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Can family language policy predict linguistic, socio-emotional and cognitive child and family outcomes? A systematic review

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ABSTRACT

Multilingual families face decisions about the linguistic upbringing of their children. These decisions shape their family language policy (FLP) which potentially impacts the children and their family. Departing from this hypothesis we conducted a systematic literature review applying the PRISMA guidelines, screening three databases, using search terms related to FLP (building on Spolsky's framework). After a title- and abstract-based initial screening, 191 retained articles were scanned for a connection between FLP (components) and outcomes. We classify fortytwo studies that describe such a link in multilingual families with focal children under the age of thirteen. Based on our results, we argue that studies exploring the socio-emotional (9) and cognitive outcomes (13) are underrepresented, especially because all but one of these studies also largely focus on linguistic outcomes (41). When it comes to the separate components of FLP, practices are found to have the most impact (41 studies), either exclusively (16) or combined with management (12), beliefs (6) or both (7). Based on this review, we recommend future studies to further explore the socio-emotional and cognitive spheres and all their aspects, preferably in families with young children, including families from various language groups or communities, and adopting a longitudinal design.

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KEYWORDS

Bilingualism; multilingual education; family language policy; language beliefs; language practices; language management

Introduction

Multilingual families, whether they have multiple home languages or the home language(s) differ(s) from the institutional language, face decisions about the linguistic upbringing of their children. These decisions shape their family language policy (FLP, i.e. how a family views and organises language use) which potentially impacts children and the family as a whole. This insight goes together with scholars' growing interest in multilingual child-rearing, often focusing on children's (linguistic) home environment and families' language policies. But even though linguistic diversity, in and outside the family domain, is, more than ever, a reality, beliefs on the impact of early multilingualism still differ greatly. While most scholars shifted from bilingual disadvantage theories stating multilingualism leads to confusion and lower intelligence (e.g. Saer 1923) towards a more nuanced or even appreciatory approach (as evidenced in Barac and Bialystok 2011 and Byers-Heinlein and Lew-Williams 2013), society often remains sceptical. Some policymakers and ECEC (Early Childhood Education and Care) professionals, for instance, still advise against multilingual childrearing (e.g. Kirsch 2012; Aghallaj et al. 2020), causing parents raising their family in a multilingual context even more concern about the linguistic, cognitive and socio-emotional development of their children.

Research on family language policy frequently addresses these concerns when studying '[w]hat beliefs, practices, and conditions lead to what child language outcomes?' (King 2016, 729), often even going beyond outcomes in the linguistic domain. This is evidenced in several research timelines and review studies on family language policy, family factors for childhood bilingualism or well-being in bilingual settings (e.g. De Houwer 2017, 2020; Hirsch and Lee 2018; King and Fogle 2013; Pearson 2007; Schwartz 2010), each of which describes how certain factors (e.g. parental language use) may lead to certain outcomes (e.g. children's proficiency or well-being). However, we argue that, in order to better find associations between FLP components and outcomes and generalise claims on the potential impact of FLP, the literature ought to be addressed systematically. In light of this hiatus, we methodically analysed the connection between FLP components (based on Spolsky's framework) and their outcomes, applying the PRISMA guidelines. This way of systematizing FLP research not only enables us to uncover potential connections between FLP (components) and outcomes on individual and family level, but might also enable us to better support families in making educated decisions concerning their language policy, taking into account their possibilities and goals. In addition, by examining both FLP as a potential predictor variable and used research methods in the literature, we aim to divulge lacunae and make recommendations for future FLP studies.

Theoretical framework

Family language policy (FLP)

As the family domain soon proved to play a key role in processes such as language maintenance or language shift, the study of family language policy has established itself in the literature over the past two decades (e.g. Caldas and Caron-Caldas 2000; Curdt-Christiansen 2009; King and Fogle 2006, 2013; Spolsky 2012; Tannenbaum and Howie 2002) and has evolved and expanded considerably since Ronjat's (1913) diary studies on his son's bilingual upbringing to today's interdisciplinary research connecting child language acquisition and language policy (King, Fogle, and Logan-Terry 2008).

In studying multilingual families, Spolsky's (2004, 2012) language policy framework is commonly adapted to the family domain, examining one or all three components of the non-unitary construct (F)LP; i.e. beliefs (beliefs about and attitudes towards language(s) and language use), language practices (language(s) used in families' daily interactions and employed strategies), and language management efforts to shape the language use and learning outcomes (King, Fogle, and Logan-Terry 2008; Spolsky 2004).

This framework has received some remarks over the years, of which the constraining focus on explicit choices probably is the most common one. Several scholars (e.g. Caldas 2012; Curdt-Christiansen 2009; Fogle 2013) therefore, recommend including covert and implicit language choices, as, according to Caldas (2012, 352) the majority of parents do not strategically plan a policy and in reality

family language policies lie along a continuum ranging from the highly planned and orchestrated, to the invisible, laissez-faire practices of most families. Somewhere in between are found the pragmatically inspired language strategies employed by families in sociolinguistic contexts that confront them with real choices that have real consequences for their children.

Irrespective of the consciousness of their linguistic choices, any multilingual family's language policy is continuously susceptible to internal and external changes and influences. Societal pressure to adopt the dominant language; advice (e.g. Okita 2002) from family members, ECEC professionals, or teachers; parental expectations (e.g. Curdt-Christiansen 2009); the family's socio-linguistic

background; and the broader context within which the family lives (Caldas 2012) can all shape and affect the FLP. One of the strongest described influences, however, probably is the influence (school-age) children exert on their family's language policy. The observation that children are important agents in modifying the FLP, even though they lack their parents' authority (Gyogi 2015; Kheirkhah and Cekaite 2015, 2018; Revis 2019; Said and Zhu 2019; Tuominen 1999) was partially addressed by Spolsky's (2019) latest addition to the original model, introducing advocates to the management component (individuals without authority wishing to change language practices). The addition of self-management or efforts speakers make to modify or increase their own linguistic repertoire and proficiency (Spolsky 2019), has also been observed and described in several FLP studies (e.g. adoptive parents learning the birth-language of their adopted children (Fogle 2013; Shin 2013)).

Possible outcomes of FLP

Since FLP research arose to bridge the gap between language policy studies and research on child language acquisition (King, Fogle, and Logan-Terry 2008), much of the early work centred on the impact of FLP on child language development. Reported outcomes in the linguistic sphere, such as children's proficiency, but also language use, and language maintenance or shift, therefore, seem self-evident and are well researched. The potential impact of FLP, however, goes beyond the linguistic domain, as research also uncovered outcomes in the socio-emotional and cognitive sphere. Below we describe different outcomes (as categorised by us) and several ways in which they are potentially influenced by FLP. Most studies point at children's outcomes, often linked to parental practices, ideologies and management. Children's agency or influence and parental outcomes seem to be examined less frequently, but are addressed in the literature nonetheless. Furthermore, one should bear in mind that the reciprocity, interplay and dynamic character of both FLP (components) and outcomes, make it challenging to clearly pinpoint the connection and its directionality.

Linguistic outcomes

Proficiency

Various studies observe a link between FLP and language proficiency, the outcome most examined. Practices seem the most influential component affecting children's lexical and grammatical development, where a higher quality and/or quantity of language input lead(s) to earlier and/or better language acquisition (Blom 2010; Hoff et al. 2012; Paradis 2011; Place and Hoff 2011; Quiroz, Snow, and Zhao 2010). Not only parental, but also siblings' language use is proposed to affect children's proficiency, often favouring the IL (Duursma et al. 2007). In addition, children's linguistic development benefits from positive beliefs. This holds for both parental (Makarova, Terekhova, and Mousavi 2019) as children's own attitudes (Schwartz 2008, 2012; Zhang and Slaughter-Defoe 2009). Lastly, parental management efforts such as enrolling children in heritage language classes (Mattheoudakis, Chatzidaki, and Maligkoudi 2017) can also positively affect children's proficiency.

Language use

Analogous to children's proficiency, their language use is suggested to be another outcome associated with FLP. Children's language use is linked with parental attitudes and linguistic choices, which shape parents' practices (overview by De Houwer 1999). Practices in the form of exposure in particular, either via parental input or peers' and siblings' language use, can influence focal children's language use. Lastly, management, such as parental discourse strategies, affects not only children's language use, but also their active bilingualism, and/or tendency to codeswitch (Döpke 1988, 1992; Lanza 1992, 1997, 2001), where explicit strategies are more successful regarding children's use

of the minority language. It is important to note that language proficiency and use are interrelated outcomes that can affect one another, as evidenced in Pearson's (2007) input-proficiency-use cycle.

Language maintenance or shift and degree of bilingualism

In addition to being separate outcomes, language proficiency and use are valuable indicators to measure the direction and degree of language maintenance or shift, and the degree of bilingualism (i.e. active or passive; balanced or unbalanced), which are therefore also expected to be influenced by FLP. Since language maintenance requires intergenerational transmission of a language, it is a process in which families and their policies play a key role (Fishman 1991, 2001; Schwartz 2008; Spolsky 2004, 2012). When a family is unable or unwilling to transmit the heritage language (HL) to the next generation(s), a language shift starts to occur in favour of the institutional language (IL). This language shift can be measured by comparing the use of and/or proficiency in the IL versus the HL across generations (de Bot 2001). Family members' degree of bilingualism can be approached in the same way.

Socio-emotional outcomes

Several studies connect socio-emotional outcomes to FLP. Firstly, the influence of linguistic outcomes cannot be overlooked when addressing well-being, these outcomes are therefore seen as part of FLP. Secondly, we argue socio-emotional outcomes might indicate a (mis)match, for instance between FLP components (beliefs, practices, and management); between expectations and reality; between individual family members' language use, beliefs, or proficiency; etc. We propose a distinction between linguistic and general socio-emotional well-being. Linguistic well-being, on the one hand, refers to positive or negative emotions related to language acquisition, proficiency, use, etc (e.g. parental frustration due to a child's low HL proficiency or reluctant HL use). Socio-emotional well-being, on the other hand, involves family relations, identity, general feelings of well-being, etc.

