

Testing a theoretical model of motivators of parental home involvement in children's German heritage language learning

by

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Abstract

In heritage language (HL) schools, parental home involvement in children's HL learning varies greatly (Glinzner, 2010; Hu, 2006; Salahshoor, 2017; Seo, 2017). Despite the importance of the home, next to formal instruction for children's HL maintenance (Hitchens Chik, Carreira, & Kagan, 2017; Kagan, 2005), research in HL schools is rare (Baker & Wright, 2017). This is also the case for German HL (GHL) schools (Ludanyi & Liu, 2011). This study aimed to: 1) investigate the extent of parental home involvement in children's GHL learning; 2) identify motivators pertaining to parents' personal beliefs, their social environment and their personal context that explain the extent of parental home involvement in children's GHL learning; and 3) examine the effect of such motivators on parental home involvement and on parents' role in school-home partnerships at GHL schools.

A quantitative approach was adopted to assess a hypothesised model of motivators of parental home involvement in children's GHL learning at GHL schools. After piloting the questionnaire in Australia, in the main study, 313 parents from 31 GHL schools participated in the United States of America (U.S.). This study identified two distinctly different groups of parents labelled as the GHL expert group and the GHL non-expert group.

Structural equation modelling (SEM) using the AMOS program version 25 was employed to investigate the complex relationships between motivators of parental home involvement (e.g., self-efficacy, role belief and perceived child invitations) and four forms of parental home involvement in children's GHL learning (i.e., speaking the GHL, teaching the GHL, assisting with GHL studies and motivating GHL learning). No evidence was found of a composite factor that comprised the four forms

of parental involvement; rather, each form of parental home involvement had to be treated as a discrete outcome variable in a set of related models. The data were then analysed to examine the differences between GHL experts' and GHL non-experts' home involvement through speaking the GHL. Speaking the GHL was selected as a focus because it has been shown to be the most important factor affecting children's learning of a HL (De Houwer, 2007; Döpke, 1986; Juan-Garau & Perez-Vidal, 2001). Notably, the roles of GHL experts and GHL non-experts differed in the school-home partnership in GHL schools. More than half of all GHL experts preferred to communicate with their children in the GHL, while most GHL non-experts rarely used the GHL. Children's characteristics and behaviour in the form of perceived child invitations dictated the extent to which GHL experts used the GHL at home. Conversely, a lack of the skills and knowledge required to help children learn the GHL was the strongest barrier to GHL non-experts' home involvement as it prevented these parents from speaking the GHL.

Findings suggest that future research at GHL schools should differentiate between GHL experts and GHL non-experts. Similarly, teachers at GHL schools should hold different expectations about the home involvement of GHL experts and GHL non-experts. Finally, by adopting quantitative methods and SEM, the study differed from previous studies in its methodological approach and addressed a methodological gap in the literature.

Declaration of Originality

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed:Ulrike Glinzner.....

Date:10/08/2020.....

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List of Abbreviations

AMTB	attitude/motivation test battery
AP	advanced placement
CFA	confirmatory factor analysis
DSD	Deutsches Sprachdiplom (German language certificate)
DVDs	digital versatile discs
EFA	exploratory factor analysis
EML	English majority language
FA	factor analysis
FLP	family language policy
GHL	German heritage language
GLSC	German Language School Conference
HL	heritage language
HLE	heritage language education
LV	latent variable
ML	majority language
MVA	missing value analysis
OPOL	one-parent one-language
PAF	principal axis factoring
SEM	structural equation modelling
SES	socio-economic status
US	United States

Glossary

German language: German is a pluricentric language (Clyne, 1992). It is the official language in Germany, Austria, the German-speaking parts of Switzerland, Luxembourg and Liechtenstein. To acknowledge all dialects and standard forms of German, in this study ‘German language’ is used inclusively for all varieties of German.

German speaker: The variety of dialects and standard forms used in German-speaking countries may contribute to divergence within communities of German-speaking migrants. Despite noticeable differences, the common linguistic and cultural roots provide ample opportunities for unity. Thus, ‘German speaker’ includes speakers of any regional dialects and standard forms of German.

First-generation migrants: First-generation migrants are new migrants who were born outside their new home country (i.e., the United States [U.S.] or Australia) and migrated there as an adult.

Second-generation migrants: Second-generation migrants were born in either the U.S. or Australia, or moved to the U.S. or Australia during childhood or adolescence and have at least one parent born overseas.

Heritage language: This refers to languages associated with family (Fishman, 2001a) and language exposure in the home (Polinsky & Kagan, 2007). It is less commonly used in Australia. However, as the main study was conducted in the U.S., ‘heritage language’ will be used to refer to the German language in the U.S. and Australia.

Heritage language community: Commonly, this term refers to first, second or later migrant generations—thus, people with a cultural connection to a heritage language who may use this language to communicate with others in this group.

Heritage language education: This field of study is concerned with heritage language programs operating on weekends or in day schools to provide formal instruction to children raised in homes in which one or more heritage languages are spoken (Hitchens Chik et al., 2017). Heritage language education is situated within the broad field of heritage language research (Hitchens Chik et al., 2017) and is sometimes referred to as ‘heritage / community language education’ in recognition of the use of the HL in the U.S. and community language (CL) in Australia (Hornberger, 2005).

Heritage language schools: Heritage language schools are community-based heritage language programs (Seals & Peyton, 2017) and are a typical form of heritage language education. They are also known as after-school or weekend programs (Nelson-Brown, 2005), supplementary schools (Otcu, 2010), community language programs (Clyne, 1982), ethnic mother tongue schools (Fishman, 1980) and complementary schools (Li Wei, 2006).

Heritage language maintenance: The continued practice of a language other than the majority language (e.g., German in the U.S.) and continued development of heritage language proficiency in children with heritage language background (Fase, Jaspaert, & Kroon, 1992).

Majority language: The language spoken by the majority (e.g., English in the U.S.).

Motivators of parental home involvement: Factors ‘that serve as guides and motivators...are rooted in the belief that one has the capability to produce effects by one’s actions’ (Bandura, 2018, p. 133).

Parental home involvement: Parents' behaviour and provision of resources in the home in support of their children's education.

Parent-couple: In the present study, the responding parent and their spouse are also referred to as 'parent-couple'.

Raising children bilingually: The context of this study is parental home involvement in children's learning of German in an English-speaking environment. Therefore, 'bilingual' is used, even though some parents raise children with German, English and another HL.

Responding parent: In this study, most families were two-parent families and participants are referred to as 'parents' or 'responding parents'.

Responding parent's spouse: Participants provided data about their spouses who are referred to as the 'spouse' or 'responding parent's spouse'.

School-home partnership: The shared responsibility of parents and teachers at HL schools for children's HL learning.

Chapter 1: Introduction

I have friends who do not speak to their children in the minority language but send them to language School on Sunday mornings hoping that this will be sufficient ... I wasn't too impressed with the results. (*A Reader's Success Story*, 2008)

Parents are considered to be the most central influence and resource in children's lives (Brooks, 1999). In the last three decades, research on parental home involvement in children's regular schooling has been popular due to increased evidence linking parental involvement with children's academic success in regular schools (Epstein & Sheldon, 2007; Jeynes, 2005; Sheldon, Epstein, & Galindo, 2010). Despite the importance of parental home involvement for children's heritage language (HL) learning (Baker & Wright, 2017; Hitchens Chik et al., 2017; Kagan, 2005), research in HL schools is rare (Baker & Wright, 2017). This is also the case for German HL (GHL) schools (Ludanyi & Liu, 2011). For example, there is limited research in HL schools investigating forms of parental home involvement and influences on parental home involvement in children's HL learning (e.g., Glinzner, 2010; Hu, 2006; Salahshoor, 2017; Seo, 2017). Understanding parents' motives for home involvement in their children's HL learning is important for designing effective school-home partnership programs and policies in HL schools to increase parental involvement in children's HL learning. The present study addresses a gap in the literature by investigating motivators that explain the extent of parental home involvement and how these motivators affect parents' roles in school-home partnerships in GHL schools. This study draws on concepts from parental involvement literature, HL research and psychology to investigate motivators of parental home involvement in children's GHL learning in the United States (U.S.). A survey design was employed to investigate the relationship between motivators and home involvement of parents of children attending GHL schools. Pilot studies were conducted in GHL schools in Australia, as the researcher had

developed an interest in parental home involvement in children's GHL learning while working at a GHL school in Australia. The main study was conducted in GHL schools in the U.S., due to the small number of GHL schools in Australia.

1.1 Background

The U.S. and Australia are multilingual and multicultural. According to the U.S. Census Bureau (2015), more than 350 languages are actively used in homes by more than one-fifth of the population aged five years and older. In Australia, over 300 languages are spoken at home by one-fifth (21 per cent) of the population (Australian Bureau of Statistics, 2017a).

The development of proficiency in multiple languages results from immigration and language transmission in families (Clyne & Kipp, 2006). In the U.S. and Australia, most HL speakers are migrants, and to some extent, migrants' children who were born in their new homeland (Potowski, 2010). Migrant parents especially aspire to maintain their HL (Oriyama, 2012) and immigration appears to be the driving force for sustaining HLs (Clyne & Kipp, 1997).

HL research on the micro level has focused on the family's fundamental role in HL maintenance (Rubino, 2010). Parents who raise their children with more than one language make decisions about their family language policy (FLP) (Spolsky, 2004). Findings in HL research suggest a relationship between parents' HL use in the home and children's HL skills (Cummins, 2000; De Houwer, 2007; Grosjean, 2010; Hoff & Core, 2015; Romaine, 2006). The extant literature indicates that children acquire a HL successfully if there is a stronger HL input than there is a majority language (ML) input (Arnberg, 1987; Inglehart & Baker, 2000).

Further, children's HL literacy is vital for HL maintenance (Cummins, 2000; Fishman, 2001b). However, most migrant children 'receive all of their education in the majority language of the countries in which they live ... thus become literate only in the majority language' (Valdés, 2001, p. 1). As a result, migrant parents are concerned about HL maintenance once

their children commence regular schooling (Guardado, 2002). To maintain the HL in the family, many parents decide to enrol their children in HL schools.

HL schools are a typical form of HL education (HLE) (Hornberger & Wang, 2008). HLE concerns HL programs operating on weekends or in regular schools to provide formal instruction to children who are raised in homes in which one or more HLs are spoken (Baker & Wright, 2017; Hitchens Chik et al., 2017). Despite the limited contact time in HL schools, they are categorised as a ‘strong form’ of bilingual education’ (Baker & Wright, 2017, p. 224), as the HL is used as medium of instruction (Fishman, 2014). The main aim of HL schools is to develop and maintain heritage and indigenous languages by strengthening cultural and linguistic heritage (Nelson-Brown, 2005; Otcu, 2010). As HL schools provide formal instruction in the HL (Hitchens Chik et al., 2017; Li Wei, 2011), they are crucial for HL maintenance (Fishman, 2014). Fishman, Gertner, Lowy, and Milan (1985) identified 6,553 HL schools in the U.S. that are attended by more than 600,000 children. Fishman (2014) later revised this to 7,500 schools.

In HL programs (e.g., HL schools), HL instruction can develop and maintain children’s home languages (Baker & Wright, 2017) and cultural knowledge acquired in the home. In turn, children’s ‘intra-family communication may improve both in terms of language, cultural identity, and bonding’ (Baker & Wright, 2017, p. 262). The term ‘parental involvement’ is used in models displaying responsibilities for children’s development (Bronfenbrenner, 1986) and education (Epstein, 1987). Epstein (1987) proposed a model of school, home and community partnerships for children’s learning in regular schools. Thus, in this study, Epstein’s model is applied to HL schools as these schools and children’s parents build partnerships and share responsibility for children’s HL learning and development.

The shared responsibility implies that shortcomings in one partner (i.e., parents or teachers) can affect the other partner, and ultimately, the development of children’s HL skills.

For example, several studies have shown that HL instruction in HL schools is not effective if children have received little home support from parents (Hu, 2006; Seo, 2017). Across several ethnic communities, studies of parents whose children attend HL schools have reported differences in the frequency with which parents spoke the HL in the home (Glinzner, 2010; Hu, 2006; Salahshoor, 2017; Seo, 2017). While many parents use the HL consistently when communicating with their children, others switch to the ML when they engage in linguistically more demanding conversations with their children (Schüpbach, 2006). Additionally, many parents who want their children to learn the HL address their children mainly in English (Clyne, 1982; Winter & Pauwels, 2005). One study showed that limited support for children's HL learning at home led to children refusing to attend HL school or parents unenrolling their children (Seo, 2017). Yet, several studies in HL schools have found that some parents entrust children's HL maintenance and development to HL schools (Hu, 2006; Seo, 2017) and hope that HL schools 'could do what they could not do at home' (Salahshoor, 2017, p. 216). Thus, varying degrees of parental home involvement presents one challenge for the school-home partnership in maintaining and developing children's HL skills (Hu, 2006; Seo, 2017)

Other challenges include finding space for operating HL schools, suitable teaching resources and 'maintaining an effective pool of teachers' (Seals & Peyton, 2017, p. 90). Further, children's diverse family backgrounds and differing HL skills present a challenge for teachers in HL schools (Clyne, 1982; Ludanyi & Liu, 2011). Students with prior knowledge of the HL 'vary in language proficiency' (Ludanyi & Liu, 2011, p. 3) and often have strong aural comprehension (Polinsky & Kagan, 2007). Students with strong oral skills in the HL require help to advance from a personal to a more literate command of the language (Hornberger & Wang, 2008). Consequently, the diversity of children's HL skills affects decisions about choice of teaching resources, teaching approach and student placement, such as organising student cohorts according to age or HL proficiency levels (Carreira, 2004; Ludanyi & Liu, 2011).

Nevertheless, few studies (Glinzner, 2010; Hu, 2006; Salahshoor, 2017; Seo, 2017) have attempted to describe the various ways in which parents of children attending HL schools support their children's HL learning in the home. Due to the importance of HL input for children's HL learning (Arnberg, 1987; De Houwer, 2007, 2017; Hoff et al., 2012; Inglehart & Baker, 2000; Place & Hoff, 2011, 2016), most studies have focused on parents' use of the HL at home. Further, few studies in HL schools have investigated motivators of parental home involvement in children's HL learning (Glinzner, 2010; Salahshoor, 2017; Seo, 2017). Thus, there is little understanding of the extent and range of parents' behaviours in supporting their children's HL learning. In addition, there is no comprehensive explanation as to why some parents are more involved in their children's HL learning than others, why some parents are more successful in exposing their children to the HL at home than others, and why some parents give up exposing their children to the HL at home. In addition, most studies with parents whose children attend HL schools focus on HL-native speaking parents, and little attention is given to parents of other linguistic and cultural backgrounds (e.g., Hu, 2006; Salahshoor, 2017; Seo, 2017). To secure a broader view of parental home involvement in children's HL learning, there is a need to understand what motivates parents' involvement decisions and practices.

1.2 Problem statement

Next to HL instruction at HL schools, the linguistic environment at home plays an important role in children's HL maintenance and development (Hitchens Chik et al., 2017; Kagan, 2005). However, the literature suggests that parents tend to entrust the responsibility of children's HL learning to teachers at HL schools (Clyne, 1982; Hu, 2006; Seo, 2017). Variations in parental home involvement have been found to pose major challenges for teachers at HL schools (Salahshoor, 2017). Thus, within the school-home partnership, parents' limited home involvement in children's HL learning affects not only the development of children's HL skills in the home, but also children's HL learning at HL schools.

From the perspective of a shared responsibility between GHL schools and the home, this study addresses a gap in the literature by elucidating the extent of parental home involvement of children attending GHL schools and investigating motivators that explain the extent of parental home involvement. This was achieved by identifying forms of parental home involvement and investigating motivators of parental home involvement with a focus on motivators that can be influenced by teachers at HL schools. Further, given the diversity in the cultural backgrounds of children attending HL schools, the study addresses the influences of parents' cultural backgrounds on the school-home partnership.

The framing question for this study is: To what extent do parents share the responsibility for children's GHL learning with GHL schools and what motivators influence the extent and forms of parental home involvement?

1.3 Significance of this study

This study investigates parental home involvement behaviours and motivators affecting parents' involvement decisions within the school-home partnership in HL schools. Therefore, the research highlights contributions and limitations of parents in the school-home partnership, and provides recommendations for improving parental home involvement in children's GHL learning.

It is widely reported in the literature that some parents are more successful in raising children bilingually than others. Failure to maintain the HL in the family can lead to parental guilt and resentment (Lambert, 2008). The current study may help raise parents' awareness of their home involvement behaviour and reasons for their involvement decisions. An understanding of parents' involvement behaviour can, in turn, aid parents to make conscious choices and may help them overcome some of the obstacles to their home involvement.

The interdependence between formal HL instruction in HL schools and parental home involvement in children's HL learning means that the shortcomings of one partner (e.g.,

parents) affect the efforts of the other partner (e.g., HL instructors). Ultimately, failures of either partner in the home–school relationship can have an impact on children’s HL skills. Given the diversity of home environments and linguistic home environments (Harding-Esch & Riley, 2003), the present study may help teachers at GHL schools understand children’s linguistic home environments and clarify expectations of the GHL skills that children develop in the home. This may allow a deeper understanding of the individual contexts of children attending GHL schools, which will help determine teacher training, curricula, pedagogy, resources and assessment (Carreira, 2004). An enhanced understanding of what motivates parental home involvement can show GHL teachers how they can improve parental home involvement in children’s GHL learning. Further, this study may inspire additional research into improving the school–home partnership in GHL and other HL schools.

The complexity of the home environment is a potential reason for the popularity of qualitative case studies in this field of research. While qualitative studies are valuable for capturing distinct family dynamics in multilingual families, this methodology does not allow for generalisability (Harding-Esch & Riley, 2003). Thus, there is a need for quantitative research. By using quantitative methods, the present study seeks to bridge a gap in the knowledge of motivators of parental home involvement in children’s HL learning of parents whose children attend HL schools.

1.4 Scope

The topic of home language maintenance is broad and involves many approaches and models. For example, at the macro level, some research has focused on sociocultural aspects to understand HL maintenance across ethnic groups (Bourdieu, 1982; Giles, 1977; Kloss, 1966). In contrast, studies at the micro level have focused on the family’s fundamental role in HL maintenance, and on the interlocutor as the variable that most affects language choice (Rubino, 2010). Due to the range and complexity of influences on home language maintenance,

it is difficult for a single study to include all. Thus, the focus is on factors that can be influenced by teachers at HL schools. Based on Bandura's (1986) social cognitive theory, this study aims to investigate how personal beliefs, social environment and personal context affect parental home involvement in children's GHL learning. In this study, the term 'parental home involvement' establishes a link to related studies through the perspective of a shared responsibility for children's GHL learning between the home and GHL schools.

To achieve the aims of this study, the investigation of motivators of parental home involvement focused on one specific HL (i.e., GHL). Therefore, this study is bounded by:

1. an investigation at the micro level
2. the population of parents of children attending GHL schools, rather than the larger population of parents who raise children bilingually, but whose children do not attend GHL schools
3. a focus on motivators arising from parents' personal contexts, personal beliefs and social environment
4. a focus on GHL input (i.e., parents' involvement efforts) rather than outcome (i.e., children's GHL skills).

1.5 Thesis organisation

The present study is organised into six chapters. Chapter 1 establishes the background and rationale for this study. Chapter 2 introduces the theoretical view adopted in this study in the form of an agentic perspective based on Bandura's (1986) social cognitive theory. This chapter also establishes the theoretical framework for this study, based on the review of prior research on the forms and motivators of parental home involvement in children's HL learning, with a focus on motivators that may be influenced by teachers at HL schools. The research questions are placed at the end of Chapter 2. Chapter 3 describes the research methodology and research methods used, including sampling procedures, the development of the questionnaire,

data collection methods and data analysis. Chapter 4 provides a detailed description of the two pilot studies and the refinement of the questionnaire, while Chapter 5 presents the results of the data analyses of the main study and answers to the research questions. Lastly, Chapter 6 discusses the main findings of this study and presents practical implications and recommendations for parents, teachers at GHL schools and future research.

Chapter 2: Literature Review

This chapter presents a review of the literature and is divided into five main sections. Section 2.1 discusses GHL schools in the U.S. and Australia and summarises the literature on students and parents at GHL schools. Section 2.2 identifies models and theories to explain the role of parental home involvement within school–home partnerships in HL schools. It contains a discussion of forms of parental home involvement in children’s HL learning. Section 2.3 identifies specific influences on parental home involvement in children’s HL learning with a focus on factors that may be influenced by teachers at HL schools. After introducing the theoretical framework and proposed model of motivators of parental home involvement in children’s GHL learning in Section 2.4, the research questions are presented in Section 2.5.

2.1 GHL schools in the U.S. and Australia

This section reviews the extant literature on GHL schools in the U.S. and Australia. This section begins by examining the history of the establishment of GHL schools in the U.S. and Australia from their earliest records until the 21st century. After reporting how GHL schools in the U.S. and Australia operate, this section describes the students attending these schools. Information on students’ parents based on the most recently published data is then presented (Glinzner, 2010; Mischner-Bang, 2005). This section of the chapter highlights a gap in the literature regarding the understanding of the sociocultural and demographic backgrounds of parents of students attending GHL schools.

2.1.1 German heritage language schools

GHL schools were originally established by German-speaking groups, such as clubs or church congregations, to maintain the GHL and culture (Schaefer, 1987). The first GHL schools in the U.S. were in Boston in 1874 and later in New York in 1892 (Ludanyi & Liu, 2011). In Australia, the earliest account of a GHL school dates back as far as 1899 (German

Saturday School, 2014) (see Table 54 and Table 55 in Appendix A: GHL schools and German migration). In the 20th century, the establishment of GHL schools was driven by Germans arriving in great numbers after World War II and wishing to maintain their culture and language (see Table 56 and Table 57 and in Appendix A: GHL schools and German migration).

In the U.S. and Australia, most GHL schools operating today were established by German communities during the last century, shortly after World War II, during the 1990s and to some extent, in the first decade of this century. Many GHL schools provide GHL instruction for children attending kindergarten through to those undertaking Year 12. Some schools also provide language classes for adult learners (Mischner-Bang, 2005). Despite the variety of German dialects, there are common grammar rules for standard German in all German-speaking countries (Horvath & Vaughan, 1991). In GHL schools, a standard form of German is taught (i.e., ‘High German’).

