in Montreal. Schools are also quite likely to carry English language books in their libraries. On the other hand, books in non-official languages are not as easy to come by. While the Montreal library online catalogue displays the possibility to search for books in Spanish, Arabic, Mandarin, and Italian, a quick search of available books in the children's section in these languages returns about 11 books which were either in Chinese or Spanish. While this quick search is not representative of the libraries of other cities in GM, this demonstrates a difficulty for access to minority language children's books in GM. This variable can be considered both as an element of how the child chooses to use their languages as well as part of the parent's language strategies. For example, the child could decide that they would rather not read or be read a book in the minority language. However, at the age of the children in the current study (i.e., 5 to 7 years old), it is difficult for them to seek out books in the minority language on their own. Additionally, Gosselin-Lavoie and Armand (2015) summarized literacy programs that have considered the family's cultural background and integrated books in the child's L1 into the program. These literacy programs were shown to help the children become more interested in school, help parents bond with their child and help the child integrate into the school environment. Given these findings, literacy in the minority language can play an important role in various areas of life for the child.

Limitations and future directions

Furthermore, this may be related to the family's socioeconomic status (SES). Although this variable has not been assessed in the current study, differences in SES have been related to the difference in the children's language experience (Hoff, 2006). Future studies can assess how the language experience may differ for children in relation to their parent's language strategies or how the language experience may affect how the child decides to use their languages. Additionally, given the importance of the child's use of their languages, future studies could assess the effects of communication between the child and their siblings or their close friends. When assessing the impact of having older siblings on language development, Bridges and Hoff (2014) found that

older siblings influenced language development in a majority language but not a minority language. Assessing close friends could be interesting to assess the influence of language choice with peers has on language development due to the role peers may play (Hoff, 2006). The language of communication between parents can also be interesting to assess, seeing as it has been reported to affect outcomes (Slavkov, 2017). Further, given the difference in the number of items in the PPVT task differed for the assessed languages, the obtained ratios, while insightful, may not fully capture the differences between the groups.

The mixed-methods approach applied in this study has given an interesting understanding of how children's language development may be affected by parents' family language policies and how the child themselves chooses to use their languages. Building on these findings, we can better assist bilingual families in understanding what they can do to attain the level of proficiency in their minority language that they see fit.

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Chapter 4 – General Discussion

This master's thesis sought to understand how parents' FLPs as measured through parents' language strategy choices and the child's use of their languages affect receptive vocabulary and expressive narrative skills in a minority language. The present chapter aims to provide a general discussion of this master's thesis results. The most used official language can differ from area to area in Greater Montreal (GM), while for the most part, both languages without experiencing too much difficulty. The two groups assessed in the current study were (1) children who have no significant exposure to languages other than French and English and (2) children who have significant exposure to a non-official minority language. The data from 38 children recruited through a larger cohort study were analyzed. Of these children, 21 were bilingual in English and French only at testing, and 17 were exposed to at least one non-official minority language. Participants lived in various areas within GM at the time of the study. All children had significant exposure to the tested minority language by the time they were three years old and thus could all be considered simultaneous bilinguals. Among the children in the sample, five children were exposed to at least three languages. Three of the children were trilingual with English, French, and another language. The remaining two children were exposed to an additional language for a total of 4 languages. Measures of language development included a PPVT test to assess receptive vocabulary, and a narration task that was scored with the NSS was used to assess oral narration skills. Additionally, the C-QUEB was used to assess parents' language strategies, the child's use of language, and parents' language ideologies. In this mixed-methods analysis, two approaches were undertaken to explore the research questions: linear regression and thematic analysis.