All three FLP components play a role in affecting linguistic and general well-being. Conflicting ideologies (King, Fogle, and Logan-Terry 2008; Shohamy 2006; Spolsky 2004) or children and parents not sharing a language (Portes and Hao 1998; Soehl 2016; Tseng and Fuligni 2000; Wong Fillmore 2000), for one, might negatively impact communication, identity, family cohesion and emotional bonding. Furthermore, HL management at home that feels too effortful, leads to the expression of shame, disappointment, frustration, stress and tension (De Houwer 2017; Okita 2002; Schwartz 2008). Positive socio-emotional outcomes are also observed. A stronger emotional connection to the heritage language and culture (Kopeliovich 2010; Okita 2002), more psychosocial and emotional well-being (Liu et al. 2009) and more family cohesion (Tannenbaum and Berkovich 2005; Tannenbaum and Howie 2002), for instance, are potentially connected to pro-heritage language homes and/or higher HL proficiency. As with other outcomes, however, defining directionality is challenging. Family cohesion, for instance, can generate greater management efforts to maintain the HL, but concurrently, HL maintenance could lead to closer family relationships (Tannenbaum and Howie 2002).

Cognitive outcomes

Lastly, numerous studies report advantages of multilingualism in young children on inhibitory control, working memory and selective attention (i.a. Bialystok, Craik, and Luk 2012; Bialystok et al. 2010; Carlson and Meltzoff 2008; Struys et al. 2015). Most studies, however, do not explicitly link cognitive results with FLP. Approaching the examined influencing factors (often age of acquisition, exposure, and proficiency) via the FLP framework, we could classify some of them as practices or management. Increased language input, for instance, is said to give children more opportunities to develop the cognitive processing skills needed for vocabulary learning (Cheung

et al. 2018; Marchman, Fernald, and Hurtado 2010). In addition, exposure to the minority and/or majority language at home (Carlson and Meltzoff 2008; Gathercole et al. 2010) or the frequency of codeswitching (Soveri, Rodriguez-Fornells, and Laine 2011) might influence children's cognitive control. Beliefs might play a role in steering language practices and management, but don't seem to be directly connected to cognitive outcomes.

Present study

Since both FLP and its main outcome, child language development, are already well-researched and detailed, we decided not to focus on the conceptualisation of, but rather on the connection between both concepts, going beyond outcomes in the linguistic domain. Considering the possible implications language practices, beliefs, and management have on multilingual families with young children, a thorough overview comparing existing literature on the subject was deemed necessary. As methodological comparisons enable us to generalise claims on the potential impact, we systematically reviewed the current literature, selecting, analysing, and classifying available studies on FLP as a potential predictor variable in an attempt to answer the following research questions:

- (1) Which outcomes are found to be connected with family language policy (FLP)?
- (2) Which components of FLP specifically are found to be connected with these outcomes?
- (3) Which research methods are used in the selected studies?

With the first question we aim to investigate the ways in which FLP might affect multilingual families and their children. However, as the definition of a successful policy largely depends on the goals an individual family has set, this review does not refer to policies as successful or unsuccessful. The second research question helps us to pinpoint the specific component(s) of FLP linked to these outcomes. By addressing these first two questions, we might be able to support families in making educated decisions concerning their language policy, depending on their goals. In order to shed a better light on the included studies and to make recommendations for future studies, the methodology used to explore a link between FLP and possible outcomes should be examined. Exploring our third research question, we aim to achieve a better understanding of the currently available expertise and lacunae in terms of language sociological settings, study designs and age categories.

Methodology

In conducting this study, we employed PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), the standardised protocol for conducting systematic reviews and delivering transparent reporting (Liberati et al. 2009). Following the PRISMA guidelines, checklist and flow diagram, a systematic search strategy with pre-selected search terms and eligibility criteria was applied. The databases Web of Science, Scopus, and Education Resources Information Center (ERIC) were systematically, and in this order, searched for peer-reviewed articles on the connection between bi-or multilingual families' language policy (components) and possible outcomes on an individual and family level. The cut-off date for the search was July 2019, whereas no 'start date' limiter was imposed. Due to the origination and use of the term 'family language policy' in the early 2000s, however, we anticipated obtaining mostly search results from the past two decades.

Search terms

Procedure

The queries, based largely on the components in Spolsky's framework, in Figure 1 were entered in the three databases, searching anywhere in the article, refining the search via quotation marks. This search method culminated in approximately 720 unique hits (calculated via extrapolation) to which

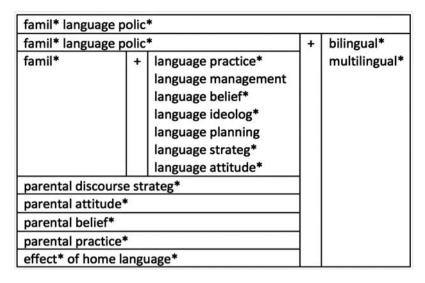


Figure 1. Search query.

we applied a title- and abstract-based initial screening. First, the titles of the unique hits were read, immediately excluding articles of which the title clearly was unrelated to the topic of FLP. When the title was not a conclusive reason for exclusion, the abstract was read in order to decide whether the study met our inclusion criteria (note: in this stage we included all minors, 0-18 years). When this was unambiguously not the case, the study was dropped. In case the abstract did not provide sufficient information for exclusion, the study was retained. As for language, articles written in another language than English were only included if at least one of the authors had sufficient receptive knowledge of that language. Apart from the articles written in English (187), this led to the inclusion of one article in Dutch, one in French and one in German. One article written in Galician was excluded for that reason (Figure 2).

All of the 190 retained articles were skimmed to determine inclusion. In this stage articles not reporting original data (4) were removed first. Subsequently, articles were scanned for a link between FLP and outcomes. Due to the focus of our review, only articles mentioning a potential connection (either merely descriptive or via statistical analyses) qualified for our systematic review, as such both FLP and outcomes needed to be described explicitly. Studies mentioning the effects of multilingualism (e.g. cognitive effects, language proficiency) without giving attention to FLP (components) were removed, as were records mentioning effects related to an undescribed factor or general approach (e.g. general educational openness or strictness). In this stage, 118 studies were excluded, leaving 68 studies.

Of those sixty-eight, twenty-six records were rejected based on the age category of all focal children in the study, which was at this point limited to twelve years old (0-12 years).

Only studies describing a link between FLP (components) and outcomes in multilingual families in which all focal children were younger than thirteen years were included, resulting in the selection of a total of forty-two articles.

Inclusion criteria

The following inclusion criteria were applied: (a) peer-reviewed studies published in English or a language mastered by one of the authors, (b) conducted and published (or in press) before July 2019, (c) research population is limited to bi- or multilingual families in which the focal child is 0-12 years old, (d) the study describes a connection between FLP (components) and outcomes

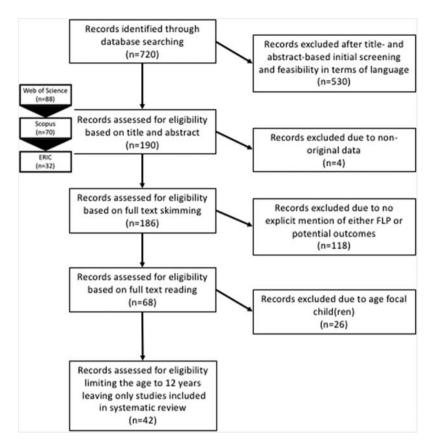


Figure 2. PRSIMA flow diagram.

within the family domain or on the level of the individual family members. We are aware that our methodology and inclusion criteria do leave out certain influential FLP research, as we specifically focus on studies indicating a connection between FLP and outcomes.

Given the assumption that the FLP established and implemented during early childhood is the foundation of children's linguistic, cognitive and socio-emotional development, we decided to concentrate on studies involving young children. Nonetheless, the age limit was adapted during the course of the selection process. We started the initial screening with studies focusing on minors (0-18 years), in order to maximise the amount of valuable search results. As for the final selection we initially intended to use age seven ((elementary) school attendance) as a cut-off. Due to the limited variation in outcomes for that age category, however, the cut-off was raised to age thirteen (secondary school attendance). No distinction was made between included languages (e.g. status, language family, number of speakers, etc.), but studies focusing only on language varieties (i.e. dialects) were excluded in the earliest possible stage.

Results

Based on the final selection of forty-two articles, we attempt to answer the three research questions formulated earlier. Table 1 presents an overview of the selected studies and comprises of information on (a) applied research methods, (b) age of the focal child(ren), (c) languages and country, (d) observed outcomes (L stands for linguistic outcomes, S-E for socio-emotional outcomes and C for cognitive outcomes), and (e) connected family language policy components (B stands for beliefs, P for practices and M for management). The languages in italics present minority and/or heritage

Table 1. Overview of selected studies, describing method, age of focal child(ren), languages, country, outcome variables and related FLP component(s).