In the U.S., HL schools are sometimes part of national organisations (Seals & Peyton, 2017). For example, many GHL schools belong to umbrella organisations, such as the German Language School Conference (GLSC) (Ludanyi, 2013). In contrast, in Australia, GHL schools are registered with the Community Language Schools Association¹ within their state. HL schools must adhere to rules and conditions to be registered with the ethnic schools association in their state and to receive government funding that is essential for the maintenance of these schools (The Ethnic Schools Association of South Australia Inc., 2019). GHL schools in the U.S. are operated by the communities themselves and costs are covered by school fees and fundraising (Maloof, Rubin, & Miller, 2006). However, worldwide, many GHL schools receive financial support from the German government. For example, the Central Agency for Schools Abroad provides structure, support and funding for accredited German Diploma Schools of the

¹ In some Australian states or territories, they are called ethnic schools associations.

Education Ministers Conference or Deutsches Sprachdiplom (DSD) der Kultusministerkonferenz (Glinzner, 2013).

Many GHL schools are accredited as German Diploma Schools. The German language certificate (DSD) exam is a standardised test. According to the Central Agency for Schools Abroad, worldwide around 75,000 students sit the test every year (Die Zentralstelle für das Auslandsschulwesen, 2015). The German language certificate level I (DSD-Level I) is required for entry to a college in Germany (i.e., DSD-A2/B1), whereas the DSD-Level II is needed for entrance to a German university (i.e., DSD-B2/C1). Also, many GHL schools offer German as a matriculation subject (e.g., in Australia, state and territory certificates of education, and in the U.S., National German Exam—AATG testing). Additionally, according to Ludanyi and Liu (2011), some GHL schools in the U.S. offer advanced placement (AP) examinations (The College Board, 2019a), which give students credit on entry to colleges and universities in Germany. Further, some GHL schools take Subject Tests (SAT) which can improve students' credentials for college admission (The College Board, 2019b).

Based on the number of recently established GHL schools in the U.S. and Australia it can be concluded that, GHL schools are popular, despite the low German-speaking migrant intake. For example, in the last decade 64,287 German-speakers migrated to the U.S. compared to 155,697 in the previous decade (see Table 57 in Appendix A: GHL schools and German migration). Enrolments in GHL schools have been linked to the lack of opportunity to study German as a subject in regular schools (Ludanyi, 2014). Further, shrinking social networks due to reduced migrant intake from German-speaking countries and the ageing of this migrant group (Australian Bureau of Statistics, 2017c; Ortman, Velkoff, & Hogan, 2014) indicates that GHL schools can be a necessary social network for students and their parents. HL schools provide an opportunity to develop children's GHL skills outside the home (Seals & Peyton, 2017). Further, in GHL Schools students can connect with the HL culture, meet like-minded

peers (Ludanyi, 2013) and gain internationally accepted subject accreditation (Ludanyi & Liu, 2011).

2.1.2 Students at GHL schools

According to the latest publication on student numbers in GHL Schools, in the U.S. around 7,000 students were enrolled in 70 GHL schools (Ludanyi, 2013). Australian enrolment numbers are difficult to collate. The Community Language Schools Association in each Australian state collects annual enrolment numbers, though only state-funded HL schools are listed. Therefore, these numbers are incomplete. Based on data provided by the Community Language Schools Associations in each state and GHL school websites, the number of students attending GHL schools from kindergarten to Year 12 (4–17 years of age) is estimated to be around 800.

In GHL schools, students vary in GHL proficiency (Ludanyi, 2013). However, thus far, the empirical basis for the demographic profile of children attending GHL schools has been reported in very few studies, involving just seven GHL schools across the U.S. and Australia (e.g., Mischner-Bang, 2005; Muenstermann, 1998, 2001). The GLSC in the U.S. collected student background data from six GHL schools (Mischner-Bang, 2005). Most children commence GHL learning at GHL schools in kindergarten and elementary school, and most children attending GHL schools do not study German at their regular school because it is not available as a subject. Most students (71%) were born in the U.S.; only a small percentage (16%) were born in Germany, Switzerland (4%) and Austria (2%). Only a small number of students (7%) were born in other countries (Mischner-Bang, 2005). Similarly, Muenstermann (1998, 2001) found that in one GHL school in Australia only a small percentage of children were new German-speaking migrants. Further, Muenstermann (2001) reported that most children were from culturally and linguistically mixed families, with one parent being a native

German speaker. Muensterman (2001) found that around one-quarter of students had no German-speaking background and that the diversity of students appeared to be increasing.

2.1.3 Parents of children at GHL schools

The school board that governs a HL school mostly consists of parents of students attending the school. Teachers at HL schools may also be parents of students. Despite parents occupying numerous roles within the operation of HL schools and in relation to their children's HL learning, very little is known about their demographic profile.

Due to limited research conducted at GHL schools (Ludanyi & Liu, 2011), the empirical basis for background information of parents of children attending GHL schools so far consists of three studies (Glinzner, 2010; Mischner-Bang, 2005; Muenstermann, 1998, 2001). Parents' educational levels and socio-economic status (SES) were very high (Glinzner, 2010; Mischner-Bang, 2005). Mischner-Bang (2005) found that of 363 families, 250 mothers and 238 fathers could speak at least some German. Similarly, Glinzner (2010) reported that parents' communication skills in the GHL varied between very limited GHL skills and German-native speaking skills indicating that parents are not equal in terms of their GHL proficiency. In addition, Mischner-Bang (2005) found that most students had at least one German-speaking grandparent.

Whilst there has been scant research with parents in GHL schools, the anglicisation of the speech of Germans in the U.S. and Australia has been widely investigated through macro-level determinants for HL maintenance. In the 19th and early 20th centuries, German was one of few 'colonial languages' (Fishman, 2001a) that was successfully transmitted over several generations (Van Deusen-Scholl, 2003). In the last century, investigations into HL maintenance of migrants across ethnic communities in Australia showed that migrants from northern European countries like Germany were less likely to promote HL maintenance than were migrants from southern or south-eastern countries (e.g., Greece, Macedonia and Asian

countries) (Clyne, 1991). For example, in the U.S., Kloss (1966) explored the function of cultural values for ethnic groups and reported that if the HL and culture of an ethnic group were very similar to the majority group, preservation of the HL and culture was difficult. Likewise, in Australia, Clyne (1991) and Kipp et al. (1995) identified the cultural distance between majority and minority groups as a distinct factor in HL maintenance. Italian, German, Hungarian and Spanish speakers were identified as high-shift groups for whom there is not a substantial cultural distance from Anglo-Australians. In contrast, Arabic and speakers of Asian languages were found to be culturally more distinct (Clyne, 1991).

Correspondingly, in Australia, of all residents with German ancestry (4.5%) (Australian Bureau of Statistics, 2017b), only around 80,000 (0.3%) speak the GHL at home (Australian Bureau of Statistics, 2016). In the US, 1.1 million people (0.4%) spoke the GHL at home in 2011, whereas half a decade later, only 917,812 people (0.3%) used the GHL at home (U.S. Census Bureau, 2017). This shows a decline of the use of the GHL in the U.S. since the turn of the century (Ludanyi & Liu, 2011) and is projected to decline further (Ortman & Shin, 2011).

2.2 Parental home involvement

This section describes forms of parental home involvement that may support children's GHL learning at home. First, parental home involvement is situated within school-home partnerships in GHL schools based on Epstein's (1987) concept of school, home and community partnerships. Then, the literature on parental activities in the home in support of children's HL learning is discussed and summarised. Lastly, forms of parental home involvement in children's HL learning are presented based on four learning mechanisms: instruction, modelling, reinforcement and encouragement (Walker, Shenker, & Hoover-Dempsey, 2010).

2.2.1 The role of parental home involvement in school, home and community partnerships

In Epstein's (1987) model, the overlapping spheres of influence—schools, families and the community—build a partnership and share responsibility for children's educational success. Epstein's framework includes six essential dimensions for successful school, home and community partnerships (i.e., parenting, communicating with their children's teacher, volunteering at school, helping children's learning at home, decision-making and co-operating with the community) (Epstein, 1992, 1995). Within school, home and community partnerships, the term parental involvement indicates the importance of parental activities for children's development and learning, and is frequently explained according to the range of activities involved. Children's educational achievements can be supported in any home, regardless of the parents' SES or cultural background (Funkhouser, Gonzales, & Moles, 1997). Correspondingly, research in this field indicates that the relationship between students' academic success and parental involvement holds across all year levels and economic, ethnic and educational backgrounds (Henderson & Mapp, 2002).

Based on Epstein's (1992, 1995) types of parental involvement, the study of parental home and school involvement in children's education is well documented as essential to students' educational achievements (Buerkle, Whitehouse, & Christenson, 2009; Grolnick & Slowiaczek, 1994). Parental involvement has been shown to facilitate children's learning and achievement, and the motivation and aspirations children require for success at school (Dauber & Epstein, 1989; Grolnick, 2009).

Similarly, the family, HL school and HL community are important contexts for children's HL learning. For example, Kagan (2005) proposed that children's HL learning depends on HL input from the family, community and literacy instruction. 'Each of the elements in the triad can have a greater or lesser prominence depending on the language, history

of the language group migration and attitude to language preservation, among other factors' (Kagan, 2005, p. 213). Similarly, Grosjean (2010) proposed that children must perceive a need for the HL, otherwise it will be no longer used and thereby forgotten. According to Grosjean (2010), children's need for a HL is provided through communicating in the HL with important others (e.g., family and friends), and interacting in the HL in institutional settings (e.g., day care, school) and the HL-speaking community.

Among these three contexts, parental home involvement in children's HL learning is of particular importance, as 'heritage language acquisition begins in the home' (Campbell et al., 2000, p. 213). Based on Vygotskian thinking that social interaction between parent and child yields cognitive change (Vygotsky, 1986), parents can be viewed as children's first teachers (Horowitz, 2000). In a bilingual context, parents are encouraged to be children's instructors of language and first teachers with 'distinctive roles and responsibilities' (Scarino & Liddicoat, 2009, p. 13). Landry and Allard (1992) highlighted the importance of the use of the HL in the family and in the school for children's learning of a HL. In their counterbalance model of bilingual experience, Landry and Allard (1992) proposed that HL proficiency is only possible through the collaboration of the family and school to compensate for the dominance of the ML in the wider community.

The importance of HL schools can be found in their ability to provide HL literacy instruction (Li Wei, 2011; Schwartz, 2008) and supplement what is not available in the formal educational landscape (Nelson-Brown, 2005; Otcu, 2010). For example, Salahshoor (2017) reported that children learnt to communicate in the HL at home, but that without the HL school, children's HL literacy skills were not developed. HL schools have also been found to be used as parental substitutes to provide the practical realisation of the HL (Hu, 2006; Schwartz, 2008; Seo, 2017). Further, HL school communities can:

create and support a German community, creating camaraderie among parents, native speakers, HL speakers, and friends of the language. They broaden an often diminished domain for the natural use of the HL in public and generate opportunities that do not exist in connection with mainstream German language education. (Ludanyi, 2013, p. 311)

Thus, similarly to Epstein's (1987) model of school, home and community partnerships in children's regular schooling, the HL school, the home and the HL community form a partnership and share responsibility for children's HL learning.

2.2.2 Forms of parental home involvement

Epstein's (1992, 1995) six types of parental involvement take place in the home and school environment. Home involvement includes parents' basic obligations and helping with children's learning activities at home. Basic obligations concern the establishment of 'positive home conditions that support learning and behaviour all across the school years' (Epstein, 1992, p. 11), while learning activities relate to 'monitoring and assisting their own children' (Epstein, 1992, p. 12) at home.

Focusing on the need to understand how parents' involvement influences children's academic success at regular school, Hoover-Dempsey and Sandler (1995, 1997) and Grolnick et al. (1997) developed theoretical models of the parental involvement process. Similar to Epstein's (1992, 1995) types of parental involvement, Hoover-Dempsey and Sandler (1995, 1997) and Grolnick et al. (1997) differentiated between parents' involvement at home (e.g., parents' supportive activities in the home environment) and their involvement at school (e.g., attending events and volunteering at school). Parental home involvement referred to by Grolnick et al. (1997) comprises parental behaviour at home (e.g., helping with homework), personal involvement (e.g., knowing about the child's performance in school) and cognitive-intellectual involvement (e.g., engaging in cognitively stimulating activities with the child such

as going to a library). Hoover-Dempsey and Sandler (1995, 1997) ‘identified mechanisms of parental involvement’s influence (i.e., modelling, reinforcement, and instruction) or the specific means by which parents affect children’s school outcomes’ (Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005, p. 87).

Similar to Hoover-Dempsey and Sandler’s (1995, 1997) mechanisms of parental involvement, Glinzner (2010) reported that parents of children attending a GHL school used modelling (i.e., speaking the HL), instruction (i.e., teaching the HL), reinforcement (i.e., assisting with HL homework and HL resources) and encouragement (i.e., rewards and praise). Parents use instructional scaffolding (Vygotsky, 1978) when they, for example, rephrase children’s spoken communication to help them express their thinking, draw children’s attention to the differences between languages or provide a different, culturally coloured view of the world. Parents’ modelling (Bandura, 1977) is central to instructional scaffolding. During parents’ instructional scaffolding, children are engaged in vicarious or observational learning (Bandura, 1977). Vicarious learning allows children to observe a more capable partner who, in turn, demonstrates a skill by example (Bandura, 1977, 1997). Modelling can raise children’s expectations and motivate them to master a skill (Bandura, 1977). Instructional scaffolding also facilitates children’s enactive learning, or learning by doing (Bandura, 1977).

Likewise, several studies of parents of children attending HL schools found that parents spoke the HL to the children at home (Hu, 2006; Salahshoor, 2017; Seo, 2017), used teaching techniques (e.g., checking children’s comprehension) (Seo, 2017) or taught HL literacy (Salahshoor, 2017). Further, in HL schools, researchers found that parents assisted their children with HL homework (Hu, 2006; Salahshoor, 2017; Seo, 2017), encouraged children to use the HL (Hu, 2006; Salahshoor, 2017) and provided resources in the HL (e.g., films, cartoons and books). In addition, one study mentioned that parents spoke with their children about the HL culture, facilitated contacts with the HL community and visited HL-speaking

countries (Salahshoor, 2017). Forms of parental home involvement, such as speaking the HL, teaching the HL and strategies to facilitate children's HL learning (e.g., assisting with HL homework, encouraging and providing HL resources), refer to Spolsky's (2009) language management.

Most research in HL schools that investigated forms of parental home involvement used qualitative methods (Glinzner, 2010; Salahshoor, 2017; Seo, 2017). For example, the most recently conducted research in a GHL school was Glinzner's (2010) case study on GHL maintenance in the context of GHL schools. A well-established model (Hoover-Dempsey & Sandler, 1995; 1997) from the parental involvement literature on children's regular schooling framed this research. This qualitative study investigated a small number of motivational and contextual influences on the home involvement of parents of children attending Grade 5 in a GHL school in Australia. In this insider research, the author was a teacher at the GHL school. The parents were first- and second-generation German speakers, parents with no German background and parents with other HL backgrounds. The study provides examples of how motivational and contextual factors interacted with each other and affected parental home involvement. The study confirmed the findings in the literature about the importance of considering both motivational and contextual influences when investigating parental aspirations for home involvement. Due to the small number of participants interviewed in the study, no statistical validation was provided. Furthermore, little attention was paid to how motivational and contextual factors affect the roles of parents in the context of HL schools. Similarly, Salahshoor's (2017) study in the U.S. explored the elements of the FLP (i.e., language ideology, language practice and language management) among 12 Farsi-speaking first- and second-generation Iranian-American parents whose children were attending a Farsi HL school. Bronfenbrenner's (1979) ecological theory was used as a holistic framework to gain a deeper understanding of family dynamics and the influence of the social environment

(e.g., Farsi HL school) on HL maintenance in the family. A mixed methods design was utilised, and the data were collected through interviews, a biographical questionnaire and classroom observations in Farsi HL schools. The study offers a convincing portrayal of Iranian-American families, their expectations, the effort required and the challenges faced when raising their children bilingually. The study highlights the important role of the wider HL community and the Farsi HL school for the children's HL learning and the upkeep of cultural traditions. The Farsi HL school was one strategy employed by the Iranian-American families to facilitate their children's HL learning. The study also provides a critical review of Farsi HL schools in relation to teaching methods (e.g., teacher-centred and teaching from textbooks), the financial resources of the HL school and teachers' expectations of parental home involvement. Lastly, Seo's (2017) study investigated the FLP of first- and second-generation Asian-American migrants in the U.S. whose children attended HL schools. The study utilised a number of data collection methods, including a survey, interviews and two cases studies that comprised interviews with, and observations of, two Korean families and Korean HL school classes. The small number of participants (14) were either native Korean or Chinese or had limited HL skills. The interconnectedness between the wider environment, the parents' language ideologies and their FLP were successfully presented, yet attention to the cultural differences between Korean and Chinese families was lacking. Nevertheless, the study presents some valuable points of reference for research in HL schools (e.g., parents' and teachers' roles in children's HL learning). The explicit examples provide insights into how the HL teachers facilitated the HL schools' FLP and their students' HL identities, cultural norms and customs. Thus, these studies have provided valuable information for understanding individual family dynamics; however, more research is needed to capture the bigger picture of parental involvement in children's HL learning at home. The following sections discuss the forms of parental home involvement in children's HL learning including summaries addressing their relevance for this investigation.

2.2.3 Speaking the HL

Parents interacting with children in the HL instead of the ML has been found to be the most important influencer of successful HL learning (Döpke, 1996; Juan-Garau & Perez-Vidal, 2001) and concerns the quantity and quality of input in the HL. The quality of input is crucial for HL acquisition (Gollan, Starr, & Ferreira, 2015; Place & Hoff, 2011). The importance of the quantity of input is due to the fact that bilingual language skill develops in proportion to exposure to both languages (Hoff et al., 2012) and affects children's usage of the HL (Pauwels, 2005; Takeuchi, 2006). Exposure to two languages leads to the development of two distinct systems for phonetics—lexis and grammar (Hoff & Core, 2015)—needed for bilingual language development. Further, as children tend to use the language they know better, more often, the language to which children are most exposed promotes the development of this particular language (Pearson, 2007). In addition, the amount of exposure to a HL contributes to the valorisation of a HL and affects its use (Hamers & Blanc, 2000). Children tend to use a highly valued language more. Thus, if parents only speak the ML, this will allow for little valorisation of the HL (Clark, 2000), even if parents encourage the children to speak the HL. Likewise, communicating in the HL within the family is an important activity in Grosjean's (2010) model that creates a need for children to learn the HL. However, even with limited linguistic input in the home, the HL continues to develop (Schwartz, 2008). For example, according to Hoff et al. (2012), even a 20 per cent exposure to a language will develop children's vocabulary in that language. Correspondingly, Pauwels (2005) concluded that 'children who are exposed to a CL in the home usually develop good receptive skills in the language even if their degree of active (productive) use is very limited' (p. 126). The literature on the quantity and quality of HL input is further discussed in the following sections.

Quantity of HL input

Language exposure depends on the linguistic family context, yet, in bilingual families, there are many possible linguistic family contexts (Harding-Esch & Riley, 2003). One aspect that may contribute to the diversity of linguistic family contexts found in bilingual homes is the language parents use with each other (i.e., the parent-couple home language). The parent-couple home language may be an important decision, as it can influence which language children develop more (Barron-Hauwaert, 2004). Döpke (1992) reported that most parents with different native tongues speak the ML with each other, followed by the HL. This makes sense, as generally parents appear to communicate in the language they used when they first met (Spolsky, 2004). Parents' conscious decisions to raise children with more than one language implies use of more than one language at home. For example, parents rarely address each other in the same language as they address the children (Döpke, 1992). Parents using the ML together refers to Barron-Hauwaert's (2004) OPOL-ML interaction strategy, in which the ML is more supported in the home. However, parents may opt to use the HL with each other to support the HL at home, which corresponds with Barron-Hauwaert's (2004) 'minority language (ml) at home' strategy (OPOL-ml).

De Houwer (2007) examined whether parents speak a particular language to their children (i.e., parental language input patterns). De Houwer (2007) found five types of parental language input patterns including 1) both parents' use of the HL, 2) one parent speaking the HL and the other parent using the HL and the ML, 3) one parent speaking the ML and the other parent using the HL and the ML, 4) both parents using both the HL and the ML, and 5) one parent speaking the HL and the other parent speaking the ML. Parental language input patterns were related to children's use of the HL (De Houwer, 2007). Thus, parental language input patterns may be another aspect contributing to the diversity of linguistic family contexts in bilingual families .

Döpke (1992) categorised parents' linguistic approaches to raising children with more than one language based on the one-parent one-language (OPOL) strategy. The OPOL strategy may be applied in several linguistic family contexts depending on parents' mother tongues, the parent-couple home language and parental language input patterns (i.e., one parent speaking the HL and the other parent speaking the ML). Table 1 presents Döpke's (1992) categories of parents' linguistic approaches across various linguistic family contexts. The most basic OPOL strategy involves both parents consistently speaking their own mother tongue to the children, (e.g., one parent speaks the HL and the other parent speaks the ML to the children). In the following two linguistic approaches, parents have the same mother tongue, but one parent chooses to speak their non-native language. For example, if both parents are native speakers of the ML, one parent may choose to speak the HL to the children, which corresponds with Barron-Hauwaert's (2004) artificial or non-native strategy. Conversely, one parent may choose to speak the ML with the children despite the fact that both parents' native tongue is the HL (Döpke, 1992).

In the last of Döpke's (1992) linguistic approaches, children grow up with three languages. If both parents are speakers of HLs, they may leave the learning of the ML to the wider community. In Barron-Hauwaert's (2004) trilingual strategy, in addition to the use of the OPOL strategy, parents use another HL as parent-couple home language. The trilingual strategy requires parents to have bilingual skills themselves (Barron-Hauwaert, 2004). For successful use of the OPOL strategy, it is recommended that the non-native HL-speaking parents have some knowledge of the HL so as not to feel excluded (Döpke, 1992).