Key findings from linear regression for each type of measure of language skill suggest that the child's refusal to use the minority language is a predictor of PPVT scores, and the use of books in the minority language is a predictor of NSS score. Language status was not a predictor for either language measure. To better understand how the parent's language ideologies and the child's use of language may be related to these results, two groups were compared: (1) children scoring 0.5SD above the sample mean

(+0.5SD group), and (2) children scoring 0.5SD below the sample mean (-0.5SD). While there was some overlap between the groups, group composition was not identical for the PPVT and NSS. Regarding parent ideologies in relation to PPVT scores, parents of the +0.5SD group and the -0.5SD group found it important for their child to learn their language for family and cultural links. Additionally, parents of the +0.5SD group tended to mention reasons relating to the future opportunities that bilingualism can bring, while parents of the -0.5SD group tended to mention reasons relating to social expectations. While parents of both groups suggested that parents can expose their child to the language through speaking and reading stories to help the child learn to speak a language, only parents of the +0.5SD group mentioned being a good language model for the child. When looking at the child's response patterns in relation to PPVT scores, the mode response for children in the -0.5SD group was to mainly respond in French, while the mode response for the +0.5SD group was to respond in the language spoken by the parent. Regarding parent ideologies in relation to NSS scores, parents of the +0.5SD group tended to mention that they hoped their child becomes completely bilingual, while this was not the case for the parents of the children that scored 0 on the NSS. Furthermore, parents of the children that scored 0 tended to suggest parents speak the language to help the child learn to speak it, while parents of the +0.5SD group tended to suggest reading or telling stories. Regarding the child's response pattern relating to NSS scores, mode response pattern for children scoring 0 was to respond mainly in French, while for the +0.5SD group, the mode response was to respond in the language spoken to them.

Parent language strategies

The hypothesis for objective 1 suggested that the children of parents with language strategies prioritizing the use of the minority language in the home will best develop their minority language. These language strategies have been assessed in distinct parts. Neither the ratio of exposure to the minority language nor the use of the OPOL strategies was found to be a significant predictor of PPVT scores or NSS scores. Relating to the language used for different media, which can be considered both the

parents' language strategies and the child's use of language, books were seen to be a significant predictor of NSS scores. For example, the child could decide that they would rather not read or be read a book in the minority language. However, at the age of the children assessed in this thesis (i.e., 5 to 7 years old), it is difficult for them to seek out books in the minority language on their own. As discussed in Chapter 3, English books are quite easily found in municipal libraries and bookstores in Montreal. Even French schools are quite likely to carry English language books in their libraries. On the other hand, books in non-official languages are not as easy to come by. While the online library catalog for the city of Montreal displays the possibility to search for books in Spanish, Arabic, Mandarin, and Italian, a quick search of available books in the children's section in these languages returns about 11 books which are either in Chinese or Spanish. This quick search is by no means representative of libraries in other cities. However, this search illustrates the difficulty in accessing minority language children's books in GM. Therefore, for the children to have a choice of whether they want to use the books in the minority language, parents must make the choice and put in the effort to make said books available to the child. While the more direct forms of influence such as exposure ratio or strategies such as OPOL may not have a significant influence, the environment in which the parent creates may play an important role in the child's choices. For example, Polinsky and Kagan's (2007) overview on heritage language research discussed findings where the child's language skills in a minority language were correlated with parent's attitudes towards the minority language and how much they integrated the culture in the home environment (e.g., instilling ethnic pride or encouraging the child to learn and practice cultural traditions and values). Interestingly, a study by Moore (2006) found that when children in a bilingual classroom setting were encouraged to draw from their knowledge of their other languages when facing an unknown language, these children were better able to make use of their linguistic knowledge and perceived a bilingual person's languages as less dichotomous. Similarly, parents may influence how the child themselves decide to use the minority language through these practices.