Study	Method	(Mean) Age focal children	Languages and country	Outcome(s)	Related FLP component(s)
Altman et al. (2014)	Child and parental interview, linguistic assessment/ tasks 65 children	4;6–6;9 yo	Russian & Hebrew Israel	L: language use and proficiency	B, P, M (*FLP studied as a whole)
Cheung et al. (2018)	Parental questionnaire, linguistic assessment/task, recording/observation, teacher interview 92 children	49.87 mo	<i>Cantonese &</i> English USA	L: proficiency C	Ą Ž
Curdt-Christiansen (2016)	Recording/observation over six months, FLP audit, parental interview 3 focal children (3 families)	5–7 yo	Mandarin/Hokkien & English Malay & English Tamil & English Singapore	 L: language use, proficiency, language shift S-E: linguistic and general well- being 	B, P (beliefs shape P)
Danjo (2018)	Recording/observation, parental and child interview, teacher interview, parental diary entries over 16 months 2 children (1 family)	4 & 6 yo	<i>Japanese</i> & English UK	L: language use, proficiency S-E: general well-being C	۵
De Houwer (2007)	Parental questionnaire 1899 families	6–10 yo	Several HLs & Dutch Belgium	L: language use	۵
Dekeyser and Agirdag (2018)	Child questionnaire 500 children	10-12 yo	Arabic and/or Berber & Dutch Turkish & Dutch Eastern European languages & Dutch + other HLs Belgium	L: emotional language use S-E: emotional language use ("domains overlap)	д. Р
Dekeyser and Stevens (2019)	Child questionnaire 312 children	10-12 yo	Arabic and/or Berber & Dutch + other HLs Belgium	L: proficiency	B, P, M
Dolson (1985)	Child questionnaire, teacher reports, standardised test scores 108 children	10-12 yo	<i>Spanish</i> USA	L: proficiency S-E: general well-being C	۵
Doyle (2018)	Parental interview, parental questionnaire 5 children (4 families)	4;8-11;2 yo	Hebrew & Estonian Slovenian & Estonian Swedish & Estonian Turkish & Estonian Estonia	L: language use, proficiency S-E: linguistic and general well- being	Θ΄ W
Duarte et al. (2014)	Parental and child interview, parental questionnaire, linguistic assessment/task 133 children	11 yo	Russian & German Turkish & German Vietnamese & German Germany	L: writing proficiency in German and HL C	۵

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Study	Method	(Mean) Age focal children	languages and country	Outcome(s)	Related FLP
Eisenchlas et al. (2019)	Parental questionnaire, parental interview 6 mothers of 8 children in total	5–10 yo	Taiwanese & English (*during the sojourning, Taiwanese becomes the IL)	L: proficiency S-E: linguistic and general well- being	×
Han, Lee, and Waldfogel (2012)	Parental interview, linguistic assessment/task over five years 6800 children	from birth to 5 yo	Australia Se <i>veral HLs &</i> English USA	' other ': developing self-reflection L: proficiency C	۵
Hoff et al. (2018)	Parental questionnaire, linguistic assessment/task over thirty months 178 children (139 children from Spanish-speaking or bilingual homes)	from 30 mo to 60 mo	<i>Spanish</i> & English USA	L: proficiency	۵
Howard et al. (2014)	Parental questionnaire, recording/observation, linguistic assessment/task, teacher interview, school records	5, 8 yo & 10 yo	<i>Spanish &</i> English USA	L: proficiency C	۵
lbrahim et al. (2013)	Parental questionnaire, linguistic assessment/task 49 children (*28 native speakers of Arabic, 21 children with L1 Hebrew, their L2 Arabic was confined to the school context)	8–10 yo	<i>Arabic &</i> Hebrew Israel	L: proficiency C	, д М
Juan-Garau and Pérez- Vidal (2001)	Recording/observation, parental diary entries over approx. three years 1 child	from 1;3–4;2 yo	<i>English &</i> Catalan Spain	L: degree of bilingualism, rate of CS	, д М
Kasuya (1998)	Recording/observation, parental reports over approx. 15 months 4 children	2;10–4;1 yo	<i>Japanese &</i> English USA	L: language use/choice	P, M
Kuo (1974)	Parental questionnaire, parental interviews, parental and researcher evaluations, observations, linguistic assessment/task 47 children (44 families)	30–72 mo	<i>Chinese</i> & English USA	L: proficiency, degree of bilingualism	B, P, M
Lewis et al. (2016)	Parental questionnaire, linguistic assessment/task 93 children	43–66 mo	<i>Spanish</i> & English USA	L: proficiency	P, M
Li (2006)	Recording/observation, parental interview, teacher interview, document collection 3 focal children	ov 7–6	Mandarin and/or Cantonese & English Canada	L: language use, proficiency, maintenance, degree of bi-/ trilingualism and biliteracy	B, P, M
Li and Tan (2016)	Parental questionnaire, linguistic assessment/task 76 children	66.8 mo	<i>Chinese</i> & English Singapore	L: proficiency C	P, M
Lü and Koda (2011)	Parental questionnaire, linguistic assessment/task	7–8 yo	Chinese & English	L: proficiency	۵

Table 1. Continued.					
Study	Method	(Mean) Age focal children	Languages and country	Outcome(s)	Related FLP component(s)
Makarova, Terekhova, and Mousavi (2019)	Parental questionnaire, linguistic assessment/task 30 children	5–7 yo	Russian & English + additional HLs Canada	L: proficiency	В, Р
Mattheoudakis, Chatzidaki, and Maliokoudi (2017)	Parental questionnaire 202 parents	9–10 yo	Albanian & Greek Greece	L: language use, proficiency C	P, M
Miękisz et al. (2017)	Parental questionnaire, linguistic assessment/task 53 hilingual and 53 monolingual (Fnolish) children	24-36 mo	Polish & English IIK Ireland	L: proficiency	В, Р
Mishina-Mori (2011)	Recording/observation over approx. one year 2 rhildren	from 2;3–3;2yo & from 2;5– 3:3 vo	Japanese & English USA	L: language use/choice, degree of bilingualism, rate of CS	P, M
O'Toole et al. (2017)	Parental questionnaire, linguistic assessment/task 250 children	24–36 mo	Matrese & English Polish & English English & Hebrew English & Itish Portuguese & French Turkish & German	L: proficiency C	۵
Palacios, Kibler, and Simpson Baird (2017)	Parental interview, linguistic assessment/task 77 children	2–5 yo	Spanish & English USA	L: proficiency	۵
Pham and Tipton (2018)	Parental questionnaire, linguistic assessment/task 69 children	5;6-8;6 yo	<i>Vietnamese &</i> English USA	L: proficiency	۵
Quay (2012)	Parental questionnaire, parental interview, linguistic assessment/fask, recording/observation, parental diary entries, day-care diaries, day-care interview over approx. 10 months	from 1 to 1;10 yo & from 1;1– 2;4 yo	English & Chinese & Japanese English & German & Japanese Japan	L: degree of trilingualism	ω. W
Rinker, Budde-Spengler, and Sachse (2017)	Parental Parention Parent Pare	24-36 mo	Turkish & German Germany	L: proficiency	۵
Scarpino et al. (2019)	Parental questionnaire, productive vocabulary and sound tasks	3-6;6 yo	<i>Spanish &</i> English USA	L: proficiency	۵
Schwartz (2008)	Parental and child questionnaire, linguistic assessment/fask 70 children	6;11–7;5	<i>Russian &</i> Hebrew Israel	L: proficiency, language maintenance	B, P, M
Slavkov (2017)	Parental questionnaire 170 children	8;8 yo	French (official minority language) & English (official majority language) & several HLs (minority) Canada	L: degree of bi-/multilingualism, multilingualism vs bilingualism	B, P, M

Table 1. Continued.					
		(Mean) Age			Related FLP
Study	Method	focal children	Languages and country	Outcome(s)	component(s)
Slavkov (2015)	Recording/observation, parental diary entries over approx. 2;2 years	from 0;1–2;3 yo	<i>Bulgarian &</i> English Canada	L: proficiency, language attrition/ shift and reactivation, degree of bilingualism	P, M
Smith-Christmas (2017)	Recording/observation 1 child	8 yo	Gaelic & English ("Gaelic only in school context)	L: language use, proficiency S-E: general well-being	В, Р
Tsai et al. (2012)	Parental questionnaire, linguistic assessment/task 79 children	4–7 yo	Chinese (Mandarin, Cantonese, or Taiwanese) & English USA	L: proficiency	۵
Van Mensel and Yao (2017)	Parental interview, recording/observation over 6 months 2 children (1 family)	2;4 & 4;9 yo	(focus on) Mandarin Chinese & Dutch L: degree of bilingualism Belgium	L: degree of bilingualism	A,
Van Mensel (2018)	over almost 2 years (fam 1) y 2)	2–6 yo	Spanish & Dutch Mandarin & Dutch (+sometimes English) Belgium	L: familylect* S-E: general well-being (*we view familylect both as a language practice and a linguistic outcome, due to the ongoing, dynamic process)	В, Р
Verhagen, Mulder, and Leseman (2017)	Parental questionnaire, linguistic assessment/task, cognitive task 200 bilingual and 829 monolingual children	3 yo	<i>Turkish</i> & Dutch <i>Arabic and/or Berber</i> & Dutch Netherlands	U	۵
Yeh, Ho, and Chen (2015)	Child questionnaire 234 children	7-12 yo	<i>Vietnamese &</i> Taiwanese Taiwan	combination of L and S-E (or 'other'): child attitudes towards and motivation for learning the minority language.	۵
Yoshimitsu (2000)	Parental and child questionnaire, parental and child interview, linguistic assessment/task, recording/observation	10–11 yo	Japanese & English Australia	L: proficiency, language maintenance	B, P, M