Döpke (1998) reported that the OPOL strategy is often used in German-speaking immigrant families, but without much success. Correspondingly, Glinzner (2010) found that only one parent of 10 families exclusively spoke the GHL to the children. Similarly, Mischner-Bang (2005) reported that one-third of children always spoke the GHL at home. However, it

has been found that children’s use of a HL does not necessarily correspond with their parents’ use of the HL at home (De Houwer, 2007). Therefore, findings by Mischner-Bang (2005) do not necessarily portray parental GHL use in the home. Nevertheless, research in GHL schools so far indicates that parents’ use of the GHL at home varies. More research is needed to understand the extent of parents’ use of the GHL.

Table 1

Linguistic Approaches Based on the OPOL Strategy

Linguistic approach	Parents’ mother tongues	Parent-couple home language
OPOL strategy (Döpke, 1992) Parents speak their mother tongue to children (i.e., HL and ML)	Parents have different mother tongues: HL and ML	ML strongest (OPOL-ML) (Barron-Hauwaert, 2004) ML is better supported, parents speak ML together ML supported by the other parent (OPOL-ML) (Barron-Hauwaert, 2004) Minority language is better supported, parents speak HL together
OPOL strategy (Döpke, 1992) One parent speaks the HL to the children	Parents have same mother tongue: both ML	OPOL-ML interaction strategy (Barron-Hauwaert, 2004) ML is better supported, parents speak ML together
OPOL strategy (Döpke, 1992) One parent speaks the ML to the children	Parents have same mother tongue: both HL	Minority language supported by the other parent (OPOL-ml) (Barron-Hauwaert, 2004) Minority language is better supported; parents speak HL together
OPOL strategy (Döpke, 1992) Parents speak their mother tongue to children. Children grow up with three languages; ML learnt from wider community	Parents have different mother tongues: different HLs	Parents communicate in one or both HLs Trilingual strategy (Barron-Hauwaert, 2004)

In addition to Döpke’s (1992) linguistic approaches based on the OPOL strategy, several other linguistic approaches have been described in the literature. Table 2 lists linguistic approaches used by parents who raise children with more than one language. Grosjean (2010) described the ‘one-language-first’ strategy, in which parents focus on HL use at home for the

first few years of their children’s lives. Once the HL is well established in the home, the ML is introduced through the wider community (Grosjean, 2010). Thus, only the HL is used at home (ml@home) (Barron-Hauwaert, 2004). This linguistic approach can also be managed by establishing the ML in the home and introducing the HL later (Grosjean, 2010). Further, Barron-Hauwaert (2004) and Grosjean (2010) described two linguistic approaches that focus on mixing languages in the family. The ‘mixing’ strategy (Barron-Hauwaert, 2004) or ‘free-alternation’ strategy (Grosjean, 2010) is part of many bilingual families’ daily communication, particularly in countries with regions of high bilingual use (Barron-Hauwaert, 2004). In contrast, the ‘time and place’ strategy (Barron-Hauwaert, 2004; Grosjean, 2010) is often used on family holidays in HL-speaking countries. This strategy implies that at a particular time and place, the HL is accepted by all family members as the language of communication (Barron-Hauwaert, 2004). The more practical approach of mixing languages was parents’ favoured strategy in Glinzner’s (2010) study.

Table 2

Additional Linguistic Approaches to Raise Children with More Than One Language

Linguistic approach	Parents’ mother tongues	Similar linguistic approaches
The ‘one-language-first’ strategy (Grosjean, 2010) Both parents use the HL at home; ML learnt from wider community	Parents have different mother tongues: HL and ML Parents have same mother tongue: both HL	Minority language at home (ml@home) (Barron-Hauwaert, 2004) Only HL used at home; parents speak HL together
Mixed strategy (Barron-Hauwaert, 2004)	Any of the above	‘Free-alternation’ strategy (Grosjean, 2010)
Time and place (Barron-Hauwaert, 2004; Grosjean, 2010)	Any of the above	

The OPOL strategy is the most widely discussed strategy for raising children bilingually (e.g., Barron-Hauwaert, 2004; Döpke, 1992; Grosjean, 1982; Piller, 2005) and is in contrast to parents’ mixing of languages. The OPOL strategy was first published by Grammont

(1902 as cited in Ronjat, 1913) as ‘one-person one-language’, indicating that the second language does not necessarily have to come from a parent. The strategy was aimed at learning two languages without confusion by strictly separating the languages, which should prevent children from language mixing. Conversely, mixing languages can mean using words from the HL and ML in the same utterance (e.g., code mixing), changing from one language to the other (e.g., code-switching), or using a word from one language in a sentence of the other language by adapting it structurally (e.g., loan blending) (Hamers & Blanc, 2000). Another term concerning the language practices of bilinguals is translanguaging (Garcia, 2009; Garcia & Li, 2014; Li, 2018). In contrast to code-switching and code mixing, where language use is viewed as switching between separate entities, translanguaging describes the speaker’s use of one language repertoire encompassing several languages and their accompanied social-cultural and psychological structures (Garcia & Li, 2014). Nevertheless, Döpke (2000) explained that mixing languages is contradictive to persistence and consistency, which are necessary for children’s successful HL acquisition. Parents mixing languages reduces the amount of HL input and lessens children’s competence (Hoff & Core, 2015). Language mixing has been linked to reduced comprehension, vocabulary and vocabulary production for children under two years of age and may ‘obscure cues that facilitate young bilingual children’s separation of their languages’ (Byers-Heinlein, 2013, p. 32). Another disadvantage of mixing languages is that the ML becomes dominant once children spend more time with ML speakers; thus children’s acquisition of the HL suffers (Grosjean, 2010).

Generally, balanced bilingualism, in which language input is approximately the same and children develop both languages at the same rate, is rare. More commonly, children growing up with more than one language will have a dominant language. Therefore, for successful HL acquisition, bilingually raised children should frequently experience the use of the HL in a monolingual mode that can be activated if children feel the need to communicate

in the HL with a monolingual HL speaker (Grosjean, 2010). Putting children in a monolingual mode with monolingual HL speakers is more likely to prevent language mixing and children will learn to use the HL in situations in which they may be used to code-switching or borrowing (Grosjean, 2010). Parents' attitude towards children's choice of language can range from parents' tolerance of language mixing to parents' presumably strict adherence to monolingual standards (Barron-Hauwaert, 2004). Lanza (1992) described a monolingual discourse strategy as parents' exclusive use of one language and their expectations for children to respond in the same language. Parents' monolingual discourse strategy can socialise children into using the HL when communicating with the parent (De Houwer, 2015). For example, parents of children attending a HL school have been reported to actively direct children's choice of language at home to ensure children's use of the HL (Glinzner, 2010; Salahshoor, 2017). Conversely, parents' use of a bilingual discourse strategy (Lanza, 1992) will allow children to use the HL or ML and can lead to children's mixing of languages or exclusive use of the ML (De Houwer, 2015).

Quality of HL input

Next to the quantity of HL input, the quality of interaction has also been found to influence children's HL acquisition. The quality of input can be facilitated through different language models (e.g., family members, teachers and friends) and a varied language input, particularly through HL native speakers. For example, adults speaking their mother tongue augments HL input quality possibly because HL native speakers have a richer vocabulary in the HL than do second-language speakers (Hoff & Core, 2015). Further, according to Döpke (1986, 1988), the quality of interaction is demonstrated in a child-centred communication style, in which children feel understood and mutual comprehension is achieved. Quality of interaction includes children's exposure to a wide range of vocabulary in the HL, diverse grammar structures and de-contextualised discourse (Rowe, 2012). This confirms the family as provider

of a rich linguistic environment (Brown, Hammond, & Onikama, 1997; Clark, 2000; Faulstich, 1994), as conversations are more frequent between adults and children (Tizard & Hughes, 1984). In addition, when children speak their parents' native tongue, they often experience a sense of belonging to a community and culture, which may render language central for group membership (Fillmore, 2000). Children also develop a person-language bond, and it is important to maintain this bond for children's emotional wellbeing (Grosjean, 2010). In instances in which parents choose to speak the ML, consequences may well be that children feel at a loss (Grosjean, 2010) and observe looser ties to the home culture (Giambo & Szecsi, 2005).

As has been discussed, the situation of a parent speaking a particular language and also requesting children to respond in the same language, can be realised on a continuum ranging from consistently speaking the HL to using the ML. Parents may decide to communicate in their own mother tongue with their children in an OPOL situation (Döpke, 1992), or provide a context, where only the HL is spoken in the home (Grosjean, 2010). They may speak a non-native language to the children (Barron-Hauwaert, 2004; Döpke, 1992), or mix languages (Barron-Hauwaert, 2004; Grosjean, 2010). Sometimes a third language is used in the home in the form of the parent-couple home language (Barron-Hauwaert, 2004; Döpke, 1992). In addition, parents have different approaches in relation to their children's language choice (Barron-Hauwaert, 2004; De Houwer, 2015; Lanza, 1992). Building on this body of literature, the scale of speaking the HL was developed to measure where the parents' speaking pattern was positioned on this continuum (see Section 3.4.2.1). Speaking the HL presents the most salient sub-dimension of parental home involvement in the theoretical framework for this study (see Section 2.4.1). The analysis and subsequent discussion of parental home involvement through speaking the GHL can be found in Chapter 5 and 6.

2.2.4 Teaching the HL

Current understandings of children's development incorporate several theories, especially sociocultural theory (Vygotsky, 1978) where the relationship and access to interaction with others are viewed as significant to children's life. Sociocultural theory emphasises children and their social environment, particularly the role of parents and teachers who are valued as contributors to the children's development (Horowitz, 2000).

Parents are encouraged to be children's instructors of language and first teachers with 'distinctive roles and responsibilities' (Scarino & Liddicoat, 2009, p. 13). Based on Vygotskian thinking that social interaction between parent and child yields cognitive change (Vygotsky, 1986), parents as children's first teachers is not a new perspective (Horowitz, 2000). For example, Döpke (1992) referred to parents as teachers in their role to raise children bilingually.

Vygotsky's zone of proximal development (ZPD) (1978) is a popular theory in education and cognitive psychology that emphasises cognitive growth in adult-child interactions. According to Vygotsky (1978), during culturally mediated interaction between parents and children, cognitive change takes place as parents help children to accomplish more than they could without their parents' help. The difference between the children's independent level of problem solving, and the level that can be achieved with the help of a more experienced and capable partner, is called the ZPD. Both interlocutors bring their understanding of the world to their interaction where parents' more advanced understanding is made accessible to the children, facilitating learning (Wertsch & Tulviste, 1992). Through language, the children internalise this interaction with all its motivational, cognitive and social aspects (Vygotsky, 1978).

Based on Moerk's (1983) teaching techniques, Döpke (1988) established four teaching techniques for the bilingual context of parents' instructional speech patterns in relation to children's GHL learning. Teaching techniques within the parent-child interaction were

characterised by linguistic features specific to parent-to-child interactions. These included ‘vocabulary teaching techniques’, ‘grammar teaching techniques’, ‘techniques with unspecified goals’ and ‘non-teaching oriented techniques’ (Döpke, 1988, p. 104). The techniques for teaching of vocabulary and grammar were further subdivided. Vocabulary teaching techniques included:

- modelling (e.g., introducing new elements, translation, elaboration or paraphrasing)
- rehearsing (e.g., preserving vocabulary through repetition of parent’s own or children’s utterances and incorporating vocabulary by including children’s utterances in the parent’s expression)
- patterning (e.g., providing a contrasting label pair)
- eliciting (e.g., requesting labels, an insertion, a translation, making a choice, and what and where questions).

The same categories were applied to grammar teaching techniques:

- modelling (e.g., structural expansion, extension, grammar transformation and morpheme correction)
- rehearsing (e.g., morpheme repetition, reduction of parent utterances or substitutions)
- patterning (e.g., extensions, variations and substations—frames or morphemes)
- eliciting (e.g., requesting different kinds of extensions).

Sometimes, techniques for vocabulary and grammar teaching were used in combination with corrections. Techniques with unspecified goals concerned communicative strategies and did not fit any other categories. These included strategies a parent may use when children fail to respond (e.g., the parent repeating themselves or providing the answer to a question).

Döpke’s (1988) work showed no correlation between children’s active use of the GHL and teaching techniques with unspecified goals. Conversely, parents’ use of specified teaching

techniques and a more favourable language learning environment for the GHL affected children's GHL use positively (Döpke, 1988). Döpke (1992) identified a relationship between children speaking the GHL and parents' use of vocabulary rehearsing techniques, vocabulary and grammar patterning and less use of non-teaching techniques with unspecified goals. Particularly, vocabulary preservation by parents was related to children's active use of the GHL.

Döpke's (1988) vocabulary and grammar language teaching techniques relate to the quality characteristics of interaction, as they facilitate a diversity of vocabulary and grammar structures through modelling, rehearsing, patterning and eliciting. These quality indicators also apply to reading books, which has been found to contribute to children's HL learning (Caldas, 2006; Song, Tamis-Lemonda, Yoshikawa, Kahana-Kalman, & Wu, 2012). The literature also stressed the importance of teaching children to read in the HL (Cunningham, 2011; Grosjean, 2010). Teaching techniques and reading books to children may compensate for limited exposure to the HL (Pauwels, 2005).

In summary, Döpke (1988, 1992) found that parents raising their children bilingually (i.e., German and English) used a range of teaching strategies with different effects on their children's GHL learning. Döpke's (1988) HL teaching categories informed the development of the scale for teaching the GHL and included items representing 'vocabulary-teaching techniques', 'grammar teaching techniques' and 'techniques with unspecified goals'. In addition, strategies combined with vocabulary and grammar teaching techniques (Döpke, 1988) was the fourth category included in the teaching the GHL scale (see Section 3.4.2.1). Teaching the GHL presents one sub-dimension of parental home involvement in the theoretical framework for this study (see Section 2.4.1).

2.2.5 Parental strategies to facilitate children's HL learning

Clyne (1991) suggested that successfully raising children with more than one language depends on parents' imagination to tap resources in and outside the home. In Grosjean's (2010) model, influences on children's HL development relate to a range of parental involvement behaviour. Parents can facilitate and encourage children's HL learning by providing opportunities for their children to participate in school activities (e.g., HL school), interact with people in the community (e.g., HL school community), and by providing access to media in the HL, which in turn create a need for children to learn the HL (Grosjean, 2010). Glinzner (2010) found that almost all parents used regulative and motivation strategies, provided media in the GHL and encouraged children's GHL learning through exposure to popular electronic and printed media.

Glinzner (2010) reported that parents used extrinsic and intrinsic strategies to motivate children's GHL learning. For example, extrinsic motivation included offering rewards, whereas intrinsic motivation included relating activities to children's interests and making HL learning fun. Döpke (1996) advised parents to participate in activities with their children, such as singing, reading books, acting and cuddling.

Further, watching digital versatile discs (DVDs) may be a good technique for HL learning (Cunningham, 2011) due to the possibility of watching favourite shows and films repeatedly (Caldas, 2006). Similarly, watching television in the HL may enrich verbal skills through linguistic variety (Caldas, 2006; Harding-Esch & Riley, 2003) and may be particularly helpful if neither parent speaks the HL (Harding-Esch & Riley, 2003). As children begin to read subtitles, television in the HL may also have an input in children's literacy (Baker, 2014; Caldas, 2006). Caldas (2006) noted that his children learnt new words from watching films in the HL. Likewise, a recent study found that in documentaries and narrative television, visual images with corresponding soundtrack supported vocabulary acquisition of language learners

(Rodgers, 2018). However, in a different study, gaining new vocabulary through watching television appeared to be dependent on the viewers' existing knowledge of vocabulary in the target language and the amount of hours television programs were watched (Webb & Rodgers, 2009). The importance of the learner's existing vocabulary in the HL for vocabulary acquisition through watching television may be one reason why watching television has been found to be less supportive of HL acquisition in young children (e.g., Hoff & Core, 2015). When watching television or DVDs, children are mostly passive recipients and do not actively produce the HL (Baker, 2014; Grosjean, 2010). Thus, watching television or DVDs in the HL can aid training in HL comprehension (Caldas, 2006; Harding-Esch & Riley, 2003; Rodgers, 2016). One way to overcome the passivity of this activity may be to watch with other family members who speak the HL and who can provide an opportunity to ask questions and have discussions in the HL (Baker, 2014; Harding-Esch & Riley, 2003).

In contrast to watching television or DVDs in the HL, the internet offers more interactive HL input. Communicating with HL native speakers via email or video conversations motivates the child to respond and allows for real and authentic language use (Baker, 2014; Harding-Esch & Riley, 2003). The use of communication technology can contribute to maintaining direct links with family and friends in the homeland and may increase a family's commitment to HL learning (Borland, 2006). Thus, the internet may contribute to children's HL acquisition (Harding-Esch & Riley, 2003) through contact with HL speakers and a wide range of resources for bilinguals and second-language learners (Baker, 2014). A disadvantage of the internet may be that more than half of all websites are in English, though German and Japanese are the third most used languages (World Wide Web Technology Surveys, 2009-2019). Thus, the dominance of English on the internet may facilitate the use of English if not strictly monitored by parents. For example, Caldas (2006) noted that for his children, the internet helped to keep the English language alive in a French-speaking ML environment. If

children identify the HL with popular, high-status mass media such as television and the internet, this may raise the status of the HL for the children (Baker, 2014) and may create a need for children to learn the HL (Grosjean, 2010).

Parental regulation of HL input in the home appears to be mostly realised with media in the HL. Parents provide a rich linguistic environment for their children through media in the HL such as books, music, films and games. Strategies such as rule-setting seem to be commonly used by parents to regulate HL and ML input in the home. Glinzner (2010) revealed that parents used strategies focused on regulating HL input and ML input in the home. For example, some parents who regulated HL input factored in time spent on German studies (Glinzner, 2010). Most parents reported monitoring children's exposure to music, games, books and other resources in the HL and setting rules for watching television or DVDs to improve HL input through electronic media (Glinzner, 2010). Caldas (2006) reported enforcing a rule that he only watch television in the HL with his bilingual children. Regulative strategies such as exposure to media in the HL were used by some parents to compensate for their limited HL skills (Glinzner, 2010).

In addition, hearing the HL in a variety of contexts from numerous speakers who use the HL naturally adds to the quality and quantity of input (Grosjean, 2010) and facilitates children's HL learning. Thus, children partaking in school activities in the HL with other children may raise the status of the HL. Other social benefits are drawn from the fact that the ability to speak the HL is necessary for group membership. Acceptance by a particular group and a sense of belonging can contribute to children's emotional wellbeing and intellectual development (De Houwer, 2015; Lopez-Rocha, 2010).

Lastly, in regular schooling, homework is the context in which the influence of the home on children's academic achievement is most noticeable (Hoover-Dempsey, Bassler, & Burow, 1995). The literature indicates that parents' helping with homework is related to higher

student achievement at primary and secondary levels (Shumow, 2010). Based on Epstein's (1992, 1995) typology, Hoover-Dempsey, Battiato, Walker, Reed, DeJong and Jones (2001) developed eight categories of parental homework activities in relation to the learning mechanisms of modelling, reinforcement and instruction. Categories of parental homework activities that influence students' learning through 'reinforcement' include establishing school-like structures, interacting with teachers about homework, oversight of children's homework processes, parents' responses to students' homework efforts, facilitating the child's understanding of homework and engaging in metastrategies (Hoover-Dempsey et al., 2001). In the context of GHL schools, homework can be provided by the teacher, but due to students' voluntary attendance, it is not compulsory. Yet, Glinzner (2010) found that some parents were mainly involved in their children's GHL learning by assisting their children with German homework. Glinzner (2010) reported that some parents planned time slots for doing homework, monitored or helped children complete homework from their GHL school. Further, some parents checked children's understanding of tasks in the GHL, assisted them to improve their comprehension and engaged in activities conducive to GHL learning achievement such as activating prior knowledge through revision of German HL schoolwork (Glinzner, 2010). Other studies have also reported parents helping with children's homework from their HL school (Hu, 2006; Salahshoor, 2017; Seo, 2017) although without providing a description about activities necessary to complete homework tasks.

As we have seen, parents may facilitate children's HL learning through regulating input in the HL (e.g., opportunities for interaction with other HL speakers and rules for media input in the ML and the HL) (Caldas, 2006; Glinzner, 2010; Grosjean, 2010), assisting children with HL studies (e.g., homework from HL school) (Grosjean, 2010; Hoover-Dempsey et al., 2001), encouraging children's HL learning (e.g., child-centred activities) (Döpke, 1996; Glinzner, 2010), and by providing resources in the HL (e.g., music, films in the HL and the use of the

internet) (Baker, 2014; Caldas, 2006; Cunningham, 2011; Grosjean, 2010). Based on this body of literature, four scales of parental home involvement to facilitate children's GHL learning were developed (i.e., assisting with GHL studies, regulating GHL input, motivating GHL learning and providing resources in the GHL) (see Section 3.4.2.1). They present four separate sub-dimensions of parental home involvement in the theoretical framework for this study (see Section 2.4.1).

2.3 Influences on parental home involvement in children's HL learning

This section describes influences on parental home involvement that may explain 'very different outcomes under very similar sociolinguistic conditions' (Döpke, 1998, p. 4) in bilingual families. Based on Bandura's (1986) social cognitive theory (see Section 2.4), and in consideration of previous research on predictors of parental involvement in children's schooling (Grolnick et al., 1997; Hoover-Dempsey & Sandler, 1995, 1997), this study focuses on the influences arising from parents' personal beliefs, personal context and the social environment. The following sections discuss personal beliefs (i.e., self-efficacy and role belief) including language specific beliefs (i.e., language beliefs and goal orientation), influences from the social environment (i.e., perceived child invitations and perceived teacher invitations) and the personal context (i.e., skills and knowledge and available time).

2.3.1 Influences on parental home involvement

In the literature on parental involvement in children's regular schooling, several theoretical models have been developed to explain why some parents are more involved than others. Hoover-Dempsey and Sandler's (1995, 1997) model explores parents' views to explain motivational influences on parental involvement at home and at school. Figure 1 shows Hoover-Dempsey and Sandler's (1995, 1997) model which presents multiple factors as dynamic variables that influence parental involvement behaviour and suggests how teachers might enhance parental involvement (Hoover-Dempsey & Sandler, 1997). Hoover-Dempsey

and Sandler (1995, 1997) proposed three major categories of motivational influences on parental involvement: parents' motivational beliefs (e.g., parental role construction and parental self-efficacy), parents' perception of invitations for involvement from others (e.g., school invitations, teacher invitations and child invitations) and parents' perceived life context (e.g., skills and knowledge and time and energy).