Child's use of languages

The hypothesis for the objective 2 suggested that children who use the minority language frequently and consistently will develop their expressive language best. However, in this master's thesis, we have not assessed the child's language choice directly when initiating a conversation themselves. We did, however, assess their use of media and response patterns to their parents. Most of the top-scoring children in the NSS used multiple forms of media in the minority language, and, specifically, most read or were read books in the minority language. The highest scoring children also tended to reply in the language spoken to them. Additionally, the remaining variables of the child's use of language were not significant predictors of NSS scores. Given the importance of the child's use of books in the minority language, it is important to consider how to integrate the use of books in the minority language. Gosselin-Lavoie and Armand (2015) have summarized findings on literacy programs that take the family's cultural perspectives and integrate books in their L1. These programs can help the child become more interested in school, which is in the majority language, help parents bond with their child, and help the child integrate into the school environment. Based on these results, integration of minority language in literacy programs would not only help with the development of the minority language but also with helping the child integrate in school. Additionally, as children get older, they may be spending less time with their parents. Given previous findings on the impacts of older siblings on majority language development (Bridges & Hoff, 2014) and the role of peers (Hoff, 2006), it may be important to also assess the child's language use with siblings and friends in the future studies.

Parent ideologies and language status

While the findings were not causal, the parents of top-scoring children on the NSS tended to want their child to be completely bilingual, while this was not the case for the parents of the children that could not complete the task. Additionally, the former parents also suggested that parents can help their child learn to speak a language through reading. This could suggest that the parents of top-scoring children

on the NSS may be reading to their child, which, in turn, could have contributed to their higher scores. However, as Nakamura (2019a) mentioned, it can be difficult to capture parents' true ideologies through a questionnaire, as was done in this master's thesis. No similar findings were found in relation to the parents of top-scoring children on the PPVT task. These findings can be suggestive of a more general additive environment for bilingualism in GM. None of the parents mentioned any negative comments regarding bilingualism. In fact, the parents had positive views on bilingualism and discussed bilingualism as an asset for their child. This reflected similar findings in Park & Sarkar's (2007) study, which also found that parents from Montreal also have positive views on raising their child bilingually. Together these studies suggest that there is a positive view of bilingualism in Montreal. This positive view may be related to the relatively large language population of the languages assessed in our study. During the 2011 Canadian census Arabic, Spanish and Italian were the three most common non-official L1 in Montreal, and Chinese was in the top ten most common non-official L1 (Statistics Canada, 2012). Since there was a large population of L1 speakers on the island of Montreal, this could also reflect a large language community with which the families may be interacting. Additionally, interactions with the large community may have influenced parents' ideologies relating to developing or maintaining the minority language. However, the influence of these language ideologies may not be restricted through interaction with the language communities as they may also be affected by the parent's outlooks on what knowledge of the minority language brings for their children (Curdt-Christiansen, 2009). Interestingly, parents did not mention any responses related to their personal experiences throughout the thematic analysis. This pattern is in contrast with Surrain (2018), which found that the parents in their study mentioned personal experiences in justifying their language choices. This contrasting finding may be related to a more general positive outlook on bilingualism within Montreal, which reduces the need for parents to justify why they decide to raise their child bilingually. Unlike the trends seen for parent response of the highest-scoring children in the sample, there were no trends in the suggestions of what a parent can do to help their

child learn a language from the parents of the highest performing children of the Min group. This could tie into the fact that language status was not a significant predictor for PPVT scores. Concerning NSS scores, it is difficult at this time to assess whether such a trend exists for parents of the highest-scoring children seeing as 8 of the 9 children tested Spanish have yet to be scored. In terms of the child's language use, the highest-scoring children on the PPVT in the Min group all never refused to use the minority language. Additionally, three of the four children responded in the language spoken to them, and half used books in the minority language while the other half did not. In comparison, the lowest-scoring children for the PPVT in the Min group had three of the five children that do not use books in the minority language and never refused to use the minority language. Regarding NSS scores, none of the three children in the Min group that were not able to complete the narration task read books in the minority language, 2 of the 3 refused to speak in the minority language often due to shyness, and 2 of the 3 children mainly responded in French. When looking at the thematic analysis for parents' ideologies, we did not observe any differences in trends of responses between parents of the OMin group and the Min group. However, parents from the OMin group did not mention any responses regarding how they could adapt the language learning process for their child. On the other hand, a few parents from the Min group mentioned diverse ways to adapt the learning process for their child. This difference could reflect the difficulty relating to developing and maintaining a minority language (Smithson et al., 2014), particularly those without official status.