Outrome	Study	Outcome: additional info/ focus on	Component	Component: additional info
Language proficiency Altman et al. (2014)	Altman et al. (2014)	Child self-reported HL & IL proficiency B-P-M (speaking), actual proficiency	B-P-M	FLP studied as a whole (strict pro-HL, mild pro-HL and pro-bilingual policy) Strictness of pro-HL FLP and openness to bilingual FLP
J	Cheung et al. (2018)	HL & IL vocabulary knowledge	P-M	Greater influence of peers and siblings than parents Familial HL & Luse in specific activities (dinner, reading out loud, playing with family),
J	Curdt-Christiansen (2016)	MT & English	B-P	siblings HL & IL use/input Lower MT (mother tongue) input due to caregivers/Family members' negative attitudes
	Danjo (2018)	呈	۵	towards Mi and societal pressure to be proncient in English Parental language use (OPOL & especially self-isolation of HL speaking mother and
0	Dekeyser and Stevens (2019)	Child self-reported HL & IL proficiency B-P-M	B-P-M	children from IL during everyday language learning opportunities) All components as perceived by child
				HL proficiency: parental attitudes towards HL (children's own attitudes towards IL or HL have no effect), parental HL use (at least one parent), mother's HL proficiency,
				number of non-IL languages spoken in the house (possibly due to implicit importance placed on multilingualism), language brokering by child (= management) Child's view of school policy also matters
	Dolson (1985)	Bilingual and HL proficiency, HL	۵	IL proficiency: siblings' IL use, mother's IL proficiency, language brokering by child HL use as main home language (seems to be an intervening factor, rather than an
٥	Dovle (2018)	reading proficiency HI	D ₋ M	independent variable) Languaga uce/avangura (Al. uce in parant-dvad as wall as in the parant-child-dvad)
	JOJIE (2010)	-	Ē	Language ascreptosure (the ascrimparent again as well as in the parent and again, reading bedtime stories
	Duarte et al. (2014)	IL & HL writing proficiency	۵	Exposure: quantity and quality of familial HL & IL input i effects of familial quantitative IL input decrease when controlled for duration of IL contact and the type of school children attend
ш:	Eisenchlas et al. (2019)	HL (becomes IL during sojourning)	≥ (Sojourning
·I	ноп et al. (2012) Hoff et al. (2018)	productive IL skills HL & IL	<u>.</u> .	Familial IL use, parental IL proficiency HL & IL exposure
				! faster child IL acquisition, given the same levels of IL & HL exposure at home
_ =	Howard et al. (2014)	IL reading comprehension	2	Home and school IL exposure
= Y	Ibranin et al. (2013) Kuo (1974)	nc & it reading speed and accuracy HL & IL	P-M B-P-M	(explicit crioice וסו) חסוון e alia scriool חב א וב exposure, scriool crioice parental attitudes, relative language use, language use between parents and between
				parent and child, story reading (IL was not impeded by exposure) significant effect of child's age on IL proficiency
7	Lewis et al. (2016)	HL & IL expressive vocabulary and oral comprehension	P-M	HL exposure, mother-child book reading, child IL use, frequency of (engaging child in) stoytelling
7	Li (2006)	HL & IL speaking, reading and writing B-P-M	B-P-M	Parenty and the state of the state of their minority status in the hort society managed professional in 8. U. management effects and an orbital school
		SINS		itost society, parentar prometricy in it or it., management enous such as its school attendance and HL teaching at home
7	Li and Tan (2016)	MT oral and written abilities	P-M	Children's MT (mother tongue) literacy related activities (either independently or with
7	Lü and Koda (2011)	HL language and literacy skills, especially oral vocabulary knowledge	۵	Familial HL use/exposure

	Makarova, Terekhova, and	분	В-Р	parental attitudes and familial language use/exposure
	Mathosan (2017) Mathoudakis, Chatzidaki, and Maligkoudi (2017) Miękisz et al. (2017)	HL comprehension, reading and writing HL & IL vocabulary size	P-W B-P	Exposure at home and via HL classes, parental HL promotion (likely to stem from positive parental attitudes towards HL) children's frequency of HL & IL use (HL & IL vocabulary), parental concern about language or rather sensitivity to limited vocabulary (HL vocabulary), limited maternal HL & IL use (limited HL vocabulary), siblings' IL language use (IL vocabulary), maternal education
	O'Toole et al. (2017)	HL & IL vocabulary size, TCV & TV	۵	level Quantity and quality of familial HL & HL exposure, mixing, parental proficiency (e.g. parental IL use relates negatively to Total Conceptual Vocabulary (TCV) & Total Vocabulary (TV), possibly because of limited parental IL proficiency or more mixed input)
	Palacios, Kibler, and Simpson Baird (2017)	IL vocabulary	۵	Parental concerns about language development, parental education status, and child age might also play a role. Maternal IL input (might be connected with maternal IL proficiency) Child care also seems to play a role: children staying at home in parental care have lower HL & IL vocabulary scores, possibly due to less engagement in early vocabulary
	Pham and Tipton (2018)	HL & IL receptive and productive vocabulary	۵	building activities Cumulative HL & IL exposure, quantity and quality of parental HL input, HL activities, Several child-internal factors " Activities of the control of
	Rinker, Budde-Spengler, and Sachse (2017)	HL productive vocabulary	۵	In proliterity was only felated to ching-internal factors (age, priorioriogical memory). Quantity and quantity of familial HL exposure (the word category did play a role: related to home/family context or not)
	Scarpino et al. (2019)	phonological abilities: phonological whole-word proximity	۵	Maternal (especially for IL outcomes) and child (especially for HL outcomes) HL & IL use in mother-child-dyads
	Schwartz (2008)	· ·	B-P-M	Children's attitudes (towards development of both languages at home & HL literacy acquisition), parental permission of HL & IL co-existence, HL literacy practices/efforts,
	Slavkov (2015)	HL language acquisition	M-A	support of numeracy schools Exposure (OPC) at home 10-day trip to Bulgaria), explicit parental strategies to establish
	Smith-Christmas (2017)	Gaelic (minority language used in school context)	В-Р	inonomingual ne context. Parental attitudes (e.g. de-normatising Gaelic use by child, framing Gaelic as school language), familial and school input (no/barely any Gaelic at home, only at school)
	Tsai et al. (2012)	HL expressive and receptive proficiency	۵	Parental HL use (possibly steered by parental cultural orientation)
	Yoshimitsu (2000)	· :	B-P-M	child language use, child initiatives to learn HL, child attitudes towards reading HL books, parental management efforts (e.g. Saturday schooling, HL activities at home, use of a
Language use	Altman et al. (2014)	HL & IL	B-P-M	Japanese network in Australia) FLP studied as a whole (strict pro-HL, mild pro-HL and pro-bilingual policy) Strictness of pro-HL FLP and openness to bilingual FLP
	Curdt-Christiansen (2016)	Parental and child MT use	B-P	Greater influence of peers and siblings than parents, but no matter the FLP: more HL use to parents, more IL to siblings
				(Continued)

Table 2. Continued.			
Outcome	Study	Outcome: additional info/ focus on Component	nent: additional info

Outcome	Study	Outcome: additional info/ focus on	Component	Component: additional info
				Family members' disparate attitudes towards MT (mother tongue) influences language use of the different family members
	Danjo (2018)	로	۵	Parental language use (OPOL & especially self-isolation of HL speaking mother and
				children from IL during everyday language learning opportunities)
	De Houwer (2007)	HL & IL	۵	Parental language input (patterns)
	Dekeyser and Agirdag (2018)	emotional language use	B-P	Primary language of communication with siblings, both parents or the father (if IL, more
				likely to prefer IL in negative emotion situations), child attitudes towards HL acquisition
	Doyle (2018)	로	P-M	Language use/exposure (HL use in parent-dyad as well as in the parent-child-dyad,
	Kasuva (1998)	Ī	P-M	mixing in parent-child-dyads), reading bedtime stories Parental discourse strategies and consistency
	Li (2006)	H & IL	B-P-M	Parental attitudes towards IL & HL, parental perceptions of their minority status in the
				host society, parental proficiency in IL & HL, management efforts such as HL school
	Mattheoudakis, Chatzidaki,	¥	M-M	exections of the form of the f
	and Maligkoudi (2017)			parental attitudes towards HL)
	Mishina-Mori (2011)	Child HL use, CS and mixing	P-M	Parental language use, discourse strategies and reaction to child language use, CS or
				mixing
	Smith-Christmas (2017)		В-Р	Parental attitudes (e.g. de-normatising Gaelic use by child, framing Gaelic as school
				language), familial and school input (no/barely any Gaelic at home, only at school),
:		•		subtle parental critiquing of child Gaelic proficiency
Language shift or	Curdt-Christiansen (2016)	shift	B-P	Lower MT (mother tongue) input due to caregivers/Family members' attitudes towards
maintenance			:	MI & English, and societal pressure to be proncient in English
	Li (2006)	maintenance	B-P-M	Parental attitudes towards IL & HL, parental perceptions of their minority status in the
				nost society, parental pronciency in it or nt, management enous socinas nt scinori attandance and HI teaching at home
	Schwartz (2008)	aguetaiem	R-D-M	distributions affitudes (towards development of both languages at home 8, HI literacy
	3CI Wal (2 (2008)	וומווונפוומוונפ	D-L-1VI	critical saturades (towards developinent of bour languages at none of the firefact)
				acquisition), parential permission of the art co-existence, the fixeracy practices, enough
	Slavkov (2015)	attrition/shift and reactivation	M-M	Exposure (OPOL at home, 10-day trip to Bulgaria), explicit parental strategies to establish
				monolingual HL context, IL day-care
	Yoshimitsu (2000)	maintenance	B-P-M	child language use, child initiatives to learn HL, child attitudes towards reading HL books,
				parental management efforts (e.g. Saturday schooling, HL activities at home, use of a Japanese network in Australia)
Degree of bi/	Juan-Garau and Pérez-Vidal	Active bilingualism	P-M	Parental discourse strategies, use of monolingual puppets, trip to UK
multilingualism	(2001)	•		
	Kuo (1974)	Balance	B-P-M	Parental attitudes, relative language use, language use between parents and between
				parent and chind, stufy reading (it. was not inspecied by exposure). I significant effect of child's age on IL proficiency
	Li (2006)	Balance of bi-/trilingualism and biliteracy	B-P-M	Parental attitudes towards IL & HL, parental perceptions of their minority status in the host society, parental proficiency in IL & HL, management efforts such as HL school attendance and HL teaching at home
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	Mishina-Mori (2011)	Active bilingualism	P-M	Parental language use, discourse strategies and reaction to child language use, CS or
				mixing
	Quay (2012)	Active trilingualism	P-M	Parental language use and discourse strategies
	Slavkov (2017)	Active bi-/multilingualism + number B-P-M	B-P-M	School choice (possible indicator of positive attitudes to multilingualism), language of
		of languages child knows		schooling, HL school attendance, parental language use in parent-dyads and parent-
				child-dyads, child language use with siblings, parental HL literacy commitments
	Slavkov (2015)	Active bilingualism	P-M	Exposure (OPOL at home, 10-day trip to Bulgaria), explicit parental strategies to establish
				monolingual HL context
	Van Mensel and Yao (2017)	Active bilingualism	P-M	Exposure, parental language use and discourse strategies
Rate of CS	Juan-Garau and Pérez-Vidal ((2001)	P-M	Parental language use, discourse strategies, use of monolingual puppets, trip to UK
	Mishina-Mori (2011)		P-M	Parental language use, discourse strategies and reaction to child language use, CS or
				mixing
Other	Van Mensel (2018)	familylect	B-P	Ideologies regarding speech correctness or normativity, attitudes towards language
				separation and codemixing, familial language use
	Yeh, Ho, and Chen (2015)	child attitudes towards and	۵	Parental HL use at home, living with (HL speaking) immigrant parent(s)
		motivation to learn HL		