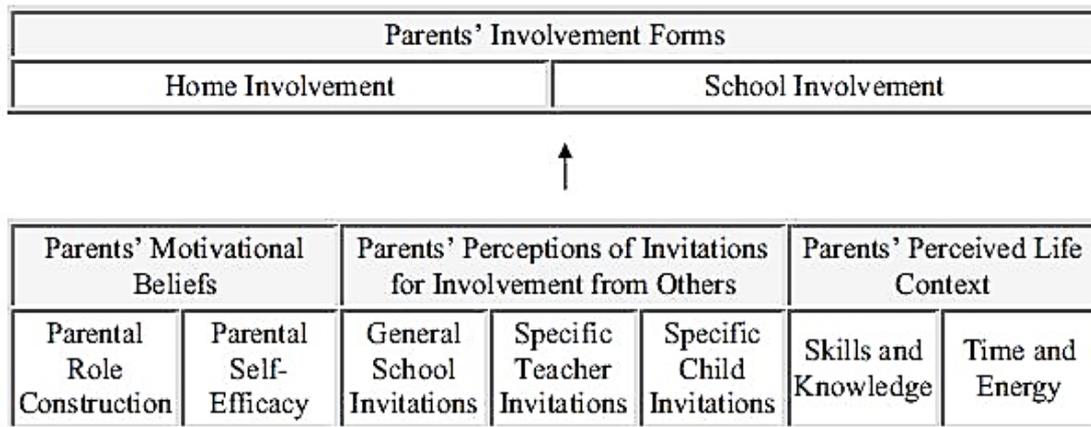


Figure 1 Hoover-Dempsey and Sandler's (1995, 1997) model of the parental involvement process.

Source: Green, C. L., Walker, J. M., Hoover-Dempsey, K. V., & Sandler, H. M. Parents' motivations for involvement in children's education: An empirical test of a theoretical model of parental involvement. *Journal of Educational Psychology*, 99(3), 532-544. Copyright 2007 by the American Psychological Association. Reprinted with permission.

Similarly, Grolnick, Benjet, Kurowski and Apostoleris's (1997) model reflects parental involvement in personal, contextual and institutional settings. As shown in Figure 2, Grolnick et al.'s (1997) model included five categories: parents' internal properties (e.g., parent self-efficacy and their role as their children's teacher), family context (e.g., stress, social support and family resources) and environmental influences from school (e.g., teacher attitude and behaviour) and from the children (e.g., children's characteristics and motivational qualities). Further, parents' demographics (e.g., educational level and SES) influence all other categories.

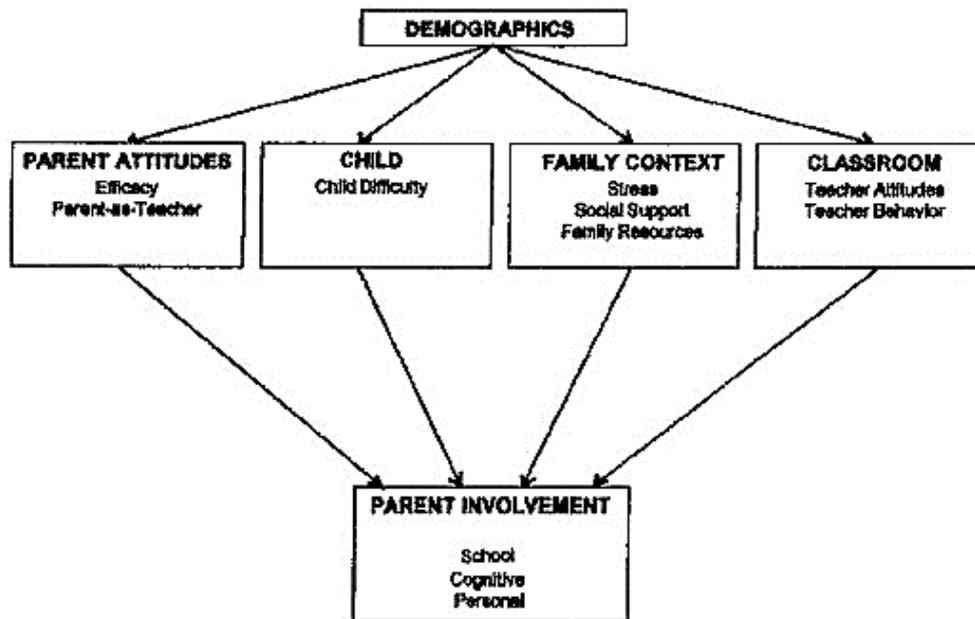


Figure 2 Grolnick et al.'s (1997) model for predictors of parent involvement in children's schooling.

Source: Grolnick, W. S., Benjet, C., Kurowski, C. O., & Apostoleris, N. H. Predictors of parent involvement in children's schooling. *Journal of Educational Psychology*, 89(3), 538-548. Copyright 1997 by the American Psychological Association. Reprinted with permission.

Scholarly recognition of the importance of the family in children's HL learning has resulted in a considerable body of research into influences on HL maintenance in the home. Qualitative studies investigating language dynamics in families across ethnic communities have provided in-depth insights. Most influences on HL maintenance in the family concern parents' demographics and the linguistic family context, parental beliefs and attitudes and the social environment. Influences on HL maintenance within parents' demographics and the linguistic family context include; for example, parents' gender (Clyne, 2003; Harres, 1989; Lambert, 2008; Piller, 2001; Winter & Pauwels, 2005), culturally and linguistically mixed families (Clyne & Kipp, 1999; De Klerk, 2001; Lambert, 2008), parents' educational levels (Borland, 2006; Lambert, 2008), and parents' proficiency in the HL and the ML (Piller, 2001; Søndergaard & Norrby, 2006).

Parents' personal attitudes and beliefs strongly influence HL maintenance in the family; for example, parents' attitudes towards the HL (Lambert, 2008; Schaubert & Moses, 1982; Schüpbach, 2006; Slavik, 2001), cultural core values (Guardado, 2002; Lambert, 2008; Rubino, 2010; Smolicz, 1981; Smolicz, Secombe, & Hudson, 2001), goals and reasons for HL maintenance (Clyne, 1985; Lambert, 2008; Slavik, 2001), parental impact belief and role belief (De Houwer, 1999). The social environment has been a focus of macro-level research, such as examining the influence of diasporic contact on HL maintenance (Clyne, 1991; De Klerk, 2001; Hamers & Blanc, 2000; Lambert, 2008). On the micro level, the influence of children on parents' language choice (Clyne, 1991; Gafaranga, 2011; Grosjean, 2010; Piller, 2001; Schüpbach, 2006; Søndergaard & Norrby, 2006; Winter & Pauwels, 2005) has been found to be significant.

Based on models investigating motivators of parental involvement in children's regular schooling (Grolnick et al., 1997; Hoover-Dempsey & Sandler, 1995, 1997), Glinzner (2010) found that parents' personal context (e.g., skills in and knowledge of the GHL), personal beliefs (e.g., self-efficacy) and the social environment (e.g., parents' perceived invitations from family members) influenced the extent of parental home involvement in children's GHL learning. Similarly, several studies conducted at HL schools have reported that parental demographics (e.g., migrant generation) (Seo, 2017), parents' beliefs (e.g., attitudes towards the HL) (Salahshoor, 2017; Seo, 2017), and the social environment (e.g., children's willingness to use the HL) (Salahshoor, 2017; Seo, 2017), influence parental involvement in children's HL learning at home.

Overall, few studies in HL schools have investigated influences on parental home involvement and most of them were case studies using qualitative methods. There is a lack of research into HL schools that applies quantitative methods to analyse the complex relationship between parents' home involvement and the various influences stemming from parents'

personal beliefs, their personal context, and their social environment. Building on existing work on parental home involvement in children's regular schooling and influences on HL maintenance, personal beliefs (i.e., self-efficacy, role belief, language beliefs and goal orientation), influences from the social environment (i.e., perceived child invitations and perceived teacher invitations) and the personal context (i.e., skills and knowledge and available time) are discussed in more detail.

2.3.2 Self-efficacy

Self-efficacy is one's judgement about one's own ability to perform a task in a specific domain (Bandura, 1997). Parental self-efficacy is parents' belief that their involvement in their children's schooling will positively affect their children's development, learning and school success (Ardelt & Eccles, 2001). Parents with a high sense of efficacy for parental involvement believe that they can enact the behaviours that will produce positive outcomes (Anderson & Minke, 2007). Similarly, De Houwer (1999) described parental impact belief as a feeling of control over children's 'linguistic functioning' (p. 83). A very strong impact belief; for example, may indicate that parents sense that they have an important task to fulfil, and that their use of the HL affects their children's language skills. Conversely, a weak impact belief indicates that parents believe that their children will learn the language from other sources and that their actions will have no influence on children's HL acquisition.

The development of self-efficacy beliefs is based on vicarious, enactive, affective, persuasive and somatic sources of efficacy-relevant information (Bandura & Locke, 2003). Several social experiences, such as mastery experiences, social modelling or social persuasion, can build a sense of efficacy (Bandura, 1997). Mastery experiences are a person's history of achievement in a domain (Bandura, 2008). In social modelling, people learn vicariously from observing similar people who accomplish tasks (Bandura, 2008). Self-efficacy in one domain can be built through explicit demonstration trials (Bandura, 1989). However, developing strong

efficacy entails experience in overcoming obstacles through perseverance, which trains people in how to manage failure in an instructive rather than demoralising sense (Bandura, 2008). Hence, training in cognitive skills can produce more lasting effects if it raises an individual's sense of efficacy and imparts skills (Bandura, 1986). In the bilingual context, domains of experience may include parents' experiences of mastery or success (e.g., a child's willingness to communicate in the HL), experiences of failure (e.g., a child's request for parents to communicate in the ML), verbal persuasion (e.g., a child asking a parent to help him/her with HL homework) and affective response (e.g., parents' pride in their child's HL skills).

The importance of self-efficacy for parental involvement is demonstrated through a focus on self-efficacy in parenting training programs. To achieve long-term outcomes in parenting programs, parents' self-efficacy must be increased (Sandler, Schoenfelder, Wolchik, & MacKinnon, 2011). Research using Hoover-Dempsey and Sandler's (1995, 1997) model found that strong self-efficacy beliefs explained a small but significant portion of the variance of home-based involvement (Anderson & Minke, 2007; Deslandes & Bertrand, 2005; Green, Walker, Hoover-Dempsey, & Sandler, 2007; Grolnick et al., 1997; Ice & Hoover-Dempsey, 2011; Sheldon, 2002). Similarly, Glinzner (2010) identified a distinct difference between the self-efficacy of German native-speaker parents and non-German speakers when helping their children learn the GHL. Parents with high levels of self-efficacy in helping their children learn the GHL were more involved than parents with low levels of self-efficacy. However, Glinzner (2010) also reported that German native speakers do not automatically have high self-efficacy in helping their children learn the GHL. In difficult situations, parents weigh the benefits and costs in terms of time, effort and resources to determine whether to invest their efforts and resources 'in ventures that are difficult to fulfil, and how much hardship they are willing to endure in pursuits strewn with obstacles and uncertainties' (Bandura, 1996, p. 57).

As we have seen, Bandura's (1997) self-efficacy belief and De Houwer's (1999) parental impact belief may explain parents' level of engagement in children's HL learning. Based on the work of Bandura (1997, 2006b), De Houwer (1999) and Walker et al. (2005), the self-efficacy scale for the present study was developed (see Section 3.4.2.2). In addition, sources of efficacy-relevant information such as Bandura's (1997) domains of experience were considered for the generation of questions for the scales of perceived child invitation (see Section 3.4.2.6) and perceived teacher invitations (see Section 3.4.2.7). Parents' self-efficacy belief presents an essential influence in the proposed model of motivators of parental home involvement in children's' GHL learning (see Section 2.4.1). The analysis and discussion of parents' self-efficacy belief can be found in Chapter 5 and 6.

2.3.3 Role belief

Parental role belief can be defined as parents' beliefs about what activities they should engage in to support their children's schooling (Hoover-Dempsey et al., 2005). Similarly, role-activity belief is parents' perceptions of the level of personal involvement necessary to support children's success at school (Ice & Hoover-Dempsey, 2011). In the bilingual context, De Houwer (1999) found that parents held beliefs about their own role in their children's HL learning. This can influence parents' linguistic behaviour.

The concept of a social role stems from the theatre, where actors' scripts describe a specific behaviour for a certain part in a play (Biddle, 1986). Characteristic behaviours of a social role are assumed by social participants. In turn, expectations for a social role are followed by performers (Biddle, 1986). This implies that if there is information about expectations about a particular social role—for example for teachers, students or parents—a considerable part of the behaviour of people occupying that position can be predicted (VanLange, Kruglanski, & Higgins, 2012).

In many disciplines, role theory is one of the most compelling theories in social sciences, as it provides a bridge between individual behaviour and the social environment (Biddle, 1986). Role theorists concern themselves with people's roles (i.e., people's characteristic social behaviour), social position (i.e., people's assumed identities) and expectations for behaviour that are understood and observed (Biddle, 1986). Roles can give guidance for the goals that should be pursued, the tasks that should be accomplished and the behaviour that is required in a certain context (VanLange et al., 2012).

In cognitive role theory (Biddle, 1986) and most other role theories (e.g., functional, symbolic interactionist, structural and organisational role theory), it is widely assumed that expectations held both by the individual and by others are formed in response to experience and generate role behaviour (Biddle, 1986). Expectations are a subfield of cognitive role theory; Biddle (1979) assumed that these can appear simultaneously in at least three modes: norms, attitudes and beliefs about probable behaviour, and involvement in generating a role. Correspondingly, parental involvement behaviour in children's regular schooling has been linked to historically derived values, goals and expectations from important others (Hoover-Dempsey & Jones, 1997).

Likewise, social networks may exert positive or negative influences on parents' norms and beliefs concerning their children's HL learning. Pauwels (2005) reported that attitudes of an ethnic community to HL usage can be very diverse and may affect parents' use of the HL. Parents who belong to a group in which the maintenance of the HL is not a core value or a group that believes that 'using the vernacular language will result in insufficient exposure to English' (Brown et al., 1997, p. 9) may possibly support the ML over the HL. Further, families who consider raising children bilingually sometimes face opposition from members of the medical profession, teachers, extended family or even strangers (Piller, 2001). One reason for negative attitudes could be misguided beliefs about the effects of bilingualism on children. The

influence arising from expectations of others creates a need for self-help and mutual support for the parents, which is met through an increasing number of parent-initiated newsletters (Piller, 2001).

Research on parental role construction suggests that it might be pivotal for predicting parental activities at home and at school for parents of elementary and secondary school students (Hoover-Dempsey et al., 2005). Some studies found the effect of role construction to be limited (Anderson & Minke, 2007; Deslandes & Bertrand, 2005). However, other studies reported that parents' role construction influenced their decisions about involvement in children's regular schooling (Drummond & Stipek, 2004; Green et al., 2007; Sheldon, 2002). Becher (1984) and Grolnick et al. (1997) reported that parents who view their role as that of a teacher were more involved in cognitive enhancing activities with their children. In particular, parents who home-school were found to hold role belief indicating an active role construction (Ice & Hoover-Dempsey, 2011). Similarly, Glinzner (2010) reported that a more active home-support role belief was exhibited by more involved parents. In contrast, a less active home-support role belief was reported by less involved parents who also identified considerably more obstacles with respect to their language support.

In summary, role belief is parents' belief about what they should do to help their children's GHL learning (Hoover-Dempsey et al., 2005; Ice & Hoover-Dempsey, 2011) and develops in response to expectations from the social environment (Biddle, 1986; Hoover-Dempsey & Jones, 1997). Role belief has been found to be an important influence on parental involvement in children's regular schooling (Drummond & Stipek, 2004; Green et al., 2007; Hoover-Dempsey et al., 2005; Sheldon, 2002) and may influence parental home involvement in children's HL learning (De Houwer, 1999; Glinzner, 2010). Based on the reviewed body of literature, role belief presents an important influence in the proposed model of motivators of parental home involvement in children's' GHL learning (see Section 2.4.1). The development

of the scale of role belief can be found in Section 3.4.2.3 and results for the effect of role belief on parental home involvement can be found in Section 5.6.9.

2.3.4 Language beliefs

According to Spolsky (2004), parents belonging to a speech community have beliefs about language and language use that influence their language practice. Aspects of the language (e.g., value of the HL and HL use) are evaluated, gaining status in the process, and may form a consensual ideology (Spolsky, 2004). Thus, parents' language beliefs may also demonstrate their attitudes; for example, their evaluative responses, which are expressed in the form of likes or dislikes towards a referent or an object (Bohner & Dickel, 2011).

Research on attitudes has been popular in social psychology because of their tendency to influence behaviour (Bohner & Dickel, 2011). Smolicz and Secombe (1977) differentiated between four forms of attitudes towards the HL among HL groups. The first form is a negative evaluation of the HL, which results in opposition to HL maintenance. Negative attitudes are not necessarily overtly expressed (Slavik, 2001). Thus, unstated or unacknowledged negative attitudes towards the HL may partly explain the discrepancy between parents' stated positive attitudes and behaviour (Slavik, 2001). The second form of Smolicz and Secombe's (1977) forms of attitude towards the HL is indifference that indicates no interest in HL maintenance due its perception as having no purpose. A general positive evaluation signifies that the HL is valued but not important enough to be maintained. For example, Clyne (1991) reported that a positive attitude towards the HL did not necessarily increase use of the HL. The last attitude towards the HL is a personal positive evaluation, meaning that the HL is a core value, and thus there is a commitment to maintain it (Smolicz & Secombe, 1977). However, the desire for ethnic identification might also be satisfied through the maintenance of cultural core values other than the HL, despite having a positive attitude towards the HL. In other words, the

maintenance of other cultural core values can substitute for HL maintenance (Wright & Kurtoğlu-Hooton, 2006).

Piller (2001) found that positive parental attitudes were demonstrated when childhood bilingualism was viewed as a small investment with high returns. Their attitude was based on their belief that HL acquisition in childhood was easy and can lead to children developing native-like proficiency in the HL (Piller, 2001). Often, parents develop beliefs about language learning based on information from the popular press and literature, other bilingual families and personal experiences with language learning (King & Fogle, 2006; Lambert, 2008; Piller, 2001). As a result, parents' lack of knowledge about raising children with more than one language leads to such beliefs, that in such as using the HL in the home will negatively affect the acquisition of the ML (Grosjean, 2010). A similar belief is that learning more than one language can be confusing for children (Glinzner, 2010), or that using the HL will result in deficient contact with the ML (Brown et al., 1997). Often, parents' negative attitudes prevent them from actively using the HL with their children (De Houwer, 1999; Lambert, 2008; Rubino, 2010). A study investigating FLP in a multilingual society in Malaysia (Wang, 2017) found that parents believed in a hierarchical order of languages based on their social significance, instrumental, and sentimental values; resulting in intergenerational language shift. In an Australian study, Lambert (2008) found that parents did not transmit the GHL if they believed that it would involve potential psychological harm for children. Conversely, parents' belief in the benefits of bilingualism spurred GHL transmission in the home, and parents with a positive attitude towards transmitting the GHL showed more active transmission strategies than parents with an ambivalent attitude (Lambert, 2008). Likewise, De Houwer (1999) reported that 'attitudes towards bilingualism in general and child bilingualism in particular' (p. 82) influenced parents' linguistic preferences.

Nevertheless, it has been found that positive attitudes do not necessarily correspond with HL maintenance efforts (Clyne, 1991). For example, one study of parents of children attending Korean HL schools found that, despite parents' positive attitudes, parents lacked commitment to HL maintenance in the home (Seo, 2017). Likewise, Slavik (2001) and Schüpbach (2006) reported that positive attitudes towards the HL might not directly lead to HL transmission within the family.

As we have seen, language beliefs are beliefs and attitudes about a HL and its use (Spolsky, 2004) and can be expressed in forms of likes and dislikes (Bohner & Dickel, 2011; Gardner, 1985b). Based on the four forms of attitudes towards their HL (Smolicz & Secombe, 1977) and attitudes towards childhood bilingualism (De Houwer, 1999; Grosjean, 2010; Piller, 2001), parents' language beliefs may range from parents opposing HL maintenance to their commitment to HL maintenance. The development of the scale 'language beliefs' can be found in Section 3.4.2.4. Parents' language beliefs are one influence on parents' personal beliefs in the proposed model of motivators of parental home involvement in children's' GHL learning (see Section 2.4.1).

2.3.5 Goal orientation

Grosjean (1982) described childhood bilingualism as 'a planned affair' (p. 169) in which parents make decisions about raising children bilingually. 'But one might ask why individuals have this goal. Worded another way, what is their orientation?' (Gardner, 1985b, p. 11). According to Gardner (1985b), goals are reflected in a person's motivational orientation—their reasons for choosing between objectives. Gardner's (1985b) theory on language learning motives differentiates between integrative and instrumental goal orientations. Similarly, Slavik (2001) explored Maltese HL maintenance in Canada and differentiated between practical reasons for HL maintenance (e.g., the need to speak the HL on overseas vacations) and idealistic reasons (e.g., pride of Maltese identity). Integrative goal

orientation is about ‘some form of membership in a language community’ (Leaver, Ehrman, & Shekhtman, 2005, p. 104) and ‘emphasises social-emotional purposes’ (Gardner, 1985b, p. 11). Instrumental goal orientation focuses on usefulness (Leaver et al., 2005), such as the usefulness of a language for a future career. Søndergaard (2006) referred to parents’ instrumental orientation as how they viewed ‘the market value of bilingualism in a shrinking world’ (p. 118). For example, Lambert (2008) recorded that parents hoped that learning the GHL would lead to educational and occupational advantages for their children and increase travel and lifestyle opportunities.