Contextualizing the findings

Kupisch and Rothman (2018) discuss heritage speakers as native speakers of the minority language. According to this article, heritage speakers acquire their language for different uses and develop the minority language accordingly. This concept resembles Grosjean's (2010) description of the complementarity principle through which bilinguals develop their vocabulary for different purposes in each of their languages. Therefore, for these reasons, results from the current study have not been

compared to monolingual children. For example, families could be using the minority language in very specific contexts. If this is the case, some of the words from the PPVT task may not be words that the child hears within their family context or the dialect of the language used. Unless the child is enrolled in a language school, the child may not be exposed to the more standard variety of the minority language. They might not be familiar with the words tested in the task. On the other hand, the narration task allowed us to assess whether the child was minimally able to tell a story in their minority language. These tasks provided an idea of which children are receptive bilinguals, active bilinguals, and whether any children are functionally monolingual. According to Nakamura (2019b), receptive bilinguals can minimally respond in the non-dominant language and make simple script-like responses when prompted but would not be able to produce original utterances on their own. Based on these definitions, at least one child in the sample would be functionally monolingual as they scored lower than chance level (0.25) on the PPVT and could not complete the narration task. One other child scored similarly on the PPVT but could not be assessed on the narration task due to the missing recording. Interestingly, of the children scoring under chance level on the PPVT, two children scored among the highest on the narration task. This discrepancy could be related to the previously mentioned differences in the vocabulary tested and the vocabulary used at home. There were about four children who scored above chance levels on the PPVT but were not able to complete the narration task. These four children could be considered receptive bilinguals. Additionally, one of the children that scored 0 on the narration task seemed to be quite shy and distracted during the task and needed their mother to intervene quite often to get the story moving. While the use of the distinctions between standard or academic varieties and more informal variety as well as proficiency more generally is a point of contention for some researchers, these distinctions have helped researchers within the field of language education better evaluate the impacts of bilingual programmes (Cummins, 2021). Within the context of this thesis, the use of the measures and classifications are intended to provide context on how different situations may relate to different capacities for language use

in the minority language. Based on these classifications, the question then becomes what can be done to help parents of receptive bilingual or functionally monolingual children if they want their child to develop into active bilinguals. The current findings suggest that creating an environment where the child is less likely to refuse using the minority language can help with receptive vocabulary, while using books in the minority language may help the child in the narration task.

Future directions

Most of the children have already started primary school, which is when children tend to lose proficiency in the minority language (Guardado, 2006). It would then be very interesting to assess how language skills change with time and whether any parent strategies or ideologies along with the child's language use patterns relate to results a year or two later. Also, seeing as SES has been linked with literacy skills in monolingual populations, the assessment of SES could provide additional insight into the present results. For example, SES could impact access to materials such as books in the minority language or possibly language courses and the parent's education level, possibly impacting strategies adopted by parents (Dixon et al., 2012). Furthermore, more detailed questions regarding the child's language experience outside of the home could provide additional information on the impacts of parents' strategies and ideologies more generally and give more specific information regarding how the child uses their languages in various areas in life. This information could be important, seeing as the child may spend more time outside of the home as they get older. Additionally, the assessment of identity may provide added perspectives on how the child assimilates their parent's language practice and language ideologies encountered outside the household.

Conclusion

The present master's thesis assessed the impacts of family language policies and the child's language use on minority language development in Montreal, Quebec. Results indicate that the child's tendency to refuse to use the minority language affects

vocabulary breadth as measured using the PPVT. Additionally, the use of books in the minority language was seen to correlate with narration skills as assessed using a generative story scored using the NSS. While not all parents raising bilingual children may want their child to become active users of the minority language, our results suggest that creating an environment in which the child does not feel the need to refuse using the minority language, and where they can be read or read books in the minority language can contribute to the capacity to use the minority language actively.

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