Table 3. Overview of selected studies with outcomes in the socio-emotional sphere.

Outcome	Study	Outcome: additional info/ focus on	Component	Component: additional info
Linguistic well-being	Curdt-Christiansen (2016)	Frustration, regret	В-Р	Conflicting attitudes towards MT between family members, societal pressure to be proficient in English, incongruent parental ideologies and practices (e.g. regret for not providing enough MT input), and incongruent everyday
				practices and parental expectations/impact belief
	Doyle (2018)	Lamentation of parents, child's reluctance to speak HL	P-M	Language use/exposure (HL use in parent-dyad as well as in the parent-child-dyad), reading bedtime stories, child HL proficiency
	Eisenchlas et al.	Child impatience and frustration	V	limited proficiency > conflict with classmates, impatient and frustrated
General well-	Curdt-Christiansen	Social tensions	B-P	Defination attitudes towards MT between family members, societal pressure to
n S	Danjo (2018)	Family relations (bonding and unbonding), perception of identity and culture, HL parent feeling left out	۵	Parental language use (OPOL & self-isolation of HL speaking mother and children from IL during everyday language learning opportunities), conflicting
				parental and child language use, mother and maternal language practices as embodiment for HL, Japan and Japanese culture (sometimes used by children
				in socio-emotional context: using HL to comfort mother, using IL to challenge mother), child IL preference/frequent language use
	Dolson (1985)	Psycho-social adjustment and interaction at school	۵	HL use as main home language (seems to be an intervening factor, rather than an independent variable)
	Doyle (2018)	Parents feeling left out, 'migrant'-feeling, being perceived as 'weird' for being bilingual/bicultural, identity	P-M	Language use in parent-dyad and in the parent-child-dyad, child HL proficiency, parental proficiency
	Eisenchlas et al. (2019)	Identity formation, mother-child bonding, bonding with family overseas, confidence, motivation, rebellion/resistance, conflict with classmates	Σ	Sojourning, child proficiency
	Smith-Christmas (2017)	Possibly family relations and self-worth child	B-P	Parental attitudes (e.g. de-normatising Gaelic use by child, framing Gaelic as school language), familial and school input (no/barely any Gaelic at home, only at school), subtle parental critiquing of child Gaelic proficiency
	Van Mensel (2018)	Emotional bond and family ties	۵	Familylect
Other	Dekeyser and Agirdag (2018)	Emotional language use	B-P	Primary language of communication with siblings, both parents or the father (if IL, more likely to prefer IL in negative emotion situations), child attitudes towards HL acquisition
	Yeh, Ho, and Chen Child attitudes (2015)	Child attitudes towards and motivation for learning the minority language	ط	Parental HL use at home, living with (HL speaking) immigrant parent(s)

Cog**n**itive outcomes.



Table 4. Overview of selected studies with outcomes in the cognitive sphere.

Study	Outcome: additional info/ focus on	Component	Component: additional info
Cheung et al. (2018)	Conceptual knowledge	Р	Familial HL & IL use in specific activities (dinner, reading out loud, playing with family), sibling's HL & IL use/input
Danjo (2018)	Linguistic creativity (e.g. grammatically or phonologically adapting 'loan words' from one language into the other)	Р	Parental language use (OPOL & self-isolation of HL speaking mother and children from IL during everyday language learning opportunities)
Dolson (1985)	Literacy, academic grade point average (also: being held back, mathematics, effort grade point average)	Р	HL use as main home language (seems to be an intervening factor, rather than an independent variable)
Duarte et al. (2014)	Written language abilities IL and HL	Р	Exposure: quantity and quality of familial HL & IL input ! effects of familial quantitative IL input decrease when controlled for duration of IL contact and the type of school children attend
Han, Lee, and Waldfogel (2012)	School readiness, early reading and math skills	Р	Familial IL use, parental IL proficiency, SES
Howard et al. (2014)	English word reading skills	Р	Home and school IL exposure
Ibrahim et al. (2013)	Reading speed and accuracy	P-M	(explicit choice for) Home and school HL & IL exposure
Li (2006)	Literacy skills	B-P-M	Parental attitudes towards IL & HL, parental perceptions of their minority status in the host society, parental proficiency in IL & HL, especially management efforts such as HL school attendance and HL teaching at home
Li and Tan (2016)	Written language abilities	P-M	Children's MT (mother tongue) literacy related activities (either independently or with parents), child language preference
Lü and Koda (2011)	HL language and literacy skills, especially oral vocabulary knowledge	Р	Familial HL use/exposure
Mattheoudakis, Chatzidaki, and Maligkoudi (2017)	HL reading and writing skills	P-M	Exposure at home and via HL classes, parental HL promotion (likely to stem from positive parental attitudes towards HL)
O'Toole et al. (2017)	Total Conceptual Vocabulary (TCV)	P	Quantity and quality of familial HL & HL exposure, mixing, parental proficiency (e.g. parental IL use relates negatively to Total Conceptual Vocabulary (TCV), possibly because of limited parental IL proficiency or more mixed input) Parental concerns about language development, parental education status, and child age might also play a role.
Verhagen, Mulder, and Leseman (2017)	Inhibitory control, self-control	Р	Exposure to multiple home languages, parental language use

languages (HL), the others (always last) are majority and/or institutional languages (IL). The different outcomes, connected FLP components and used methods per age group are further expanded in Tables 2–5.

Which outcomes are found to be connected with FLP?

All studies, but one (Verhagen, Mulder, and Leseman 2017), report outcomes in the linguistic field. Socio-emotional (9) and cognitive (13) outcomes are referenced less frequently.

Linguistic outcomes

Thirty-one selected studies point to results we classified as children's language proficiency, either in the heritage language, the institutional language, or both. Language use as a linguistic outcome is described in eleven studies, one of which (Dekeyser and Agirdag 2018) is restricted to children's

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. Extensive overview of methods used per age group.
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Age group	Method	Study	Extensive information
0–3 years old	Recordings and/or observations	Mishina-Mori (2011) Quay (2012) Slavkov (2015)	Observations, audio- and video-recordings (parent-child-dyads), over approx. one year Weekly video-recordings at home and in day-care of interactions (caregiver(s)-child) Recordings of spontaneous parent-child interactions during a 10-day trip
	Parental interview	Quay (2012) Oliav (2012)	n.s. Diarv on child's language production
		Slavkov (2015)	Diary on child's emotional, cognitive, motor and language development
	Linguistic assessments	Miękisz et al. (2017)	Productive vocabulary assessment: CDI (IL & HL)
	or tasks	O'Toole et al. (2017) Ouav (2012)	Productive and receptive vocabulary assessment: CDI (IL & HL) MCDI (IL & HL)
		Rinker, Budde-Spengler, and Sachse (2017)	Vocabulary assessment: ELAN, TIGE, TILDA
		Verhagen, Mulder, and Leseman (2017)	PPVT (IL)
	Parental questionnaire	Miękisz et al. (2017) O'Toole et al. (2017)	Polish version of PaBiQ-IT PaBiQ-IT
		Quay (2012)	n.S.
		Rinker, Budde-Spengler, and Sachse (2017)	German adaptation of PaBiQ
		Verhagen, Mulder, and Leseman (2017)	Daily Communication Questionnaire (frequency of language and literacy activities with children)
	Other	Verhagen, Mulder, and Leseman	Several cognitive tasks: inhibitory control (Stroop), visuospatial working memory (Six Boxes task), selective
		(2017) Quay (2012)	attention (visual search task), and delay of gratification (Gift Delay task & Gift-in-bag task) Day-care diaries, interview day-care staff
Overlap 0–6	Recordings and/or	Hoff et al. (2018)	Recordings of children's spontaneous speech
	observations	Juan-Garau and Perez-Vidal (2001) Kasuya (1998)	Audio- and video-recordings of family interactions (patentic)-child) + notes over 3 years. Recorded speech samples, observations of family interactions between HL speaking parent and child, over approx. 15 months.
		Kuo (1974)	Observation of language use in family
		Van Mensel and Yao (2017)	Recordings of family interactions (one-on-one parent-child conversations and conversations with multiple interlocutors, with special attention for dinner time conversations, recorded by mother)
	Parental interview	Van Mensel (2018) Han I ee and Waldfodel (2012)	Observations and recording of family interactions (parent(s)-child(ren)) Farly Childhood Longirudinal Study-Birth Cohort data: parental interviews, over five years
		Kuo (1974) Palarios Kihler and Simpson Baird	Focus on child language development and parental feelings/attitudes toward the language patterns of their child focus on language patterns of their child and vice vorce and children (Early
		(2017)	Childhood Longitudinal Study – Kindergarten Class)
		Van Mensel and Yao (2017)	Semi-structured interview on perspective information on FLP
	Parental diary entries Linguistic assessments	Juan-Garau and Pérez-Vidal (2001) Han, Lee, and Waldfogel (2012)	Notes and parental diary keeping on language development, over approx. three years Early Childhood Longitudinial Study-Birth Cohort data; proteive and receptive language tasks (e.g. Letter
	Of LdSKS		recognition, phonological awareness, signi word recognition, frechs subset, etc.), over live years