Instrumental goal orientation can help people reach desired goals (Gardner, 1985b), yet integrative rather than instrumental reasons appear to lead to HL maintenance (Wright & Kurtoğlu-Hooton, 2006). According to Gardner (1985b), people with an integrative orientation are more likely to be more motivated. Lambert (2008) reported that reasons for family language transmission relate to family communication, heritage connections and the parent–child bond. For participants in Lambert’s (2008) study, the GHL was the language of socialisation that shaped their identity. The GHL carried cultural and family values that were important to the parents’ cultural identity. As such, parents’ motives:

highlighted the symbolic and communicative function of German. These motives took account of personal needs and those of other family members (locally and overseas) coupled with the wish for the children to participate in the extended family network and to have some insights into this aspect of their heritage. (Lambert, 2008, p. 224)

Similarly, De Klerk (2001) found that maintaining the cultural bond contributed to the parents’ maintenance of the HL in their families. Glinzner (2010) found that most parents’ reasons for children’s GHL learning were both integrative and instrumental. Parents with a GHL background tended to emphasise integrative reasons, while parents with no GHL background mainly cited instrumental reasons for GHL maintenance (Glinzner, 2010).

Thus, parents' reasons for having their children learn the HL may be explained through Gardner's (1985b) integrative and instrumental goal orientations, Slavik's (2001) practical and idealistic reasons, and Lambert's (2008) symbolic, communicative or social-emotional motives. Goal orientation is one influence on parents' personal beliefs in the proposed model of motivators of parental home involvement in children's' GHL learning (see Section 2.4.1). Based on the reviewed literature, the scale 'goal orientation' was developed (see Section 3.4.2.5). Results for the effect of goal orientation on parental home involvement can be found in Sections 5.6.4 and 5.6.5.

2.3.6 Perceived child invitations

Generally, parents want to respond to their children's needs (Grusec, 2011; Hoover-Dempsey et al., 1995; Hoover-Dempsey et al., 2005), which are met through parenting tasks such as nourishment, stimulation, support, structure and monitoring (Bradley & Corwyn, 1999). For example, Grolnick et al. (1997) found that parents who perceived their children as easy were more involved in cognitively enhancing activities with their children. Conversely, parents who perceived their children as difficult may be more inclined to withdraw from such interactions. In another study, parents withdrew involvement because of frustration with their children's academic performance and behaviour that showed no improvement (Williams & Sánchez, 2012). Unsurprisingly, children's actions, individual characteristics and needs have also been called regulators of parental actions (Maccoby, Snow, & Jacklin, 1984). Thus, parents' perceived 'invitations from the child are influential because they express the child's need for and willingness to accept parental help' (Walker et al., 2005, p. 94).

In the bilingual context, children have been characterised as 'agents of language shift' (Clyne, 1991, p. 114). Parents decide the ethnic membership of young children (Noro, 2009). Younger children often successfully learn the HL (Pauwels, 2005), whereas school-age children are the ones who decide the home language (Schüpbach, 2006; Schwartz, 2008). The

start of schooling often marks a turning point for children's home language preference. Young school children are especially susceptible to social forces. This susceptibility has the potential to exacerbate the home situation and can trigger the abandonment of children's interest in their first language (Gonzalez & Maez, 1995) and the abandonment of the HL in the family (Clyne, 1991; Cunningham & King, 2018). The children's impact on their family members' language choice in the home has been referred to as 'child agency' (Crump, 2017; Revis, 2019; Seals, 2017).

Older children provide a language model for their younger siblings (Barron-Hauwaert, 2011). If older siblings are exposed to the ML through day care or schooling, they have been found to socialise their younger siblings into the use of the ML (Seals, 2017). Consequently, the ML becomes the siblings' preferred language of communication together (Schwartz, 2008; Seals, 2017). Thus, siblings are likely to be responsible for shifting 'the language balance in the home and build bridges or barriers to language acquisition' (Obied, 2009, p. 705).

Gafaranga (2011) found that children use a number of methods, such as indicating confusion or misunderstanding parents' utterances, to initiate a switch to their preferred language. Depending on their communicative competence, parents may respond by trying to amend their language choice according to a child's language preference (Gafaranga, 2011). According to Crump (2017) parents and children can accommodate their interlocutor's language preference for specific purposes, such as showing solidarity. The switch to the ML is a commonly found strategy and indicates parents' willingness to follow their children's language choice (King & Logan-Terry, 2008). Thus, dynamic family language policies (Seals, 2017) might be partly responsible if bilingualism in children is not achieved.

Children's response to their parents' use of the HL has been linked to stress and tension in daily family life if parents attempt to maintain the HL at home (Glinzner, 2010; Pauwels, 2005; Schüpbach, 2006). Often, parents find it challenging to use the HL with children who

are unwilling to use it (Pauwels, 2005). Likewise, several studies involving parents of children attending HL schools reported that a major challenge to maintaining the HL in the family was children's reluctance to learn the HL (Glinzner, 2010; Seo, 2017). For example, children's metalinguistic comments (Revis, 2019) may request parents not to speak the HL (Glinzner, 2010). Thus, 'The best-laid plans of parents may often be upset by the children themselves' (Piller, 2001, p. 16).

Several contributors to children's preference for speaking the ML are outlined in the literature. Often children want to blend in (Schüpbach, 2006) and are wary of feeling singled out (Grosjean, 2010). For example, Glinzner (2010) reported that a participant expressed a great dislike of speaking German with her parents in public, as it made her feel like an outsider. Another reason for children's desire to speak the ML may be identity formation. Children are continuously establishing a sense of who they are within their social environment (Otcu, 2010). When children reach adolescence, they negotiate their own ethnic identity. If children identify more with the culture of the wider community than they do with their family's culture, their preferred language is likely to be the ML (Noro, 2009). Thus, children's language preference can be an indication of their needs. Parents' wishes to meet their children's needs can lead to changes in their HL use (Grosjean, 2010).

As we have seen, children's behaviour and characteristics can influence parental involvement behaviour in children's regular schooling (Grolnick et al., 1997; Walker et al., 2005; Williams & Sánchez, 2012) and children's HL learning (Clyne, 1991; Cunningham & King, 2018; Gafaranga, 2011; Gonzalez-DeHass, Willems, & Holbein, 2005; Schüpbach, 2006). Therefore, parents' perceived invitations from the child are an important influence in the proposed model of motivators of parental home involvement in children's' GHL learning (see Section 2.4.1). The development of the scale for parents' perceived child invitations can

be found in Section 3.4.2.6 and the analysis and discussion of this scale can be found in Chapter 5 and 6.

2.3.7 Perceived teacher invitations

In Epstein's (1992, 1995) types of parental involvement, teachers assist parents in their home and school involvement. Epstein (1986) found that the social experiences that influenced parents' attitudes to helping their children's learning included teachers' attempts to encourage parental involvement. Perceived teacher invitations convey teachers' attitudes to parental involvement. For example, Lawson (2003) reported that teachers may be reluctant to perceive the parents' knowledge to be as important as their own. Teacher invitations can be perceived as statements of teachers' school-home partnership practices and can influence parents' decision-making with respect to engaging with schools to support children's regular schooling (Ice & Hoover-Dempsey, 2011). Examples of invitations include a welcoming school climate, teachers' encouragement to visit the classroom, regular contact between parents and the school (Hoover-Dempsey et al., 2005) and homework that requires parental assistance (Epstein & Van Voorhis, 2001; Hoover-Dempsey et al., 1995). Thus, parental home involvement may be enhanced through parents' perceptions of being specifically invited to participate (Epstein & Van Voorhis, 2001).

Findings in the literature on the effect of parents' perceived teacher invitations are ambivalent. Several studies found that teacher invitations were of significance to parental home involvement (Anderson & Minke, 2007; Epstein & Dauber, 1991). For example, Grolnick et al. (1997) identified a relationship between teacher characteristics and mothers' involvement in their children's regular schooling. Teachers appeared to have the strongest effect on mothers who perceived themselves as teachers, had a high sense of efficacy and an unproblematic family context (Grolnick et al., 1997). Similarly, negative experiences with school personnel served as a potential barrier to parental involvement (Williams & Sánchez, 2012). However,

other studies showed no significant effects of teacher invitations on parental home and school involvement (Deslandes & Bertrand, 2005; Green et al., 2007; Reininger & Santana López, 2017; Walker, Ice, Hoover-Dempsey, & Sandler, 2011).

Studies investigating parents at HL schools found that HL teachers expected parents to help with children's homework (Glinzner, 2010; Salahshoor, 2017; Seo, 2017) and asked parents to volunteer in class (Glinzner, 2010). HL teachers provided homework to compensate for the minimal school contact time (Salahshoor, 2017). However, homework was often experienced as a challenge due to parents' and children's time constraints (Salahshoor, 2017). Some parents perceived no invitations for involvement, indicated by the lack of information and homework provided by the teacher and not feeling welcome in the classroom (Glinzner, 2010; Seo, 2017).

Thus, parents' perceived teacher invitations in the form of teachers' school-home partnership practices (Epstein, 1986; Ice & Hoover-Dempsey, 2011) may influence parental home involvement in children's regular schooling (Epstein & Van Voorhis, 2001; Hoover-Dempsey et al., 1995) and children's HL learning (Glinzner, 2010). In the proposed model of motivators of parental home involvement, parents' perceived teacher invitations is one influence from the social environment (see Section 2.4.1). The development of the scale for 'parents' perceived teacher invitations' can be found in Section 3.4.2.7. In Sections 5.6.4 and 5.6.5, results are presented for the effect of perceived teacher invitations on parental home involvement.

2.3.8 Skills and knowledge

Parental knowledge refers to parents' perception of their understanding of a certain domain like mathematics or science, whereas parental skill is something in which parents are confident of their abilities, such as public speaking or cooking (Hoover-Dempsey & Sandler, 1995). Shulman (1986, 1987) differentiates between two types of knowledge: subject matter

content knowledge (e.g., skills and knowledge in the HL) and pedagogical knowledge (e.g., knowledge of strategies for helping children learn the HL). In the bilingual context, parents' knowledge of the HL concerns their grammar and vocabulary knowledge, whereas skills include HL-speaking skills and parents' strategies to support children's learning of the HL. It may be important for parents to have the knowledge to enable them to actively support their children's HL learning (Goren, 2003; Grosjean, 2010).

Parents' skills and knowledge needed for helping their children's learning varies (Van Voorhis, 2011). Parental perceptions of an inability to help their children can negatively affect their involvement in children's regular schooling (Walker et al., 2005). For example, parents' skills and knowledge have been linked to parents' SES, with parents from low-income families being less involved possibly because they lack the skills and knowledge to help their children (Griffith, 1996).

Several studies have proposed parents' skills and knowledge as a powerful predictor of parental involvement, as they shape parents' ideas about the kinds of activities in which they consider involvement (Hoover-Dempsey & Sandler, 1995). Parents appear to engage in educational activities with their children particularly if they believe they have the skills and knowledge in that specific domain (Chrispeels & Gonzalez, 2007). For example, home-schooling parents reported large positive effects on their perceptions of skills and knowledge for involvement (Green & Hoover-Dempsey, 2007). Parents' lack of certain skills, such as communication skills in the ML, have been found to be barriers to parental involvement in children's regular schooling (Brilliant, 2001).

Dauber and Epstein (1989) examined parents' perception of school practices to involve parents in children's learning in the home. The results indicated that parents wanted schools and teachers to guide them in how to help their children (Dauber & Epstein, 1989). Parents' requests for this guidance could indicate that parents frequently may not perceive themselves

as having the knowledge and skills to help their children. Parents' knowledge and skills have also been one of the greatest focuses of parent intervention programs (Balli, Demo, & Wedman, 1998; Christenson & Carlson, 2005; Shumow, 1995, 2010).

In GHL schools, Glinzner (2010) found that the greatest parental concern was their lack of skills and knowledge in the GHL and how it might affect their children's GHL learning. Several studies in HL schools across ethnic communities reported that first-generation HL speakers may not have the necessary skills and knowledge to help their children with homework from HL school (Glinzner, 2010; Salahshoor, 2017; Seo, 2017). However, overall, this applied more to second-generation GHL speakers than first generation GHL speakers. For example, Seo (2017) noted differences in HL proficiency between first- and second-generation Korean migrants and their ability to assist their children learning the HL. Further, one study asserted that parents sent their children to HL schools due to their limited HL proficiency (Hu, 2006).

Thus, reinforcing at home the language that children learn at school can be difficult, as parents lack the knowledge to take an active role in supporting their children's HL learning (Goren, 2003). Similarly, Piller (2001) demonstrated that limited proficiency in the HL may be a major obstacle in implementing the OPOL strategy. Further, lacking HL knowledge might not only interfere with language patterns in communicating with children in the HL, it can also lead to a sense of exclusion if the rest of the family converse in the HL (Glinzner, 2010; Lieberman & McCabe, 1982; Piller, 2001).

As we have seen, skills and knowledge is parents' understanding and skills for a specific subject matter (Hoover-Dempsey & Sandler, 1995; Shulman, 1986, 1987) and their knowledge of strategies to support their children's learning (Shulman, 1986, 1987) such as children's learning of a HL (Goren, 2003; Grosjean, 2010). Skills and knowledge has been found an important influence on parental home involvement in children's regular schooling (Green &

Hoover-Dempsey, 2007; Walker et al., 2005) and children's HL learning (Glinzner, 2010; Goren, 2003; Salahshoor, 2017; Seo, 2017). Thus, skills and knowledge for helping the child learn the GHL present an important influence within parents' personal context of the proposed model of motivators of parental home involvement (see Section 2.4.1). Results for the effect of parents' skills and knowledge on parental home involvement in children's GHL learning can be found in Chapter 5 and 6.

2.3.9 Available time

Hoover-Dempsey and Sandler's (1995, 1997) second variable of parents' perceived life context is time and energy—that is, the demands of their work life, family and other responsibilities (Hoover-Dempsey & Sandler, 1995). The literature contains mixed results for studies on the effects of time and energy on parental home involvement. Home-schooling parents recorded significant positive effects in their perceptions of time and energy for involvement (Green & Hoover-Dempsey, 2007). However, in studies where children were not home-schooled (Reininger & Santana López, 2017; Walker et al., 2011) time and energy was not a predictor of parental home involvement. For parents who did not home-school their children, Williams and Sanchez (2012) reported that the time available for parents to be involved in children's regular schooling was limited by other parental obligations, such as responsibility for siblings or spousal preoccupations. However, the most powerful hurdle to parents' perceived available time was their employment (Williams & Sánchez, 2012). This means that even if parents wished to be involved in children's regular schooling, work schedules often made this impossible (Williams & Sánchez, 2012).

In the context of HL schools, Glinzner (2010) found that fathers cited their lack of time to be more involved in children's GHL learning due to employment demands. Other studies in HL schools found that parents lacked the time to assist their children with homework from HL schools (Seo, 2017) or teach HL literacy at home (Salahshoor, 2017).

Thus, numerous aspects in parents' lives can affect their time and energy to become involved in their children's regular schooling (Hoover-Dempsey & Sandler, 1995, 1997; Williams & Sánchez, 2012) and children's HL learning (Glinzner, 2010; Salahshoor, 2017; Seo, 2017). Available time for helping the child learn the HL presents one influence within parents' personal context in the proposed model of motivators of parental home involvement (see Section 2.4.1). The development of this scale can be found in Section 3.4.2.9. In Sections 5.6.4 and 5.6.5. present results for the effect of parents' available time on parental home involvement.

2.4 Theoretical framework

Bandura's (1986) social cognitive theory serves as the theoretical framework for this study. In social cognitive theory (Bandura, 1986), human behaviour is explained within an interdependent causal structure involving triadic reciprocal causation between a person's behaviour, the personal dimension and their social environment. In this section, the proposed model of motivators of parental home involvement in children's GHL learning is introduced. The proposed model of motivators is based on the literature review which focused on factors that may be influenced by teachers at HL schools. This is followed by a discussion of the personal dimension, the social dimension and proposed relationships within the model.

2.4.1 Proposed model of motivators of parental home involvement in children's GHL learning

Human behaviour is socially situated and contextualised (Bandura, 2018) and as such, it reflects intrapersonal and environmental influences. Based on Bandura's (1986) model of reciprocal determinism, the proposed model of motivators of children's GHL learning postulates a relationship between parental home involvement behaviour (i.e., speaking the GHL, teaching the GHL, assisting with GHL studies, regulating GHL input, motivating GHL learning and providing GHL resources), the social environment (i.e., parents' perceived child

invitations and parents' perceived teacher invitations), personal beliefs (i.e., role belief, self-efficacy, goal orientation and language attitudes) and the personal context (i.e., skills and knowledge and available time).

Figure 3 presents the proposed model of motivators of children's GHL learning. Social cognitive theory (Bandura, 1986) was used to help understand the dynamics of influences on parental home involvement behaviour, as key elements in the model operate as interacting determinants and have a mutual bidirectional influence. For example, based on Bandura's (1986) social cognitive theory, influences from the social environment can lead to attitudinal changes (e.g., personal beliefs) and changes in how parents assist their children (e.g., home involvement behaviour) (Shumow, 1998). Thus, Bandura's (1986) social cognitive theory provides a perspective to conceptualise relationships between motivators and parents' behaviour, and informs the collection and analysis of data to understand the effects of the personal context (i.e., skills and knowledge, available time), personal beliefs (i.e., role belief, self-efficacy, goal orientation and language attitudes) and social context (i.e., perceived child invitations and perceived teacher invitations) on parents' behaviour (i.e., parental home involvement).

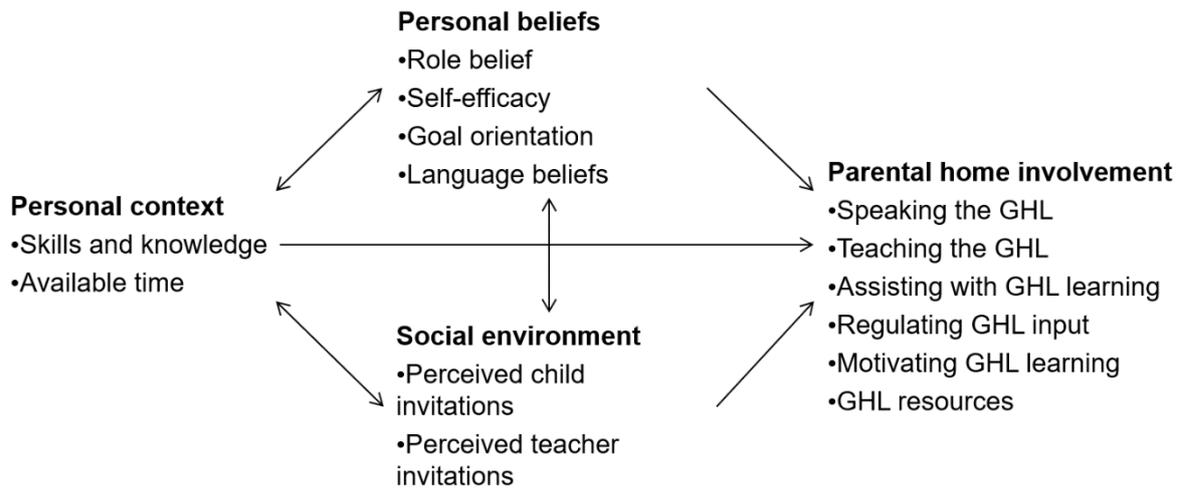


Figure 3 Proposed model of motivators of parental home involvement in children’s GHL learning.

2.4.2 Personal beliefs and personal context

A person’s cognitive interpretation of the external environment and their own behaviour is revealed in their beliefs about self and others (Bandura, 1986). ‘A major source of human motivation is rooted in cognitive activity’ (Bandura, 1989, p. 729). The dimension of personal beliefs incorporates intrapersonal factors that serve as agentic determinants in the triadic theory of causation (Bandura, 2018). A person’s biological talents, conceptions, values, goals and affective states influence how they behave (Bandura, 2008). In addition, the personal context in the form of a person’s economic conditions, SES, education and family structures affects behaviour indirectly through their impact on a person’s goals, their personal standards, self-efficacy, self-regulatory influences and affective states (Bandura, 1993; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). As such, parents’ behaviour is motivated and guided by forethought (i.e., cognition). In a bilingual context, forethought incorporates the anticipation of cognised goals, such as children’s GHL learning, and leads to the planning of actions (e.g., parents’ future home involvement behaviour).

Based on Bandura's (1988) cognitive motivation, parents' goals are determined by self-appraisal of their own competencies. A person's sense of efficacy is an important self-belief and the basis of human motivation and achievement (Bandura, 1997). 'Unless people believe they can produce desired effects by their actions, they have little incentive to act or persevere in the face of difficulties' (Bandura, 2018, p. 133). Thus, the more parents feel capable of influencing their children's GHL learning (e.g., perceived self-efficacy), the more effort and perseverance can be invested in the face of challenges such as children's reluctance to learn the GHL. Further, according to Bandura (2018), other factors can serve as motivators of human action if they are 'rooted in the belief that one has the capability to produce effects by one's actions' (p. 133). Thus, next to self-efficacy, other influences in the model (presented in Figure 3) may motivate parents to engage in behaviour that facilitates children's GHL learning if parents believe that their behaviour can have the desired effect.

Capabilities can provide a feeling of control and enable personal agency (Bandura, 2001, 2006a). In personal agency, parents use their competencies to control their own behaviour and influence social conditions. Personal agency is only attainable through mastery of knowledge and skills and can include risks and responsibilities (Bandura, 2001). Thus, people often seek others to act on their behalf to achieve goals (e.g., proxy agency) (Bandura, 2001) or cooperate with others through collective agency (Bandura, 2000). Thus, parents show personal agency for their children's GHL learning if they have high levels of efficacy for helping their children learn the GHL and show strong involvement in their children's GHL learning at home.

Parents' self-efficacy beliefs have been linked to several other personal constructs (Walker et al., 2011; Whitaker, 2008). As self-efficacy can influence parental goals and persistence (Bandura, 1988), it might also shape parents' role belief (Walker et al., 2005).

Parents' self-efficacy for helping their children has been found to contribute significantly to parents' role construction (Walker et al., 2011; Whitaker, 2008).

Parents' self-efficacy has also been positively linked with parents' knowledge and skills for involvement in children's regular schooling (Walker et al., 2011). Parents with similar levels of skills and knowledge may vary in their performance depending on their beliefs in the potential of those skills (Bandura, 1997). For example, Walker et al., (2011) found that self-efficacy was positively correlated with parents' knowledge and skills for involvement (Walker et al., 2011). Thus, the influence of parents' knowledge and skills might be mediated by other factors (Green et al., 2007), such as parents' self-efficacy.

Concerning other personal beliefs in the proposed model (see Figure 3), Glinzner (2010) found that parents' goal orientation was correlated with their attitudes towards the GHL. Parents' goal orientation, their attitudes towards the GHL and their perceived available time influenced parents' role construction (Glinzner, 2010).

Hoover-Dempsey and Sandler (1997) reported that parents' perceived life context variables (i.e., time and energy, and skills and knowledge) moderated the relationship between other constructs and forms of involvement. For example, parents frequently felt ill-prepared to help their children with homework due to limitations for their time and energy and parents lacking the necessary skills and knowledge (Hoover-Dempsey et al., 1995).

2.4.3 Social environment

In the proposed model of motivators of parental home involvement in children's GHL learning (Figure 3), the influence of important others is presented in parents' social environment. It can include family, peers, teachers (Bandura, 1986), and school staff practices (Grolnick et al., 1997; Hoover-Dempsey & Sandler, 1997). Interactions with the social environment affect a person, who in turn provokes reactions from the social environment (Grusec, 1992). Thus, family structures and other social structures within social systems

provide opportunities and constraints for human functioning operating through psychological mechanisms of the self-system to generate behavioural effects (Bandura, 2006a). Yet, the self-system is not simply a channel for external influences (Bandura, 2000). By exercising personal and collective influence (Bandura, 2006a), ‘human agency operates generatively and proactively on social systems, not just reactively’ (Bandura, 2000, p. 77). For example, perceived invitations from children was identified as an important influence of parents’ role construction (Anderson & Minke, 2007; Whitaker, 2008). Similarly, Whitaker (2008) asserted that the largest contributors to parents’ active role constructions were invitations from the child, and teachers’ suggestions that positive experiences with the child and the teacher play an important role in shaping parents’ role construction.

Further, as self-efficacy influences parents’ decisions for becoming involved in discouraging situations (Walker et al., 2005), perceived invitations from the child indicating the child’s unwillingness to use the GHL may also lead to weak parental home involvement. Similarly, perceived invitations from the teacher may enhance parents’ belief in their abilities through guidance, provision of homework and encouragement from their children’s teacher (Hoover-Dempsey & Sandler, 1995; Van Voorhis, 2011).

As we have seen, people’s personal beliefs are a result of their interpretation of the social environment (Bandura, 1986, 2006a) and their personal context (Bandura, 1993; Bandura et al., 1996). The core belief that motivates human action is self-efficacy and a strong sense of efficacy can lead to personal agency (Bandura, 2001, 2006a). Other influences can motivate human behaviour if people believe that their behaviour can have the desired effect (Bandura, 2018). In the literature, personal beliefs (e.g., self-efficacy) have been linked to other intrapersonal factors (e.g., role belief), the personal context (e.g., skills and knowledge) and the social environment (e.g., perceived child invitations). This body of literature informed the

development of the parental home involvement (PHI) multigroup model and the research hypothesis (see Section 5.6.1).

2.5 Research questions

The proposed model of motivators of parental home involvement in children's GHL learning was developed from a review of the literature. Based on the proposed model, the following research questions will direct the investigation into motivators of parental home involvement in children's GHL learning. The study aims to answer the following research questions:

Research Question 1: *In GHL schools, what are parents' demographic profiles?*

Research Question 2: *In GHL schools, what is the extent of parents' involvement at home?*

Research Question 3: *In GHL schools, what factors within parents' personal context, personal beliefs and social environment influence parental home involvement?*

2.6 Summary

This chapter reviewed the literature relevant to parental home involvement in children's GHL learning and influences on parental home involvement. This led to the development of the proposed model of motivators of parental home involvement in children's GHL learning. First, the chapter provided information on German speakers and GHL schools in the U.S. and Australia to contextualise this study. Since the time of early German settlement, German speakers have undergone changes in their use and maintenance of the GHL. Since before the turn of the nineteenth century, GHL schools have been part of the educational landscape to help maintain the GHL for German-speaking migrants and their families. Parents have a strong presence in GHL schools; however, there is an absence of literature exploring parents whose children attend GHL schools generally, and in the U.S. and Australia particularly. Following these introductory sections, the importance of the home next to the HL school for children's

HL learning was presented. Using Epstein's (1987) concept of school, home and community partnerships, the literature review showed that families and HL schools build a partnership and share responsibility for children's HL learning.

After a discussion on the various ways parents can be involved in their children's GHL learning (i.e., speaking the GHL, teaching the GHL, assisting with children's GHL studies, regulating HL input and providing media in the GHL), influences on parental home involvement were described. This was followed by the introduction of the proposed model of motivators of parental home involvement in children's GHL learning. Based on Bandura's (1986) social cognitive theory, motivators of parental home involvement pertain to parents' personal beliefs, personal contexts and social contexts.

The conclusion drawn from this chapter suggests that various aspects of parental home involvement within school-home partnerships at HL schools are yet to be explored. With the literature providing a theoretical framework and background for the purpose of this study, research questions were posed. With the research questions in mind, Chapter 3 will present a study design to investigate motivators of parental home involvement in children's GHL learning.

Chapter 3: Methods and Methodology

This chapter outlines the methodology and methods used in this study and discusses the research design to answer the research questions listed in Chapter 2. Methods in this study include the literature review, which led to the development of the theoretical framework and the collection and analysis of quantitative data through surveys. After justifying the use of a survey research design, this chapter explains the data collection and analysis methods. The research design outlines several steps for developing a survey instrument comprising the operationalisation of constructs, the measurement scale, the questionnaire layout of the draft instrument used in Pilot Study I and the expert review of the instrument. Lastly, data analysis procedures are discussed including the preparation of data for data analysis and the analysis methods used.

3.1 Research methodology

The purpose of this study is to investigate motivators of parental home involvement in children's GHL learning with a focus on factors that teachers in GHL schools may be able to influence. A systematic approach consisting of two parts was used to achieve the desired aim of the study.

The inductive approach, used in the first part, generates theories by interpreting collected evidence (Denzin & Lincoln, 2005) and was used to explore the extant literature, resulting in the development of a theoretical framework of motivators of parental home involvement in children's GHL learning. In the search to construct meanings from the existing literature, a constructivist view was taken, which can be useful when unknown variables are to be examined (Creswell, 2014). The generation of the theoretical framework and the subsequent testing of the model makes a significant contribution to knowledge as it explains forms of parental home involvement in children's GHL learning and the motivators that influence the

home involvement of parents of children attending GHL schools. The researcher in this study is a native German-speaking mother of a two-year-old, and a language teacher who has worked as a principal of a GHL school in Australia. The researcher's interpretation of the literature and generation of a theoretical framework were influenced by her own experiences and background.

According to Pring (2015), an individual's intentions and motivations drive their interpretation and understanding of the world they observe. This study is in line with previous studies of HL schools (Glinzner, 2010; Hu, 2006; Salahshoor, 2017; Seo, 2017) where the research was conducted by people who were members of the community seeking to gain a deeper understanding of HL maintenance within the HL school community. Insider researchers share the particular characteristics of the population to be studied, such as their ethnicity (Mercer, 2007). Simmel (1950) indicated that a researcher cannot be objective unless they are an outsider. One of the risks of insider research is therefore the potential for the researcher to not be objective when interpreting and reporting data. Further, there is a risk of insider researchers being blindsided and less sensitive to data they do not consider important (Smyth & Holian, 2008). However, the advantage of a researcher who holds group membership can be a deeper understanding of the problem that is being investigated (Bonner & Tolhurst, 2002; Smyth & Holian, 2008). To counter the weaknesses of insider research, potential risks were identified, and ethical standards were followed closely to achieve the objectives of the present research without introducing bias. As recommended by Fleming (2018), the thesis supervisors acted as critical friends who questioned and challenged the researcher's conclusions.

In the second part of this study, insights gained from the generated theoretical framework helped inform the choice of a deductive research approach. A deductive approach includes formulating research questions, testing a theoretical model, collecting data and confirming or rejecting the proposed model. As the first part of this study provided insight into

how the research questions could be answered from an empirical perspective, quantitative methods (i.e., survey design) were utilised and a survey instrument was developed to measure the core constructs of the model.

A sample population of parents of children attending GHL schools was identified in Australia to refine the survey instrument in two pilot studies. Thereafter, the revised instrument was used as an online survey for a sample of the population of parents of children attending GHL schools in the U.S. to test the theoretical model. The research questions were approached using quantitative data analysis, using IBM-SPSS (IBM, released 2017), and techniques for the use of structural equation modelling (SEM) in IBM-AMOS (Arbuckle, 2017).

3.2 Research design and research methods

Research designs are planned so that research questions can be unambiguously answered with the collected data (De Vaus, 2001). The research design for this study used a qualitative research method for the first part of the study (i.e., the literature review and development of the theoretical framework) and a quantitative method for the second part (i.e., survey).

An inductive process involves gathering information to generate broad themes and subsequently a model or theory (Punch, 2014). Thus, in the first part of the study, an inductive approach was used to systematically examine and interpret existing literature with a focus on concepts related to motivators of parental home involvement in children's GHL learning. This was used to generate a theoretical framework. In the second part of the study, for the purpose of answering the research questions that emerged from the literature, the need to collect data that did not exist elsewhere justified the need for a survey (Fowler, 2008). Surveys are used if relationships between variables are sought and 'can help in predicting behaviour in the future and can also serve to support a theory or hypothesis' (Wilson & Gochyyev, 2013, p. 6). Contemporary research in applied linguistics and educational research utilises cross-sectional

studies (Dörnyei, 2007), which is the choice of research inquiry for the larger design in this study. A cross-sectional survey 'refers to a snapshot-like analysis of the target phenomenon at one particular point in time, focusing on a single time interval' (Dörnyei, 2007, p. 78). It allows collecting data of participants' internal states at the same time as collecting data about their past behaviour related to their attitudes, emotions, cognitive and personality traits (Lindell & Whitney, 2001, p. 114).

In the social and behavioural sciences, the use of self-administered questionnaires on paper or online has become more popular than interview schedules due to questionnaires being more cost-effective and requiring less of the researcher's time and effort (Dörnyei, 2009). In contrast, interview schedules, where the researcher administers live interviews, places a heavy burden on the researcher's time and resources if data were to be collected from a large number of people. Benefits of a large sample size include sample representativeness and greater likelihood of model convergence (Gagne & Hancock, 2006). Further, as the population characteristics may be to some extent heterogeneous, a larger sample size could result in a smaller impact on accuracy (Lewin, 2005). Overall, questionnaires designed for participants to self-report can allow for examination of comprehensive data while being simple for participants to complete, thus offering various benefits over other methodologies (Clerkin, Marks, Policaro, & Halperin, 2007).

Nevertheless, it needs to be acknowledged that the depth of qualitative data that can be collected with questionnaires is limited (Dörnyei, 2009) and that a statistical analysis cannot do justice to the subjective reality of individual participants as responses are averaged out across the sample (Dörnyei, 2007). According to Dörnyei (2009), participants' self-reporting can also be a disadvantage of surveys as it may be susceptible to social desirability biases. However, in contrast to interviews, participants' self-reporting allows for their anonymity and reduces the risk of participants providing responses to an interviewer that may be socially

desirable but not true. To minimise weaknesses of the survey design, questions in the questionnaire were worded simply so that they could be understood by people with diverse educational backgrounds. To not limit the depth of respondents' answers, the questionnaire needed to contain several questions for each topic to clarify their response. As this can result in a lengthy questionnaire and respondent fatigue, participants were informed about the length of time that completing the questionnaire might take. Further, to allow participants to voice their opinions, expand and elucidate on particular aspects of their home involvement (Dörnyei, 2009) one open-ended question at the end of the questionnaire was provided. Online interviews were not conducted due to time limitations.

3.3 Steps within the research design

The research design included six steps. In the first step, the research problem was identified and research objectives framed as outlined in Chapter 1. The second step involved examining the existing literature with two main foci. First, the literature was reviewed for well-established models that explain the parental involvement process in children's regular schooling. Second, the literature on HL maintenance with a focus on parents of children attending HL schools was reviewed to identify forms of parental home involvement and influences on parental home involvement. Due to the lack of research in HL schools, information was sourced from the literature on HL maintenance on the micro level, with a focus on research involving German speakers.

A well-established model of motivators of parental involvement (Hoover-Dempsey & Sandler, 1995, 1997) served as a foundation for the development of forms of parental home involvement in children's GHL learning, and influences on parental home involvement. Based on traditional learning mechanisms: instruction, modelling, reinforcement and encouragement (Walker et al., 2010) (see Section 2.2.2), emerging themes and categories related to speaking the GHL, teaching the GHL, assisting with GHL studies, regulating GHL input, motivating

GHL learning and GHL resources—were used to conceptualise dimensions of parental home involvement in children’s GHL learning.

Influences pertaining to parents’ personal beliefs, social contexts and personal contexts were developed into broad patterns of motivators of parental home involvement. By summarising ideas in the literature, a theoretical framework for this study was developed, leading to the proposed model of motivators of parental home involvement in children’s GHL learning and the formulation of research questions (see Section 2.5).

The third step involved a search for a suitable questionnaire to test the model proposed in the theoretical framework. Then, based on the theoretical foundation established in the review of the literature, a questionnaire was developed (DeVellis, 2003). Data collection procedures included one preliminary pilot study of the self-administered pencil-and-paper questionnaire with parents of children attending one local GHL school in Australia, and a second pilot of the self-administered pencil-and-paper questionnaire with parents of children attending six other GHL schools across Australia (see Chapter 4). This fourth step of the research process included validating and refining the constructs in the questionnaire and using a final, adjusted version of the questionnaire for the main study (see Chapter 4). Parents of children attending GHL schools in the U.S. participated in the main study (see Chapter 5).

The final step of the research process included the data analysis, connecting, interpreting and discussing the results from the quantitative analysis of survey responses and qualitative analysis of responses to open-ended questions (see Section 3.6). The data analysis provided comprehensive insights into the parent population at GHL schools, motivators of parental home involvement and parental home involvement behaviour, and thus, answers to the research questions. Figure 4 depicts the research processes within the research design of this study. The literature review was an essential tool within each step of the study.

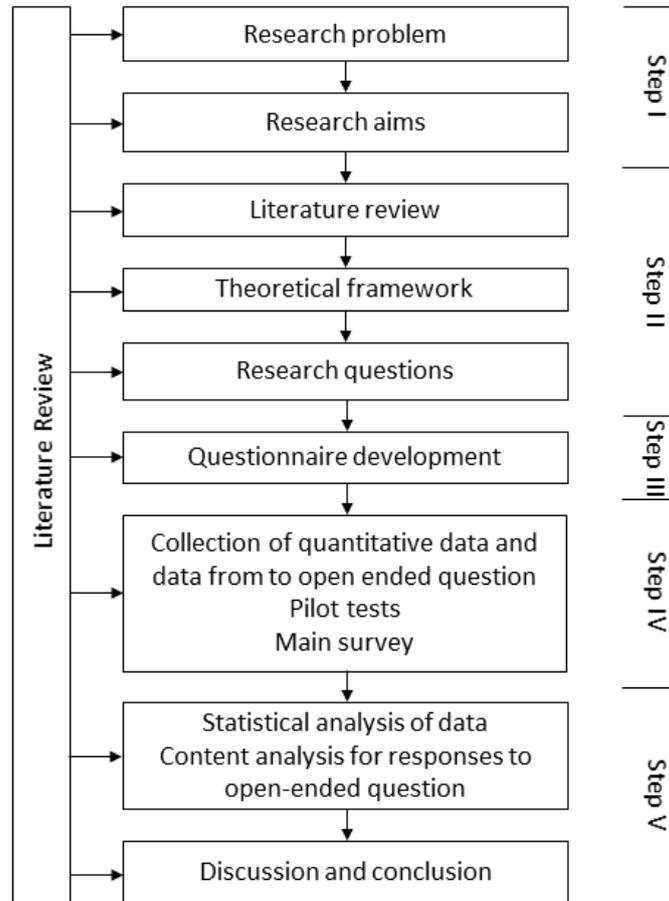


Figure 4. The research design.

3.4 Questionnaire development

This stage of the research methods included a review of suitable questionnaires measuring constructs in the proposed model demonstrated in Figure 3. Then individual items representing scales were generated (De Vaus, 2002; DeVellis, 2003; Dörnyei, 2007, 2009). The description of individual scales is followed by an outline of the response format and questionnaire layout. Before the first pilot study, the questionnaire was reviewed by a panel consisting of experts in survey design and this field of study.

3.4.1 Review of suitable questionnaires

The search for previously validated instruments measuring motivational influences on parental home involvement in children's HL learning revealed that there was no valid and reliable questionnaire suitable for this study. However, several instruments were found, including the 'parent's questionnaire' (Moin, Schwartz, Kozminsky, & Leikin, 2006 in Schwartz, 2008), the 'attitude/motivation test battery' (AMTB) (Gardner, 1985a) and Walker et al.'s (2005) 'questionnaire for parental involvement in children's education'.

The 'parent's questionnaire' (Moin et al., 2006 in Schwartz, 2008), based on Spolsky's (2004) model of language policy, measures parental attitudes (e.g., language ideology), parental use of the HL (e.g., language practice) and children's HL vocabulary (e.g., language management) of second-generation Russian–Jewish immigrants in Israel. The current study, however, investigates motivators of parental home involvement in children's GHL learning in the context of GHL schools. Thus, Moin et al.'s (2006 in Schwartz, 2008) questionnaire was developed for a similar purpose, but uses different measurement scales within a unique cultural context and population (e.g., HL home learning of children of second-generation Russian–Jewish immigrants in Israel).

The search for a suitable questionnaire measuring sociocultural influences resulted in the selection of the AMTB (Gardner, 1985a) in the literature on second-language learning. The AMTB tests non-linguistic aspects of students' motivation for second-language learning in the context of the coexistence of the anglophone and francophone communities in Canada. The original questionnaire consisted of eight categories: 1) attitudes towards French Canadians; 2) interest in foreign languages; 3) attitudes towards European French people; 4) attitudes towards learning French; 5) integrative orientation; 6) instrumental orientation; 7) French class anxiety; and 8) parental encouragement. While the AMTB was intended for a different purpose and population (e.g., school students), new items were developed representing parents'

instrumental goal orientation and parents' integrative goal orientation, based on Gardner's (1985a) AMTB.

Hoover-Dempsey and Sandler's (1995, 1997) model of motivators of parental home and school involvement in children's regular schooling contributed to the development of the conceptual framework of motivators of parental home involvement in children's GHL learning as described in Chapter 2. Based on Hoover-Dempsey and Sandler's (1995, 1997) model, a 66-item, self-reporting scale existed (Walker et al., 2005) that was designed to measure motivators of parental home and school involvement in children's regular schooling.

In Walker et al.'s (2005) instrument, aspects of parental home-based involvement activities included communicating with the child and implementing strategies such as helping to study, supervising, reading and practising school subject-related skills with the child. Walker et al.'s (2005) role activity beliefs concerned common home involvement activities (e.g., communicating with child, helping with homework and explaining assignments). Items for self-efficacy concerned parents' capabilities for home and school involvement activities. Self-efficacy items for home involvement included capabilities to help the child succeed at school and to communicate with the child. Invitations from the teacher and the child, skills and knowledge, and time and energy comprised items representing common home involvement activities (Walker et al., 2005).

Thus, the main components for scales relating to home involvement in Walker et al.'s (2005) instrument were communicating and helping with homework. In regular schools, assisting with or monitoring homework is a common form of parental involvement. Conversely, in HL schools, homework may be set but due to students' voluntary attendance, it is not compulsory. Thus, a focus on homework activities would be inappropriate in the HL school context.

As a study group, children attending regular school five days a week provide ample content for communicating with the family about school. However, in HL schools, the attendance of half a day is often quickly forgotten by students and may offer little content for discussion with parents. Therefore, due to the different educational context, Walker et al.'s (2005) instrument could not be used in its original form and was deemed unsuitable for this study.

In summary, the existing questionnaires included constructs of interest. However, the principle of compatibility (Ajzen & Fishbein, 2005) would have been contravened for all reviewed questionnaires. The importance of context suitability was emphasised by Bandura (2006b) in terms of self-efficacy beliefs:

There is no all-purpose measure of perceived self-efficacy. The one measure fits all approach usually has limited explanatory and predictive value because most of the items in an all-purpose test may have little or no relevance to the domain of functioning ... Scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest. (Bandura, 2006b, p. 307-308)

It was clear that established instruments could not be used in their entirety and a context-specific instrument would need to be created. However, the reviewed instruments were frequently consulted for guidance on questionnaire items to measure motivational influences on parental home involvement in children's GHL learning.

3.4.2 Generating scales and individual items

This stage in the research process involved the development and selection of suitable questionnaire items for a self-reporting questionnaire to measure each construct in the model related to the generated theoretical framework that was derived from a review and analysis of the literature (see Chapter 2). The theoretical framework was developed for this research and tested to assess the hypotheses and answer the research questions.

Based on the theoretical framework, the model included eight motivators of parental home involvement and six dimensions of parental home involvement in children's GHL learning. The eight motivators of parental home involvement pertained to: 1) parents' personal beliefs (i.e., self-efficacy, role belief, goal orientation and language beliefs); 2) parents' social environment (i.e., perceived child invitations and perceived teacher invitations); and 3) parents' personal context (i.e., skills and knowledge, and available time). The six dimensions of parental home involvement in children's GHL learning included speaking the GHL, teaching the GHL, assisting with GHL studies, regulating GHL input, motivating GHL learning and GHL resources in the home.

The development of the questionnaire involved two stages, as suggested by DeVaus (2002), comprising concept mapping and clarification. The first step involved a review of the appropriate literature to discover conceptual formulations identified by experts in this area. Based on theoretical insights, themes important to each construct were identified to display the boundaries of each construct (DeVellis, 2003). The next step, as advised by DeVaus (2002), was construct clarification. This was done by operationalising each construct and developing indicators that represented each component of the construct (Trochim, 2020).