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Age group	Method	Study	Extensive information
		Hoff et al. (2018) Kuo (1974)	EOWPVT (IL & HL) + recordings of spontaneous speech over thirty months + CDI Receptive vocabulary: PPVT English and Chinese
		Lewis et al. (2016)	Picture Vocabulary and Oral Comprehension (Batería III Woodcock-Muñoz) and Woodcock-Johnson III Tests of Achievement (IL & HL)
		Palacios, Kibler, and Simpson Baird (2017)	Woodcock-Muñoz language survey (IL & HL)
	Oxica doi:100.10	Scarpino et al. (2019)	Woodcock-Muñoz Language Survey-Revised + Bilingual Phonological Assessment (BiPA) (IL & HL)
	raieiitai questioiiiaire	Ruo (1974)	nome canguage Environment Questionnale III merview-form n.s.
		Lewis et al. (2016) Scarpino et al. (2019)	Home activities questionnaire 64-item background and Ianguage survey
	Other	Kasuya (1998)	Parental reports on parental graggers. Parental reports on parental language and child language development, over approx. 15 months – not specified whether these reports were obtained via an interview
		Kuo (1974)	Independent parental and researcher evaluations of child's relative language abilities, rating child's bilingual balance
4-6 years	Recordings and/or		Classroom observations (to assess amount of IL & HL used by teachers)
plo	observations	Danjo (2018)	Observation and audio-recording of family interactions (parent-child and between siblings) over 16 months + classroom observations (children's verbal interactions)
	Parental and child	Altman et al. (2014)	Parent: background child and parent, child language acquisition, FLP (practices, management and attitudes
	,		parents) Chid1 FD (e.g. reported language choice with parents and siblings, language use at home, frequency of CS) and self-rated Januage abilities (II_& HT)
		Danjo (2018)	Semi-Structured parental interviews (focus on perception of practices and beliefs) and ethnographic parental and child interviews as part of daily conversations and during playtime (+ teacher interviews)
	Parental diary entries	Danjo (2018)	Parental diary entries and email exchanges with the researcher
	Linguistic assessments		Adapted noun-verb picture naming, non-word repetition and complex syntax in sentence repetition – (IL & HL)
	or tasks	Cheung et al. (2018) Li and Tan (2016)	Proture identincation and picture naming tasks (IL & HL) – developed based on MCDI and CCDI-C Picture description task (oral language ability), Chinese character recognition task (HL)
	Parental questionnaire	Cheung et al. (2018)	(linguistic) background/demographic information, IL-HL use by each family member, IL-HL use during home activities
		Li and Tan (2016)	Home language and literacy environment questionnaire: demographic information, SES, children's language preference at home, parents' and children's Chinese language and literacy activities
	Other	Cheung et al. (2018)	Teacher interviews
Overlap 4–12	æ		Observation and recording of family interactions (adult family members-child-siblings) over six months
	observations	Howard et al. (2014) Li (2006)	Classroom observations Direct and participant home and school observations: focus on literacy activities, child language use and choice in
	Parental intenziew	(2016)	different settings, interactional patterns with teachers and peers, use of or talk about home literacy experiences Formal and informal interviews, focus on parental includes towards bilingual andicy and perceived evaluation of
			different languages in Singapore

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Table 5. Continued	inued.		
Age group	Method	Study	Extensive information
		Doyle (2018) Eisenchlas et al. (2019)	Semi-structured interview on FLP, (parental) language competences, challenges Semi-structured interview on background, family history, FLP, reflection on and evaluation of sojourning
			experience
		Li (2006)	Informal conversations with parents + semi-structured interview: children's home literacy, parental beliefs and
	Linguistic assessments	Howard et al. (2014)	values of language learning, perceptions of scriboling in Canada Subset of Woodcock Language Proficiency Battery-Revised (IL & HL): Picture Vocabulary, Letter-Word Identification,
	or tasks		Passage Comprehension
		Makarova, Terekhova, and Mousavi (2019)	Russian language speech samples via picture description task (HL)
		Pham and Tipton (2018)	Picture naming and picture identification task (IL & HL)
		Schwartz (2008)	Composite measure of Russian receptive and productive lexical knowledge using semantic categories knowledge, antonym knowledge, word description. PPVT-R (HL)
		Tsai et al. (2012)	Language Assessment Scales – Oral (Pre-LAS version) and PPVT-III (IL & HL)
	Parental questionnaire	De Houwer (2007)	Place of residence, family members age and citizenship, language(s) spoken at home by parents and children
		Doyle (2018)	Demographic information
		Eisenchlas et al. (2019)	Online survey on parental ideologies, language practices, HL management and demographic family information
		Howard et al. (2014)	Demographic survey on school and family (SES, home language and literacy practices, children's schooling history
) – sometimes administered in interview-form, sometimes with follow-up calls
		Makarova, Terekhova, and Mousavi	Demographic background, parental knowledge of IL, HL and other languages, parental language attitudes,
			parental and child language use within and outside of the family, child's exposure to language
		Pham and Tipton (2018)	(via telephone) selected items from Bilingual Input Output Survey and Alberta Language Environment Ouestionnaira
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		Isai et al. (2012)	Vancouver Index of Acculturation, Parental Cultural Maintenance Scale, Language Use and Preference Ouestionnaire
	Parental and child	Schwartz (2008)	Parante: based on existing survey including demographic and background information parental Janusage
	questionnaire		practive, based on existing survey, including demographic and background information, parental anguages practices, management, facelogies and opinion of improve of children's knowledge of different languages. Children confidelly deviational including demographic and hydroxically demographic and hydroxically demographic and professional including the professional including the professional professional and professional and professional professi
			children: specifically developed, illuduning defriographic and background illiorniauon, children's language management, practice and ideologies
	Other	Curdt-Christiansen (2016)	FLP audit
		Howard et al. (2014)	Teacher interviews and school records
		Li (2006)	Teacher semi-structured interviews + collection of children's written work
7–12 years	Recordings and/or	Smith-Christmas (2017)	Recordings and observations of natural family interactions between adult family members and child
B	observations Parental and child	rosnimitsu (2000) Duarte et al. (2014)	necording of naturally occurring family conversations (parent-child) and participant observation computer-assisted interviews
	interview		Children: language use, social networks, cultural identity and acculturation attitudes Parents: family language use (language use between parents, between parents and children and between
			sibilitys), education and socio-economic status of the family, dutual capital (—number of books in the flouse), migration background, child's time living in Germany and school type
		Yoshimitsu (2000) Duarte et al. (2014)	Demographic background, schooling, IL & HL proficiency, language choice and use, initiative in studying HL

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Linguistic assessments or tasks Ibrahim et al. (2013) Barents: vocabulany test (GFT Z Brahim et al. (2011) Noverbal intelligence via Raven' Yoshimitsu (2000) Barental questionnaire Duarte et al. (2014) Barental questionnaire Duarte et al. (2014) Dirahim et al. (2013) Barental and child language and lite and koda (2011) Mutheoudakis, Chatzidaki, and Maligkoudi (2017) Barental and Child language and lite and Roda (2017) Barental and child questionnaire Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dekeyser and Stevens (2019) Dolson (1985) Demographic information, FLD (and perstions on pare relations, socioeconomic and as relations, socioeconomic and servey including proficient and estimate and	Method	Study	Extensive information
lbrahim et al. (2013) Li and Koda (2011) Yoshimitsu (2000) Iu and Koda (2014) Ibrahim et al. (2013) Li and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) Li (2006)	Linguistic assessments or tasks		Children: written narrative task (~förmig-Tulpenbeet), digit span memory task (IL & HL) Parents: vocabulary test (CFT 20-R) (IL & HL)
Lü and Koda (2011) Yoshimitsu (2000) al questionnaire Duarte et al. (2014) Ibrahim et al. (2013) Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) I (2006)	lbr	rahim et al. (2013)	Reading tasks: word and text reading (IL & HL)
Yoshimitsu (2000) al questionnaire Duarte et al. (2014) lbrahim et al. (2013) Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) Li (2006)	Lü	i and Koda (2011)	PPVT-Revised, Auditory Discrimination Test, Deletion tasks (adaptation i.a. from CTOPP), Woodcock Reading Mastery Tests-Revised (II. & HI.)
Yoshimitsu (2000) al questionnaire Duarte et al. (2014) lbrahim et al. (2013) Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) Li (2006)			Nonverbal intelligence via Raven's Standard Progressive Matrices (control variable)
al questionnaire Duarte et al. (2014) Ibrahim et al. (2013) Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) Actionnaire Dolson (1985)	Yo	shimitsu (2000)	Reading large numerals, counting objects, naming objects, describing facial expressions, IL mixing, level of speech, flow of discourse coherence in discourse
Ibrahim et al. (2013) Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) Ti (2006)			Written survey on personal language use, personal social networks, cultural identity, acculturation attitudes,
Ibrahim et al. (2013) Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) Ti (2006)			migration status
Lü and Koda (2011) Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) I (2000) Li (2006)	lbr	rahim et al. (2013)	Background and child language practices at home (incl. language(s) for reading, writing, TV and computer games)
Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Pekeyser and Stevens (2019) Yeh, Ho, and Chen (2015) Yeh, Ho, and Chen (2015) Al and child Yoshimitsu (2000) Ali (2006)	ΓÜ	and Koda (2011)	Survey on home language and literacy support (HL use at home, HL exposure, home literacy environment, parents'
Mattheoudakis, Chatzidaki, and Maligkoudi (2017) Slavkov (2017) Slavkov (2017) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) Ationnaire Dolson (1985)			and children's engagement in literacy practices)
Maligkoudi (2017) Slavkov (2017) questionnaire Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)	Ma	attheoudakis, Chatzidaki, and	Survey on demographic information, parents' language ability and use, child's knowledge and use of different
Slavkov (2017) questionnaire Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)	~	Maligkoudi (2017)	languages, child's IL & HL acquisition and development, parental efforts for IL & HL development, potential
Slavkov (2017) questionnaire Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)			difficulties with child's language development.
questionnaire Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)	Sla	avkov (2017)	Demographic information, FLP (e.g. parental and child language practices), school language choice + qualitative,
questionnaire Dekeyser and Agirdag (2018) Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) Al and child Yoshimitsu (2000) Golson (1985) Li (2006)			open-ended questions on parents' satisfaction with the choice of language of schooling for their children
Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)			Online survey including children's emotional language use, children's and parents' language practices, proficiency,
Dekeyser and Stevens (2019) Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)			attitudes and background characteristics
Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)	De	ekeyser and Stevens (2019)	Online survey including proficiency, language practices and attitudes of children and their family members, family relations socioeconomic and sociocultural sertings demographic background children's well-being ethnic
Dolson (1985) Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)			identification and family relationships
Yeh, Ho, and Chen (2015) al and child Yoshimitsu (2000) tionnaire Dolson (1985)	Do	Json (1985)	Home Language Use Survey
al and child Yoshimitsu (2000) tionnaire Dolson (1985)	Ye	th, Ho, and Chen (2015)	Self-developed survey on family socio-demographic profile, children's and their family's attitudes about learning
al and child Yoshimitsu (2000) tionnaire Dolson (1985)			HL, school support for HL
Dolson (1985) Te		shimitsu (2000)	Demographic background, schooling, IL & HL proficiency, language choice and use, initiative in studying HL
1 (2008) 11 (2008) 11 E	•	Json (1985)	Teacher renorts (home language, school information, SFS), standardised test scores in English reading
			mathematics, and Spanish reading vocabulary, academic point average, Student Oral Language Observation
			Matrix
	=	(2006)	Teacher semi-structured interviews + collection of children's written work

emotional language use. Two studies address children's rate of codeswitching (CS) connected to FLP, i.e. parent using specific discourse strategies in order to establish and maintain a monolingual context in parent-child interactions. Children's degree of bi- or multilingualism, is described in eight studies, six of which observed active bilingualism, whereas two describe how FLP impacts the balance of proficiency in different languages. As stated in the theoretical framework, the degree of bilingualism interlinks with language proficiency and language use, as does heritage language maintenance or shift, described in five studies. Lastly, two studies are categorised as other, one of which (Van Mensel 2018) describes the familylect or multilingual family repertoire. We classify this family repertoire, which Hiratsuka and Pennycook (2019, 5) define as 'a set of shared multilingual practices within the family that play a significant role in creating and maintaining family life' both as a linguistic result and a predictor of socio-emotional outcomes.

Socio-emotional outcomes

Nine studies observed outcomes in the socio-emotional sphere. Linguistic well-being was assessed in three studies and seems strongly linked to parental expectations. In all three studies parents reported regret for not providing their child with sufficient opportunities to acquire the HL or frustration due to their child's low HL proficiency and use. Furthermore, they reported children's own frustration towards low HL proficiency and their resistance to speak the heritage language. Seven studies report on general well-being (e.g. family cohesion and stronger family ties, children's multilingual identity and identification with the heritage culture, children's psychosocial adjustment and interactions at school) or a lack thereof (e.g. parents feeling excluded or rejected when their child does not use the HL in conversations; tensions or unbonding between parents and children due to conflicting (ideas about) language use). Ultimately, children's emotional language use and their attitudes towards or motivation for heritage language learning relate positively to the heritage language use and management efforts at home. We argue these last two outcomes pertain to both the linguistic and the socio-emotional sphere.

Cognitive outcomes

A rather broad definition of the cognitive domain was applied. Literacy abilities and conceptual vocabulary, for instance, were approached as a combination of linguistic (comprehension) and cognitive (decoding abilities) outcomes, except for when the study specifically described only one aspect as related to FLP. Due to this broad definition, thirteen studies demonstrate cognitive results. Ten of which report literacy skills (e.g. writing and reading skills, speed and accuracy) as a result of home (literacy) practices and management. Verhagen, Mulder, and Leseman (2017) links inhibitory and self-control to exposure to multiple home languages. Lastly, conceptual vocabulary, linguistic creativity, mathematics skills, school readiness, and academic grade point average are also found to be connected with FLP.

Which FLP components are found to be connected with observed outcomes?

As not all FLP studies employ Spolsky's language policy framework (in the same way), we classified the components based on our interpretation of the framework in order to be able to compare the selected studies. Tables 2-4 expand on the connected components per study. Distinguishing between practices and management can be challenging, as language policies not only involve explicit, but also implicit actions (Caldas 2012; Curdt-Christiansen 2009; Fogle 2013). Furthermore, we argue that management initially aims to steer practices, but over time, as family members habituate themselves with certain efforts, these efforts might become part of the family's practices. Parents might, for instance, try to maximise their child's exposure to a specific language, which could manifest in greater parental use of that language. When labelling the language policy components in the selected studies, language use (i.e. languages spoken by family members in family interactions), without further explanation, was classified by us as part of language practices. Explicit strategies



or efforts trying to influence language use (e.g. discourse strategies, reading out loud, HL classes ...), were recorded as management, regardless of the classification used in the study. In most cases, a combination of practices and management was observed. When describing the separate FLP components, practices seem to exert the most influence (as suggested by forty-one studies), either exclusively (16) or combined with management (12), beliefs (6) or both (7).

Practices and management

Our review supports the well-accepted premise in both scientific and popular contexts that exposure, in the form of practices (such as language use) or management, is of crucial influence for children's language proficiency. Furthermore, this review illustrates the important role language use in the family plays in predicting children's language use, rate of codeswitching, degree of bilingualism, language shift or maintenance, children's and parents' linguistic and general well-being, and certain child cognitive aspects. Especially in the case of the vulnerable heritage language, sufficient input and management efforts are needed in order for children to acquire, use and eventually master this language. Increased exposure to the minority language, even in the form of a trip to the heritage country, can add to children's HL proficiency, use, and maintenance. More importantly, increased minority language input does not hinder majority language acquisition and proficiency.

We differentiate between familial (unspecified language use at home), child, parental and siblings' language use. Parental (and familial) language use often is key in supporting the HL, whereas siblings frequently introduce or establish the IL. In case of minority language use amongst siblings, however, siblings are also influential in children's HL use. Additionally, children's own language use can predict their proficiency, where greater majority language use, for instance, negatively affects the minority language competence.

As for (explicit) management efforts, the influence on child outcomes is also described clearly in some studies. Parental HL promotion, HL classes, parental discourse strategies (especially explicit strategies), a trip abroad or sojourning, and reading activities all affect children's (HL) language proficiency, use, language maintenance, literacy skills, rate of codeswitching, and well-being. Certain efforts, such as parental discourse strategies that affect children's willingness to continue a monolingual interaction context, however, might be influenced by children's language proficiency, illustrating the circularity between FLP and language development and use.

Beliefs

Beliefs are rarely described as a direct influencing FLP component, but are connected with observed outcomes nonetheless. We distinguish two ways in which beliefs can impact family and child outcomes rather indirectly. Firstly, beliefs are often the driving force shaping family practices and management. Several studies, for instance, propose that positive parental HL attitudes lead to a richer HL environment at home or greater HL supporting efforts, which in turn lead to children's higher HL proficiency and use. Negative attitudes, on the contrary, create less learning opportunities. Some studies, however, claim that children's, rather than parental, beliefs are crucial. Only when children display positive attitudes toward the heritage language and HL acquisition, a higher proficiency and frequency in HL language use, and, ultimately language maintenance, is perceived.

Secondly, beliefs are strongly associated with FLP's socio-emotional impact, which becomes especially clear in case of a mismatch between parental attitudes or expectations and children's attitudes, language use or proficiency. Conflicting language ideologies lead to tensions, which, as mentioned earlier, can, in turn, shape family language practices. Curdt-Christiansen (2016) describes three types of conflict: 'conflicting beliefs of different family members, contradictions between beliefs and practices, and contradictions between practices and expectations'. (706) These conflict types lead to (parental) frustration and regret, child's lower self-worth and motivation, and negatively influence family relations.



Which research methods were used?

In order to get a clearer understanding of the currently available expertise on the connection between FLP and possible outcomes, the methodology used in the selected studies was examined. Only this way the lacunae in terms of, study design, age category, and language sociological settings can be addressed. Table 5 gives an extensive overview of the specific methods that were used divided per age group. Regarding the age groups, we distinguish between ages 0-3 (infant or toddler possibly in day-care), 4-6 (in kindergarten or preschool), 7-12 (in elementary school), and studies overlapping these groups (i.e. 0-6 and 4-12 years).