The development of questionnaire items was facilitated by reviewing questions used in similar studies. Studies that measured similar constructs were consulted to guide the development of questionnaire items, as suggested in the literature (De Vaus, 2002; DeVellis, 2003). Thus, indicators were compiled and derived from studies measuring similar constructs for predictor variables as reviewed in Section 3.4.1. Drawing on these established questionnaires assisted with the wording of questionnaire items for role belief, self-efficacy, skills and knowledge, time and energy, child invitations, teacher invitations, goal orientation and language ideology.

For this study, no established questionnaire was found that measured forms of parental home involvement in children's HL learning. Walker et al.'s (2005) scale for parental home involvement measured the frequency of parental activities such as communicating with the child and helping them with homework. As frequency offers limited information, for the scale measuring parental home involvement for children's HL learning, dimensions of parental home involvement comprising specific activities were developed to add content to the parent-child interactions. For example, Döpke's (1988) categories for vocabulary and grammar language teaching relate to the quality characteristics of parent-child interactions, as they facilitate a diversity of vocabulary and grammar structures.

Scale specificity for each measure was gained by focusing on the content domain (e.g., parental beliefs and other perceived influences and behaviour associated with parental involvement in children's GHL learning), the setting (e.g., the home environment) and the population (e.g., parents whose children attend a GHL school in English-speaking migrant countries) (DeVellis, 2003). Glinzner's (2010) study detailed sentiments from parents whose children attended a GHL school. Thus, in consultation with other relevant literature, it gave the impetus for the creation of an item pool.

Most participants were expected to have high education levels and very good English skills (U.S. Census Bureau, 2017). Further, in previous studies in GHL schools, questionnaires (Mischner-Bang, 2005) and interviews (Glinzner, 2010) had been conducted in English. Thus, it was decided that English was a suitable language for the Parent Involvement Questionnaire for the GHL (PHIQ-GHL) and no translations into German was deemed necessary.

The next step was rewording indicators considering the clarity and length of items and the reading difficulty level (DeVellis, 2003). In accordance with general suggestions for scale development, items were developed using simple, common words and short sentences.

The number of items per scale was guided by the recommendation to include four or more indicator variables for a one-factor congeneric model (Brown, 2006). The selection of items for each scale was based on how well an item reflected the latent variable. Hence, items were chosen that best represented all aspects of each construct to maximise the reliability of items within a scale (DeVellis, 2003). As construct under-representation and construct irrelevant variance represent two main threats to the validity of measures of a construct (Messick, 1995, 1998), the goal was to include two items per component for each scale. Considering the length of the questionnaire, in some cases, one item per scale component was deemed sufficient. Nevertheless, the number of items representing each scale was quite large. A long questionnaire improves internal consistency, which tends to increase with the number of items per scale and allows for redundancy in the case of poorly performing items (DeVellis, 2003). One disadvantage of a lengthy questionnaire is the increased burden on respondents as they must spend more time on the questionnaire and focus their attention for a longer period. As a result, it was anticipated that the length of the questionnaire may create the risk of participants agreeing with items, irrespective of their content, to finish the questionnaire as quickly as possible. Therefore, negatively worded (reversed) items were added to the questionnaire to detect an agreement bias (DeVellis, 2003). DeVellis (2003) stated that disadvantages of reverse items, such as cognitive overload for the reader, may outweigh their advantages, such as avoiding agreement bias. Hence, the addition of reverse items was kept to a minimum to avoid increasing the cognitive load on respondents and creating confusion (DeVellis, 2003). Table 3 gives the definition and an example of a question for each construct. Sections 3.4.2.1–3.4.2.9 outline how questionnaire items were developed for the constructs in the model according to DeVellis’s (2003) guidelines for item development.

Table 3

*Scale Definition and Questionnaire Item Example for Predictor Variables and Outcome**Variables*

Construct name	Definition	Questionnaire item example
Role belief	Parents' beliefs about what they should do to help their child learn the GHL	I believe it is my responsibility to engage in German activities with my child
Self-efficacy	Parent's self-perceived capability to influence their children's GHL learning	I make a significant difference in my child's German language learning
Goal orientation	Parent's reason for their child's GHL learning	It will allow my child to learn more about German history, traditions and customs
Language beliefs	Parent's beliefs and attitudes towards children's learning of the GHL	Learning German is as important as learning English
Perceived child invitations	The child's characteristics and behaviour perceived by a parent as invitations to help the child learn the GHL	My child engages willingly in German studies (e.g., homework or other)
Perceived teacher invitations	The child's German teacher's behaviour perceived by a parent as an invitation to help the child learn the GHL	My child's German teacher gives advice about how to assist my child with German at home
Skills and knowledge	Parent's perception of possessing the skills and knowledge needed to help their child learn the GHL	I know how to support my child's German language learning
Available time	Parent's perceived available time for helping their child learn the GHL	I have enough time to assist my child with German studies (e.g., homework or other)
Speaking the GHL	Parent's frequency of GHL use with the child	Speak German to my child
Teaching the GHL	Parent's frequency of use of teaching strategies for the child's GHL learning	Model German sentences
Regulating GHL input	Parent's frequency of regulating the child's GHL learning	Schedule time for my child's German studies
Assisting with GHL studies	Parent's frequency for helping the child with GHL schoolwork	Help my child with German homework
Motivating GHL learning	Parent's frequency of encouraging the child's GHL learning	Praise my child for his/her German studies
GHL resources	The number of GHL resources provided in the home	Books (e.g., stories, novels etc.)

Parental home involvement in children’s GHL learning

Based on previous work measuring parental home involvement in children’s schooling (Walker et al., 2005), parental home involvement in children’s GHL learning was developed as a multidimensional self-reporting scale measuring the frequency of specific forms of parental home involvement. Parental home involvement behaviour pertained to parental strategies to develop children’s communicative and linguistic competence in the GHL (i.e., speaking the GHL and teaching the GHL) and parental strategies to facilitate children’s GHL learning (i.e., assisting with GHL studies, regulating GHL input, motivating GHL learning and GHL resources in the home).

The scale ‘speaking the GHL to the child’ was based on the OPOL strategy (Döpke, 1992) (see Section 2.2.3) and measured parents’ linguistic approach as a continuum, ranging from never speaking the GHL to exclusively using the GHL. Table 4 presents the scale ‘speaking the GHL’, which measured the frequency of parents’ GHL use with their children. The scale consisted of five items, including two items for parents’ interaction in the GHL, two items for parents’ interaction in another HL and one item requesting the children’s use of the GHL. High scores in this scale indicate a linguistic approach in which parents only address their children in the GHL and expect their children to respond in the GHL.

Table 4

Speaking the GHL: Items for Scale Components

Scale	Components	Items
Speaking the GHL	Parent speaking German	Speak German to my child Ask my child questions in German
	Requesting child to speak German	Ask my child to respond in German
	Parent speaking other language	Speak English to my child Speak another language to my child

The scale ‘teaching the GHL’ was developed based on Döpke’s (1988) GHL teaching categories (see Section 2.2.4). Non-teaching-oriented techniques were not included. Table 5 presents this scale. To differentiate this scale from the ‘speaking the GHL’ scale, items were phrased as teaching strategies, not as parents’ instructional speaking pattern as defined in Döpke’s (1988) teaching categories. Items that overlapped with parental speaking patterns, such as asking the child questions (Döpke, 1988), were placed in the scale ‘speaking the GHL’. The scale consisted of seven items, with high scores indicating that parents frequently used strategies to teach the GHL.

Table 5

Teaching the GHL: Items for Scale Components

Scale	Components	Items
Teaching the GHL	Vocabulary teaching techniques	Model German sentences Demonstrate the correct use of certain words and phrases
	Techniques with unspecified goals	Repeat German sentences for my child Translate child’s sentences to German
	Grammar teaching techniques	Explain grammatical concepts Correct my child’s German
	Strategies combined with vocabulary and grammar teaching techniques	Explain meaning of words Translate information for my child from German to English

‘Assisting with GHL studies’ represented parental strategies to facilitate children’s GHL learning and concerned parental activities in relation to children’s GHL studies. Table 6 presents the items for this scale. The scale was based on four of Hoover-Dempsey et al.’s (2001) categories of parental homework activities: general oversight of the homework process (i.e., oversight of German studies), engagement in interactive processes supporting the child’s understanding of homework (i.e., support of child’s understanding of German studies),

engagement in homework processes and tasks with the child (i.e., engagement in school tasks) and engagement in metastrategies designed to create a fit between task demands and the child’s skill levels (i.e., fitting tasks to the child’s level). The scale consisted of nine items, with high scores indicating that parents frequently assisted their children with GHL studies.

To avoid overlap of items for the scales ‘assisting GHL studies’ and ‘regulating GHL input’, items for ‘establishing school-like structures’ were placed in the scale ‘regulating GHL input’ in the theme ‘organising structures for GHL input’. Several of Hoover-Dempsey et al.’s (2001) categories included activities related to instructional scaffolding (e.g., metastrategies to create a fit between task demands), which overlapped with items for the scale ‘teaching the GHL’. To differentiate between these scales, items containing teaching activities, such as explaining grammatical concepts, were placed in the scale ‘teaching the GHL’.

Table 6

Assisting GHL Studies: Items for Scale Components

Scale	Components	Item
Assisting GHL studies	Oversight of German studies	Oversee my child’s German studies Monitor my child’s progress in German
	Support of child’s understanding of German studies	Check my child’s understanding (e.g., schoolwork, reading) Help my child with his/her German studies (e.g., schoolwork, reading)
	Engage in school tasks	Help my child with German homework
	Engage in metastrategies – fitting tasks	Re-read/repeat instructions in German Revise what child has learnt at German school

Another scale that represented parental strategies to facilitate children’s GHL learning was parents ‘regulating GHL input’ for children. Table 7 presents this scale, which measured parents’ strategies to regulate GHL input including organising structures for GHL input, GHL media input, GHL input through resources in the GHL and GHL community contact (see

Section 2.2.5). The scale consisted of eight items, with high scores indicating that parents frequently used strategies to regulate GHL input for children.

Table 7

Regulating GHL Input: Items for Scale Components

Scale	Components	Items
Regulating GHL input	Organising structures for GHL input	Schedule time for my child’s German studies (e.g., schoolwork, reading) Being near when my child does his/her German studies
	GHL media input	Put on German media for my child (e.g., music, films, computer software). Have rules for the amount of use of German and English media
	GHL resources	Check if my child uses/reads German books See that my child has a place for his/her resources in German
	GHL community contact	Organise catch-ups for my child with other German speakers (i.e., locally or via the internet) Take my child to community events in which he/she meets German speakers

Table 8 presents the scale ‘motivating GHL learning’. This consisted of two categories: intrinsic and extrinsic motivation. Items representing parent activities for intrinsically motivating children’s GHL learning included parents’ encouragement of children to engage in activities of interest (e.g., play games in German). Parental activities to foster children’s extrinsic motivation for GHL learning included praise, rewards and encouragement for children to learn the GHL. The scale consisted of eight items, with high scores indicating that parents frequently encouraged children’s GHL learning.

Table 8

Motivating GHL Learning: Items for Scale Components

Scale	Components	Items
Motivating GHL learning	Encourage GHL activities	Play games in German Ask my child to engage in activities in German
	Praise	Praise my child for his/her German studies Praise my child for his/her German studies in front of German speakers
	Reward	Reward my child for his/her German studies Talk to my child about planning trips to a Germanic country
	Encourage GHL learning	Encourage my child's German language learning Remind my child to do his/her German studies

The final scale representing parents' strategies to facilitate children's GHL learning was 'providing GHL resources in the home'. Table 9 presents this scale, which measured the amount of GHL media provided in the home. The scale consisted of nine items, including one open-ended question which invited parents to list additional resources. The scale included a range of frequently used media in German for reading, studying, playing, listening and watching and included books, learning material, music, DVDs, games and computer learning software. High scores for providing GHL resources in the home indicated that parents supplied a wide range of GHL resources in the home. This scale was removed after Pilot Study II due to the need to further reduce items in the questionnaire.

Table 9

Providing GHL Resources in the Home: Items for Scale Components

Scale	Components	Items
GHL resources in the home	Reading	Books (e.g., stories, novels etc.) Subscription to journal/magazine
	Studying	Learning material Computer learning software
	Playing	Family games Computer games
	Watching/Listening	Music DVDs

Self-efficacy

Parents' self-efficacy is assessed using a self-reporting scale measuring parents' self-perceived ability to help their children learn the GHL through parental home involvement (e.g., speaking the GHL). Self-efficacy questionnaire items should be adapted to specific tasks (Bandura, 2006b). Table 10 presents the parents' self-efficacy scale, which consisted of seven items, with high scores indicating parents' strong feelings of capability to help their child learn the GHL. As suggested by Bandura (2006b), the scale was generated to reflect items that demonstrate parents' beliefs in their capabilities to do what is needed to help their children learn the GHL. Correspondingly, it also included items that reflected the level of difficulty parents believe they can surmount to help their children learn the GHL (e.g., speaking the GHL to children). The importance of the latter items was that if questions held no obstacles for parents helping their children learn German, then all parents would appear to be highly efficacious with the effect of limiting the predictive value of the scale (Bandura, 2006b).

Table 10

Self-efficacy: Items for Scale Components

Scale	Components	Items
Self-efficacy	Feeling capable to do whatever is needed	I can influence my child's German language learning I make a significant difference in my child's German language learning
	Reversed items	I make no difference in my child's German language learning Others have more influence on my child's German language learning than I do
	Difficulty parents believe they can surmount	My use of German has a direct influence on what my child will learn to say in German I can teach my child German
	Reversed item	I don't know how to help my child learn German

Role belief

The development of this scale was guided by the work of Hoover-Dempsey and Jones (1997) and Walker et al. (2005) (see Section 2.3.3). Table 11 presents the scale 'role belief', which consisted of 10 items measuring what parents believed they should do to help their children's GHL learning. Components of the scale represented the two categories of parental home involvement in children's GHL learning (see Section 3.4.2.1). 'Strategies to develop children's communicative and linguistic competence in the GHL' was represented by six items, while 'strategies to reinforce children's GHL learning' was represented by four items. As suggested by Walker et al. (2005), in the present study parents' role belief was represented on a continuous role activity belief scale, with high scores indicating a more active role belief and low scores a more passive role belief. Scale items were prefaced with 'It is my responsibility to', followed by a variety of activities.

Table 11

Role belief: Items for Scale Components

Scale	Components	Items
Role belief	Strategies to develop children's communicative and linguistic competence in the GHL	<p>It is my responsibility to speak German to my child at home</p> <p>It is my responsibility to practice German with my child</p> <p>It is my responsibility to teach my child German</p> <p>It is my responsibility to correct my child's German</p> <p>It is my responsibility to develop my child's German language skills</p> <p>It is my responsibility to engage in German activities with my child</p>
	Strategies to facilitate children's GHL learning	<p>It is my responsibility to revise my child's German schoolwork with him/her</p> <p>It is my responsibility to assist my child with learning German</p> <p>It is my responsibility to provide resources in German for my child</p> <p>It is my responsibility to encourage my child to learn German</p>

Language beliefs

The 'language beliefs' scale was adapted from Moin et al.'s (2006 in Schwartz, 2008) language ideology scale. Theoretical considerations for the development of items in the scale included parents' attitudes towards the HL and ML (Bohner & Dickel, 2011; Smolicz & Secombe, 1977) and beliefs about language learning and bilingualism (Brown et al., 1997; Grosjean, 2010; Piller, 2001). Table 12 presents the scale 'language beliefs', comprised of six items measuring where parents' language beliefs are positioned on the continuum between parents opposing GHL maintenance to commitment to GHL maintenance (see Section 2.3.4). High scores indicated parents' positive language beliefs towards children's GHL learning and their commitment to GHL maintenance.

Table 12

Language Beliefs: Items for Scale Components

Scale	Components	Items
Language beliefs	Attitude towards the GHL	Learning German is as important as learning English
	Attitude towards the EML	It is important to speak mostly in English with children from infancy to improve their knowledge of English Supporting English in the home is more important than supporting German
	Beliefs about language learning	Children learn English easily in mainstream school Speaking German constantly negatively affects children's ability to master English
	Attitude towards bilingualism	Growing up with two languages in the home is confusing for a child

Goal orientation

The development of this scale was informed by Gardner (1985b), Slavik (2001) and Lambert (2008) (see Section 2.3.5) and yielded three dimensions of goal orientation—integrative goal orientation I (family), integrative goal orientation II (group belongingness) and instrumental goal orientation. Gardner's (1985a) scales of 'integrative goal orientation', 'instrumental goal orientation' and 'interest in language learning' in his AMTB were used to aid the development of questionnaire items. Table 13 presents components of the three dimensions of goal orientation and items representing each dimension. The multidimensional scale for the current study consisted of 17 items. High scores for integrative goal orientation I (family) indicated that parents' reasons for their children's GHL learning were guided by the importance of social-emotional motives such as family connections. High scores for integrative goal orientation II (group belongingness) highlighted the significance of group membership with GHL speakers and a cultural bond. High scores for instrumental goal orientation indicated that parents' reason for their children's GHL learning was based on

practical reasons, such as learning the GHJ for educational purposes and future career opportunities.

Table 13

Dimensions of Goal Orientation: Items for Scale Components

Scale dimension	Components	Items
Integrative I (Family)	Family connection	It will allow my child to keep a connection with the wider family
		It will enable my child to communicate with relatives
Integrative II (Group belongingness)	Ancestry	It will allow my child to learn more about his/her background
		It will enable my child to relate to German-speaking relatives
	Group membership	It will allow my child to identify with the German/Swiss/Austrian culture
		It will allow my child to have a strong sense of belonging with German speakers
	Cultural connection	It will allow my child to learn more about German history, traditions, and customs
		It will allow my child to enjoy another language and culture
Instrumental	Career	It will expose my child to another culture
		I think it will someday be useful for my child in getting a good job
	Education	My child may use it for his/her future career
		It will allow my child to study overseas
	Practice/apply	It will allow child to get a broader education
		It will enable my child to maintain his/her German skills
		It will allow my child to read the literature of a foreign language in the original language rather than a translation
World citizen	It will enable my child to live in a Germanic country one day	
	It will allow my child to meet and converse with more and varied people	

Perceived child invitations

Based on Walker et al.'s (2005) scale of specific child invitations, and sources of efficacy-relevant information (Bandura, 1997) (see Sections 2.3.2 and 2.3.6), the scale for 'perceived child invitations' used in the present study measured the extent to which children's attributes and characteristic behaviour was perceived by parents as an invitation to help

children learn the GHL. Table 14 presents this scale, which comprised eight items. High scores indicated parents' perceptions that their children sought parental help to learn the GHL at home.

Table 14

Perceived Child Invitations: Items for Scale Components

Scale	Components	Items
Perceived child invitations	Parent perceived experiences of mastery	My child participates in German activities with me My child wants to learn German with me
	Parent perceived experiences of failure	My child is reluctant to speak German with me My child avoids doing activities in German
	Parent affective response to child's GHL skills	My child is confident about his/her German skills My child expresses a lack of understanding when I address him/her in German
	Parent affective response to child's GHL attitude	My child engages willingly in German studies (e.g., homework or other)
	Child's verbal persuasion for parent involvement	My child asks me things related to his/her German studies

Perceived teacher invitations

Parents' 'perceived teacher invitations' measured the extent to which parents saw the teacher's behaviour at the GHL school as an invitation to become involved in their children's GHL learning. Table 15 presents this scale, which consisted of six items. The development of the scale was guided by Walker et al (2005) and sources of efficacy-relevant information (Bandura, 1997) (see Sections 2.3.2 and 2.3.7). Practical issues necessitated the removal of Bandura's (1997) experience dimension of mastery and failure, as it was unlikely that all participants in this study would have had the opportunity to volunteer as teacher aides at the GHL school. High scores indicated that parents perceived that their home involvement was welcome and valued by German teachers at the GHL school.

Table 15

Perceived Teacher Invitation: Items for Scale Components

Scale	Components	Items
Perceived teacher invitations	Teacher's verbal persuasion for parents to engage in school tasks	My child's German teacher asks me to help my child with German at home My child's German teacher contacted me
	Advice and guidance	My child's German teacher gives advice about how to assist my child with German at home My child's German teacher keeps me informed about my child's progress
	Parent affective response to teachers' interest in parents' involvement	My child's German teacher forwards schoolwork if my child cannot attend on any one day My child's German teacher assigns homework that involves parents

Skills and knowledge

The parents' 'skills and knowledge' scale measured parents' self-perception of possessing the necessary skills and knowledge needed to help their children learn the GHL. Table 16 presents the scale of parents' skills and knowledge available to help their child learn the GHL. This consisted of five items. The development of this scale was informed by Shulman (1986, 1987) and Walker et al. (2005) (see Section 2.3.8). High scores indicated that parents perceived they had sufficient skills and knowledge to help their child learn the GHL.

Table 16

Skills and Knowledge: Items for Scale Components

Scale	Components	Items
Skills and knowledge	Subject matter content knowledge	I know enough German to help my child I know enough about German grammar to help my child
	Pedagogical knowledge	I know how to support my child's German language learning I know how to explain things to my child about this/her German studies I know how to get German resources for my child

Available time

Based on Hoover-Dempsey and Sandler (1995, 1997), Hoover-Dempsey et al., (2001) and Walker et al. (2005), this scale measured parents' self-perceived available time for helping their child learn the GHL (see Section 2.3.9). Hoover-Dempsey and Sandler's (1995, 1997) life context variables include time and energy. However, such double-barrelled questions risk measuring two concepts as one (DeVellis, 2003). To avoid this risk, in this study, the scale focused on measuring parents' available time. Table 17 presents the scale measuring 'parents' available time', which consisted of six items. As life contexts influence how parents become involved rather than whether they become involved (Hoover-Dempsey & Sandler, 1997), questions were based on parental home involvement activities (see Section 3.4.2.1) in which parents were more or less likely to engage, based on their perceived time. High scores indicated that parents had sufficient time to be involved in their children's GHL learning at home.