Out of the final forty-two studies, thirteen are case studies, whereas twenty-seven count with thirty or more focal children. The majority of the selected studies are quantitative or mixed method. The quantitative research methods used most often (usually combined) are linguistic assessments or tasks (23) and parental questionnaires (23). Some studies also included cognitive control tasks or standardised test scores and one study included parental linguistic assessment. Even though all studies examined outcomes on child level, only six studies surveyed children themselves (of which four surveyed only children and two surveyed both parents and children). Regarding qualitative methods, home or school recordings and observations (16) were employed most frequently, followed by parental interviews (9), parental diary entries (4), and interviews addressing both parent and child (4). No studies reported interviewing only children. Divided per age group, we notice, rather unsurprisingly, that (parent) child questionnaires are limited to the older group, and parental diary entries are only used in studies with children under 7. Linguistic assessments were used in all age groups, but the type of assessment (e.g. vocabulary checklists such as CDI, Peabody Picture Vocabulary Test (PPVT), literacy tasks ...) logically corresponds with the specific ages for which it was used.

Most selected studies were conducted in Western countries. Fourteen studies were organised in the US, five in Belgium, four in Canada, the UK, and Israel, three in Germany. Whereas Australia, Singapore, and Ireland accounted for two studies each. The remaining studies were conducted in Estonia, Greece, Japan, the Netherlands, Spain and France.

While most studies examined a specific community or language combination (e.g. Spanish speaking families in the US, Chinese immigrants in Canada ...), only fifteen studies comprised of more than two different languages or language combinations. One of these studies, however, observed one specific language combination (Russian & English), mentioning additional heritage languages, and three studies looked at the Chinese community differentiating between languages. Regarding the individual languages, the top three consists of English (29 studies, often as the institutional or majority language), Chinese languages (13 studies focusing on the Chinese community, 9 distinguishing between languages: Mandarin, Cantonese and Taiwanese), and Spanish (7 studies). For the other languages, we refer to Table 1.

Discussion and conclusion

Our systematic review illustrates several examples of linguistic (41), socio-emotional (9) and cognitive (13) outcomes related to family language practices, beliefs and management. The vast majority of studies describing linguistic outcomes is not surprising, as the original focus of FLP studies was to explain children's language development connected to language policy. The occurrence of other outcomes illustrates the expansion of the field. King and Logan-Terry (2008) and Yamamoto (1995) suggest that singling out one responsible factor for observed outcomes might be impossible. We agree that determining the accountable variable is rather difficult due to the amount of internal and external influencing factors; the reciprocity between certain outcomes and FLP; the difficulty in classification (e.g. some outcomes could be(come) part of FLP, management efforts might in time become practices ...); and the connection between different outcomes. However, our systematic review shows consistent and strong evidence across the studies that FLP does play a crucial role in

explaining observed outcomes. Our overview helps confirm, discover and narrow down patterns or connections that could be investigated further. Howbeit, this review does not claim to assess directionality of the described connections. One of our findings is the varying influence of the different components, with practices being reported in forty-one studies, management in twenty studies and beliefs in only eleven studies. Even though fewer studies account beliefs as an influencing component, the role of beliefs should not be discarded, as they shape practices and management, (indirectly) affecting i.a. language use and proficiency (see also King, Fogle, and Logan-Terry 2008). Incidentally, most selected studies, refer to parental attitudes. However, children's own beliefs should also be given attention, as two selected studies claim children's attitudes strongly influence language maintenance, a finding that is supported by, amongst others, Zhang and Slaughter-Defoe (2009).

Exposure is crucial to linguistic and cognitive outcomes

Our review shows that practices and management efforts connected to language exposure are crucial to linguistic and cognitive outcomes. With this finding, we corroborate the research on the importance of language exposure on several linguistic outcomes such as language proficiency, use, maintenance or shift, the degree of bilingualism and the rate of codeswitching (e.g. Hakuta and D'Andrea 1992; Hoff et al. 2012; Paradis 2011; Portes and Rumbaut 2001). Exposure in the selected studies is defined by language use at home (i.e. practices and management) or (extracurricular) language classes and reading activities (i.e. management). Furthermore, several selected studies also address the influence of specific management efforts such as parental discourse strategies and consistent language use on children's HL development and use. These studies support Lanza's (1992) suggestion that explicit strategies are more successful regarding children's use of the minority language than implicit or codeswitching strategies. Remarkably, even though circularity (i.e. language use can be regarded either as a predictor variable (in the form of practices or management) or an outcome variable) should be considered, language use as an outcome in the selected studies almost exclusively refers to the language use of the (focal) children, whereas language use as an influencing variable refers to the language use of all family members. The same goes for the rate of codeswitching.

Our review also supports the claim that parental practices and management efforts are especially important for the minority language. Increased HL exposure positively affects children's proficiency in that language, without impeding their proficiency in the majority language. The continued finding that minority language exposure is not detrimental to majority language acquisition is valuable information to counter contradicting beliefs held by some parents and ECEC professionals. Furthermore, the efficient efforts observed in our review (i.e. consistency, creating the need for children to learn and use the HL and increasing HL input) are in line with research on language acquisition. However, explicit strategies (e.g. request for translation, pretending not to understand, etc.) seem to work for younger bilinguals, but could potentially threaten the social aspect of family interactions, as illustrated in Kheirkhah and Cekaite (2015) where the child's (7 years old) resistance and refusal to react to the strategies was recurrent.

Moreover, various studies in this systematic review support the assumption that exposure and management efforts also influence children in the cognitive domain (cf. Carlson and Meltzoff 2008; Cheung et al. 2018; Gathercole et al. 2010; Marchman, Fernald, and Hurtado 2010; Soveri, Rodriguez-Fornells, and Laine 2011). It should be noted, however, that our rather broad definition of cognitive outcomes (including for instance cognitive and self-control, literacy skills, conceptual vocabulary, school readiness ...) resulted in a larger selection of studies demonstrating a link between the cognitive domain and practices and/or management.

The influence on socio-emotional outcomes is mediated

FLP's effect on the socio-emotional domain seems more indirect, often occurring via linguistic outcomes, such as language use, proficiency and maintenance. Several scholars, for instance, attribute

'negative self-image, loss of cultural identity or embarrassment about heritage language and culture, racism, [...], and the destruction of family relationships' (Cummins 2001; Kouritzin 1999; Parks 2013 in Makarova, Terekhova, and Mousavi 2019, 475) to heritage language loss. Preservation of the heritage language, on the other hand, can be regarded as a 'positive symbol of cultural pride' (Schwartz 2010, 175), a connection with the cultural values, and a key element for family cohesion (cf. Okita 2002; Schwartz and Verschik 2013a; Tannenbaum 2005; Tannenbaum and Howie 2002; Wong Fillmore 2000). Some of these connections resonate in our review, as intergenerational tensions or stronger family ties were reported in connection to children and parents' (in)congruent language use and/or proficiency. Furthermore, the selected studies also tie FLP to children's identity formation, psychosocial adjustment and interactions at school, emotional language use, their motivation for heritage language learning, and parents' and children's linguistic well-being (here: their regret and frustration). Negative socio-emotional outcomes (e.g. frustration, conflict, resistance ...) seem to result from a mismatch, either between family members' attitudes or language use, between parental expectations and children's language use, or between parental management efforts and their children's language use or proficiency. Positive outcomes, on the contrary, point to a congruence.

Used methodology

Examining the methodology used in the selected studies can help us frame the observed outcomes and connected components. Remarkably, only eleven out of forty-two studies count with a longitudinal research design (varying from six months to five years), which, given the complex, dynamic and time-bound nature of the topic, is rather little. Secondly, most studies are limited to one specific (migrant) community or language and might therefore not be representative of the general migrant population in that country, let alone multilingual families worldwide. This claim adds to scholars' pleas and increasing efforts to include less conventional languages and family types (King 2016; Macalister and Mirvahedi 2017; Schwartz and Verschik 2013b). Moreover, most studies include English as one of the examined languages. The status of English as a global (majority) language, however, makes generalisation difficult.

Furthermore, most studies on socio-emotional results are qualitative in nature, uncovering the greater opportunities case studies and interviews offer when investigating this domain. It might, however, be interesting to attempt generalising socio-emotional outcomes via carefully thought-out quantitative measures. Another remarkable finding is that interviews or questionnaires are often limited to parents. Children's reports are usually dismissed as unreliable because they count with children's perceptions rather than the actual situation. Children's perceptions, however, are of utmost importance, because they steer children's behaviour, subsequently influencing the FLP.

The low number of studies focusing on babies and young toddlers is also concerning, as we know relatively little about linguistic, socio-emotional and cognitive effects in the early childhood, compared to the school age. Yet research suggests the early onset age of outcomes in all three domains (e.g. language acquisition, bonding and cognitive control).

However challenging, we recommend examining families with very young children, as the early childhood lays the foundation of several outcomes.

Recommendations

Even though there is consistent and strong evidence across the studies that FLP plays a crucial role in explaining outcomes, it remains difficult to name FLP as the predictor variable. Therefore, more longitudinal research focusing specifically on the connection between FLP and outcomes is needed. Studies combining a longitudinal and quantitative approach might be valuable in order to compare different FLPs and their respective (long-term) outcomes in a larger section of multilingual families, so that we could further refine tailored advice. In addition, it might be interesting to include children's viewpoint. Furthermore, we urge scholars to include families from various language communities and family types and to focus on languages besides English. This systematic review does not pay specific attention to the differences in transcription and used databases, how systematic they are and how they are managed in order to collate results. Future (review) studies, however, could contemplate including this issue, as these methodological issues might have had an impact on the outcomes reported.

We also recommend future studies to further explore socio-emotional outcomes and their source, preferably in a large body of families with young children. Considering how family relations and well-being in a language contact situation might, in turn, influence FLP and language use and proficiency, an extension of research on socio-emotional results seems essential and could help discover ways to counteract negative outcomes in multilingual families. Lastly, we encourage studies on multilingual children's cognitive abilities to investigate the link with FLP (components). As cognition studies are largely language-independent and thus have the potential to examine multilingualism more objectively and surpass the deficit thinking that is sometimes still associated with multilingual education.

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