Table 17

Parents' Available Time: Items for Scale Components

Scale	Components	Items
Available time	Strategies to develop children's communicative and linguistic competence in the GHL	I have enough time to practice German with my child I have enough time to engage in German activities with my child
	Strategies to facilitate children's GHL learning	I have enough time to revise German school work with my child I have enough time to assist my child with German studies (e.g., homework) I have enough time to supervise my child's German studies I have enough time to communicate with my child's German teacher

Demographic and background information

The questionnaire's demographic and background information section comprised two sections—information about the child and information about the parent and family. As parents were asked to respond to the questionnaire in relation to the oldest child attending a GHL school, the demographic questionnaire aimed to collect information about that child and the participating parent. Demographic questions about the child included gender, age, country of birth, school year level and the child's attendance (or non-attendance) at German classes at regular school. Further, information was collected about the child's age when starting to learn German and the child's German language proficiency.

The parent and family background questionnaire included parent gender, country of birth, ancestry (e.g., parents' country of birth), spousal country of birth, educational level and years lived in the U.S. or Australia. Further, information was collected about parental home language with their spouse.

After pilot testing, modifications were made to the demographic section. For example, instead of asking about siblings who speak German at home, in Pilot Study II, German speakers in the home were added (e.g., family members and others). After Pilot Study II, information about parents' German language proficiency was also collected. As linguistic behaviour is best assessed with self-reported data (Schmid & De Bot, 2004), the scale measured parents' self-perceived German language proficiency. For parents' self-perceived German language proficiency, the same scale was used as the child's German language proficiency, as perceived by the parent.

Open-ended question

A quantitative survey offers no opportunity for participants' own thoughts to be expressed and may leave 'the respondents with the impression that their personal opinion or experiences have to fit the straitjacket of prescribed answers' (Gillham, 2008, p. 34). Walker

et al. (2005) recommended the triangulation of data when using their questionnaire to collect information about parental involvement, as ‘it is likely to offer a more complete picture of belief-behaviour links than use of quantitative surveys alone’ (p. 100). Due to limitations such as the main study taking place in the U.S. via an online survey, in-person interviews with participants could not be conducted. Instead, positioned at the end of the demographics section, one open-ended question offered respondents an opportunity to add qualitative information. Answering open-ended questions usually takes more time than answering closed questions (Dörnyei, 2009). To avoid discouraging participants from completing the questionnaire and absorbing time at the expense of the closed questions, the open-ended question was positioned at the end of the questionnaire. The open-ended question was worded as a short-answer question, and as such, sought a more ‘free-ranging and unpredictable response’ (Dörnyei, 2009, p. 38) than did other types of open-ended questions. The open-ended question ‘Is there anything you would like to add?’ invited parents to volunteer information on matters important to them.

3.4.3 Response format

After the development and selection of items for each scale, the next step was to determine the response format. Walker et al.’s (2005) well-established parent home and school involvement questionnaire guided the questionnaire’s response format. The reviewed questionnaires included a range of response formats. Walker et al.’s (2005) instrument used a six-point Likert (1932) scale, ranging from ‘disagree very strongly’ to ‘agree very strongly’; no midpoint was included. Similarly, Gardner’s (1985a) AMTB provided a seven-point Likert-type response format (e.g., ‘strongly disagree’ to ‘strongly agree’, including a neutral midpoint). For the parent’s questionnaire (Moin et al., 2006 in Schwartz, 2008), a five-point Likert-scale was used, using a midpoint and ranging from ‘completely agree’ to ‘completely disagree’. Thus, decisions were required on the length of the response format and the inclusion (or not) of a midpoint.

As the number of response categories increases, the quantity of respondents' decision points also increased. An increasing number of decision points requires a larger sample. Thus, for smaller samples, fewer decision points (e.g., fewer response categories) are recommended (D. Curtis, personal communication, April 14, 2013). Also, considering the lengthy questionnaire, fewer response options would also reduce the burden on respondents (DeVellis, 2003). Therefore, the decision was made offer fewer response options than offered by Walker et al. (2005) or Gardner (1985a).

DeVellis (2003) stated that scales with or without midpoints are equal; neither is superior to the other. However, he advised the omission of a midpoint if it was important that respondents decided on a particular response category rather than selecting an option that involved the least effort. Likewise, Lietz (2010) asserted that studies show an increase in participants' choice of a neutral response option if this is available, and an increase in choices of substantive response options, such as agree or disagree, if a neutral response option is omitted. Thus, neutral response options were excluded.

The response categories were predictor variables (e.g., role belief, self-efficacy, language ideology, child invitation, teacher invitation, time and energy, and skills and knowledge) rated on a four-point, Likert-type scale, ranging from: 1) *strongly disagree*, 2) *disagree*, 3) *agree*, and 4) *strongly agree*. For role belief, scale items were prefaced with 'I believe it is my responsibility to' followed by a variety of responsibilities. Scale items for parents' perceived teacher invitations were prefaced with 'My child's German teacher' followed by a variety of activities (e.g., statements of the German teachers' school-home partnership practices). Different response categories were chosen for goal orientation, as parents were unlikely to disagree, particularly with instrumental (e.g., to secure a good job) and integrative goal orientation II (group belongingness; e.g., to enjoy another language and culture). As parents may not have perceived all reasons to have the same importance, goal

orientation ranged from 1) *not important*, 2) *somewhat important*, 3) *important* and 4) *very important*. In the demographic section, response categories for assessing children's and parents' ability in the GHL in the four macro skills (i.e., speaking, listening, reading and writing), ranged from 1) *none*, 2) *beginner*, 3) *intermediate*, 4) *advanced* and 5) *native speaker level*. 'Native speaker level' was selected over 'age appropriate' as participants in Glinzner's (2010) study where parents were concerned if their children's German skills were native-like rather than age-appropriate.

For the parental home involvement scales, a common set of response options did not seem adequate due to the different types of home involvement. Activities relating to teaching, assisting, regulating and motivating were measured on a five-point Likert-type scale to assess the frequencies of those behaviours, ranging from: 1) *never*, 2) *a few times a year*, 3) *once or twice a month*, 4) *once or twice a week*, to 5) *daily or almost every day*. To measure if parents' speaking pattern resembled the OPOL strategy, 'speaking German' included response options from 1) *never*, 2) *sometimes*, 3) *half the time*, 4) *mainly* and 5) *always*. The response scale for providing HL resources included 1) *none*, 2) *one*, 3) *two or three*, 4) *four to ten*, and 5) *more than ten*.

3.4.4 Questionnaire layout

The final questionnaire design step concerned the layout, which offered opportunities for maximising the response rate. Recommendations by Dillman (2007) concerned informing potential participants about the benefits of the study, linking the study to an authority such as a university, providing contact details of the researcher and showing positivity towards respondents. These elements were addressed in the cover page of the questionnaire. Further, more detailed information was given in the introduction and information letters (see Appendix B: Information for GHL schools and letter of introduction).

For the remaining sections of the questionnaire, best practice guidelines by Dillman (2007) for the layout were followed. Easy, readable instructions were placed where needed at the beginning of a new scale or next to individual items. Instructions for scale items were printed on a grey shaded background, clearly distinguishable from questions through font and positioning within the text box. For consistency, scale response items were equally spaced and appeared in the same font and size throughout the questionnaire. Questions were numbered to the left of each question and printed in an easily readable size. To avoid the selection of a response box to an item in the wrong line, questions within a scale were clearly separated by a line.

3.4.5 Expert review

After developing the initial item pool, the questionnaire was reviewed by an expert panel. DeVellis (2003) recommended the review of all items by an expert panel to ensure they items are not a manifestation of one researcher's perspective. Therefore, a review is an important step to maximise content validity. An expert panel review of the questionnaire gave feedback on the relevance of items for a construct, clarity and conciseness of items, reading difficulty, wording such as ambiguous terminology, multiple negatives or double-barrelled questions, and the identification of theoretical areas that may be missing in capturing the phenomenon (DeVellis, 2003).

As suggested by DeVellis (2003), the expert panel should consist of people with an understanding of the constructs involved. Therefore, the item pool was reviewed for redundancies by the supervision team and one external expert. The supervision team included the principal supervisor, who has more than 10 years experience as professional statistical consultant and is a senior research fellow with a focus on research-based policy development. The secondary supervisor is an expert in language education and cognitive psychology. The external expert is a highly skilled professional in the application of quantitative research

methods, with over 25 years' experience in leading international and national projects. As a result of the feedback from the panel, 133 items, including one open-ended question that all experts agreed on, were retained for the Pilot Study I.

3.4.6 Pilot studies

Pilot testing is an important step in questionnaire development, as it is an opportunity for live testing the instrument and for direct contact with the population (Iarossi, 2006). Pilot studies may lead to the refinement of the methodology used in a later study, as they 'help develop an experiential understanding that reshapes the final study in profound and important ways' (Kezar, 2000, p. 385).

Kezer (2000) suggested that limitations related to funding and available time may result in the underutilisation of pilot studies. Van Teijlingen and Hundley (2002) listed restrictions of pilot studies, including potential contamination and the likelihood of pilot data predicting unfitting expectations for the final study, such as assumptions for hypothesis testing and response rate. Pilot studies can indicate the likely outcome and response rate in the main study. This is not guaranteed since pilot studies are conducted with a small sample (van Teijlingen & Hundley, 2002). According to Van Teijlingen and Hundley (2002), contamination concerns the inclusion of data from the pilot study in the main results, and the inclusion of new data in the main study from respondents who also participated in the pilot study. The latter may raise validity issues since participants taking part in both the pilot and main study will have gained knowledge from taking part in the pilot study. The concern of including data from the pilot study in the main study stems from the fact that pilot studies pre-test a method or instrument; thus, data from the pilot study could be faulty.

Pilot studies may be 'used in two different ways' (van Teijlingen & Hundley, 2002, p. 1). They can assess the feasibility of methods later used in a large-scale study and indicate if the proposed research procedures require modification (Polit, Beck, & Hungler, 2001). The

second type is to pre-test a research instrument (Baker, 1994) for various reasons, such as pre-testing the research protocol, sample technique and data analysis technique, and training the researcher in components of study procedures.

In instances in which a study includes the development of a questionnaire, identifying and addressing all possible issues several small pilot studies may be required before conducting the main study (Peat, 2002). The researcher's ethical obligations to make the utmost use of their research practice requires the reporting of pilot studies, including any encountered issues and completed amendments (van Teijlingen & Hundley, 2002).

Peat (2002) recommended that the internal validity of questionnaires may be increased by considering respondents' comments on difficult questions. Further, administering a missing data analysis of the piloted questionnaire, assessing the range of response categories and removing difficult or unnecessary questions may also increase the questionnaire's internal validity (Peat, 2002).

3.4.7 Ethical considerations

Before data collection commenced, ethics approval for this study was obtained from the Flinders University Social and Behavioural Research Ethics Committee (Approval No. 5933; see Appendix D: Ethics approval). Ethical principles such as confidentiality, anonymity, voluntary participation and voluntary responding (i.e., participants did not have to answer questions they did not wish to answer) were followed at all times. Permission from the Ethnic Schools Board and the Central Agency for German Schools Abroad was also sought. However, both agencies specified that their approval to conduct the study in HL schools was not required (see Appendix E: Permission letters). Permissions from principals of GHL schools in Australia and the U.S. were obtained prior to data collection. In Pilot Study I, the researcher was the principal of the designated GHL school; thus, permission to undertake research was sought from the school management committee. Further, to avoid coercion, one administrative staff

member was asked to be the primary contact for parents participating in the pilot study. For Pilot Study II and the main survey, the principal of each school was asked to be the primary contact.

3.5 Data collection

Following the development of the questionnaire, the next phase of the research was data collection. After describing the population to be studied, this section outlines sampling procedures for the pilot studies and main study.

3.5.1 Population

There is very little published information available concerning the population of parents of children attending HL schools, particularly in relation to GHL schools specifically. One population characteristic is that in two-thirds of families of children attending GHL schools, at least one parent has German-speaking ancestry (Muenstermann, 1998); one-third of families do not have German-speaking ancestry (Muenstermann, 2001). Due to the limited information available for the characteristics of this population, the most basic homogeneous population characteristic was that parents' children attended a GHL school in an English-speaking country at the time of this study. Therefore, the population in this study were all parents of children attending preschool to Year 12 at GHL schools in immigrant countries with English as the ML, such as the U.S. and Australia.

3.5.2 Sampling procedures

First, a list of operating GHL schools in Australia, the U.S., Canada and England was accumulated based on information from the Central Agency for German Schools Abroad (Die Zentralstelle für das Auslandsschulwesen, 2015), umbrella organisations for GHL schools (German Language School Conference, 2014; Goethe Institute Australia, 2013) and public websites (Schulen: Partner der Zukunft, 2013). GHL schools were found on the internet after searching 'afterhours', 'Saturday' and 'weekend GHL schools'. Overall, 91 GHL schools were

identified. However, due to contradictory and inconsistent information provided on websites, it was often unclear if some GHL schools were still operating.

The first pilot study was conducted at the local GHL school in Australia and the second pilot study was administered at the remaining GHL schools in Australia. For the main study, GHL schools in the U.S., Canada and England were invited to participate. However, due to the low response rate from GHL schools in Canada and England ($N = 50$), they were not included in this study.

The sampling frame consisted of all parents of children attending a GHL school. Direct access to members of the population was not available and the opportunity for potential respondents to participate depended on the willingness of principals and GHL school committees to approve the study. To limit the burden on school staff assisting with this study, it was decided not to request lists of all parents of children from participating GHL schools. A random sample of the population of parents of children attending GHL schools was not available. Due to the limited information available about this population in the literature, stratification of members in the population could not be achieved. Thus, due to limited resources and time and logistical issues concerning participating GHL schools (and to limit the burden on school staff assisting with this study), participating GHL schools were asked to invite all parents of children attending their GHL school to participate. Similar to a census study, information about all members of the population was sought and the opportunity was provided for all members of the population to participate in the study, which is an important characteristic of good sampling (Fowler, 2008). Thus, this study had strong potential to contribute to the existing literature by gaining information about characteristics of this population, such as their ancestry and home language. Detailed information about sampling procedures for the Pilot Studies I and II and the main study can be found in Chapter 4.

3.6 Data analysis procedures

This section discusses the data analysis procedures used in the pilot and main studies. After describing procedures for data entry and the preliminary data analysis, the use of statistical procedures is discussed in more detail. As the questionnaire included an open-ended question, the analysis of qualitative data is discussed at the end of this section.

Principal axis factoring (PAF) was used for the preliminary analysis and for analysis of the validity of constructs contributing to the development of the final questionnaire used in the main study. In the main study, for constructs with more than three indicators, confirmatory factor analysis (CFA) was used to assess the hypothesised factor structure. Constructs with fewer than four indicators were examined using PAF. For the main study, SEM was used to test the proposed model of motivators of parental home involvement in children's GHL learning.

3.6.1 Data entry and verification

Data entry followed different procedures. Pilot studies utilised a self-administered pencil-and-paper questionnaire that was filled out by respondents, and the main study was administered through an online survey. To ensure consistent coding procedures, a coding protocol for each questionnaire version was prepared (see Appendix F: Variable description and coding scheme). Before entering quantitative information from the self-completed written questionnaires into a computer file, questionnaires were assigned an identification number. Data from the online survey were downloaded and imported into an SPSS computer file. The data were then entered into SPSS version 25 (IBM, released 2017).

Data entry was verified through the creation of a frequency summary of all variables and manual checks to identify any outliers. In addition, a missing value analysis (MVA) was conducted to estimate the proportion of missing values and if data were missing at random or

if there was evidence for non-randomness. Methods for dealing with missing data were used according to recommendations by Tabachnick and Fidell (2007).

During data entry, participants' voluntary comments next to their responses were entered and later analysed to explain response patterns. Further, for the pencil-and-paper questionnaires, 20–40 questionnaires of each sample were randomly selected, re-entered and cross-checked with the original entries. This process revealed a high level of accuracy of data entry and no errors were detected.

3.6.2 Preliminary data analysis

Before commencing exploratory factor analysis (EFA), several standard methods were employed to investigate the factorability and sampling adequacy of questionnaire items. Assumptions underlying factor analysis include linearity, normality, homoscedasticity and a lack of univariate and multivariate outliers. However, if used primarily for reducing or assessing correlational patterns among numerous variables, 'both the theoretical and practical limitations to FA [factor analysis] are relaxed in favour of a frank exploration of the data' (Tabachnick & Fidell, 2007, p. 611). One reason might be that assumptions are rather conceptual in nature than statistical (Hair, Black, Babin, & Anderson, 2010). According to Hair et al. (2010), the significance of assumptions such as linearity, normality and homoscedasticity may only be found in the strength of correlations. Thus, data not meeting these assumptions may show weaker correlations. Particularly relevant to this study is normality (e.g., if highly involved parents were over-represented). If assumptions of normality of data are violated, PAF is recommended as the preferable FA extraction method (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Nevertheless, in practice, FA can be relatively robust to normality violations (Gorsuch, 1983). Hair et al. (2010) suggested that sample sizes with more than 200 cases may render violations of normality insignificant and endorse sample size and factorability as more important criteria.

The minimum number of cases per variable to yield reliable results has been widely discussed, with common recommendations ranging between 10 and 15 cases per variable (Field, 2009). Others have suggested 5–10 participants per variable is sufficient (Kass & Tinsley, 1979). The ratio of participants to variables may also depend on other details. MacCallum, Widaman, Zhang and Hong (1999) found communalities crucial for the minimum sample size, with samples of fewer than 100 participants needing communalities above 0.6. Guadagnoli and Velicer (1988) reported that four or more factor loadings greater than 0.6 would ensure adequate reliability, irrespective of the number of participants. Despite other influencing details, many authors seem to agree on a minimum sample size of 300 to yield a reliable FA (Field, 2009; Tabachnick & Fidell, 2007).

The first step in assessing the factorability included scanning the correlation matrix for coefficients below 0.32 (Tabachnick & Fidell, 2007). Bartlett's (1954) test of sphericity was also used to ensure that factors consisted of sizable correlations. As Bartlett's (1954) test is dependent on size, Tabachnick and Fidell (2007) suggested its use only if there are fewer than five cases per variable, which was the case in both pilot tests.

Sampling adequacy was assessed, including anti-image matrix screening and the Kaiser–Mayer–Olkin (KMO) measure of sampling adequacy (Kaiser, 1974). Anti-image matrices were scanned for values of variable pairs below 0.5 (Field, 2009). KMO measures vary between 1 and 0, with 1 indicating relatively compact correlation patterns. According to Kaiser (1974), values of 0.5 are acceptable whereas values of < 0.5 are unacceptable. Similarly, Tabachnick and Fidell (2007) suggested values of 0.6 and above for good FA.

3.6.3 Assessing the validity and reliability of the parent involvement questionnaire for the GHL

PAF was utilised to assess validity and Cronbach's alpha was used to assess the reliability of constructs in the questionnaire. Due to the small sample size of Pilot Study I,

factors were separately assessed. However, only factors that met the minimum ratio of five cases per variable were analysed, as suggested by MacCallum et al. (1999). In the second pilot study, factor loadings for each construct were compared across the group of non-German speakers and German speakers. Due to the small number of cases in the group of non-German speakers ($N = 31$), each factor was separately assessed for both groups. A satisfactory sample size in the main study ($N = 313$) allowed the use of oblique rotation to assess the data structure of independent and dependent variables (Field, 2009). The number of factors to be retained was based on the scree test involving a qualitative examination of the graph of eigenvalues, counting the number of factors to retain above 'the natural bend or break point in the data' (Costello & Osborne, 2005, p. 3).

Decision-making rules for the final number of indicators to best describe a factor included the explanatory ability of the model and the number of adequately sized factor loadings. As a general rule, higher factor loadings represent a more reliable measure of the factor (Tabachnick & Fidell, 2007). Costello and Osborne (2005) suggested that a loading of 0.5 is enough to be considered strong. According to other authors, factor loadings are considered adequate if four or more loadings greater than 0.6 are represented (Guadagnoli & Velicer, 1988), substantial if several items have loadings above 0.65 (DeVellis, 2003) and excellent if greater than 0.7 (Comrey & Lee, 1992), even with a small sample size of 50 cases (Stevens, 2002). Garson (2010) stated that an item can be considered a good identifier of the factor if the loading is 0.7 or higher and does not significantly cross load on another factor greater than 0.4.

Items were removed individually, beginning with the lowest primary factor loadings of < 0.32 , as recommended by Tabachnick and Fidell (2007). Further, items with cross-loadings on a secondary or tertiary factor with loadings > 0.32 were removed, beginning with items with the highest cross-loadings. The removal of items followed a strict procedure involving the re-

evaluation of all remaining items after the elimination of an item. Since the removal of a single item changes primary factor loadings, it was necessary to re-evaluate all remaining items after the removal of each item. Finally, further items were removed to minimise the burden on respondents while attaining acceptable reliability (DeVellis, 2003). For example, to identify items with skewed responses, for each item, frequencies of response ranges were calculated. Items to which most parents responded in the same or similar way were considered for removal, although the decision to remove items also depended on low correlations and items that had a low response rate. For example, some items had limited relevance and obtained a low response rate among non-German speakers. This issue is discussed more fully in Section 4.1.3.

Cronbach's alpha reliability coefficient was calculated to assess the internal consistency of scales. Problematic items that increased Cronbach's alpha upon removal were eliminated, followed by items that did not affect Cronbach's alpha coefficient or reduced its value, as specified in the 'scale if item deleted' output table. Generally, values for Cronbach's alpha around 0.7 and 0.8 are deemed acceptable (Field, 2009) and respectable (DeVellis, 2003). However, item numbers need to be considered, as alpha depends on the number of items in a scale (Field, 2009). Very good alpha values can be found between 0.8 and 0.9, whereas values above 0.9 indicate that the scale may need to be shortened (DeVellis, 2003). Questionnaire items were also eliminated based on theoretical fit, provided that Cronbach's alpha remained above the acceptable level of 0.7.

3.6.4 Structural equation modelling

Structural equation modelling (SEM) was used in this study to investigate the complex relationship between motivators of parental home involvement and forms of parental home involvement in children's GHL learning. SEM was applied, as it allows latent variables (LVs) that are not directly measured to represent a theoretical construct (McArdle & Kadlec, 2013). This characteristic is important for this study, as there were both observed variables and LVs

combined with complex relationships that required SEM to estimate the best empirical solution. SEM is the only technique that allows comprehensive and simultaneous estimation of all relationships for analysing complex issues (Ullman, 2019). AMOS version 25 was used for SEM analyses. This was the only SEM program available to the researcher at the time of analysis. The practice of analysing categorical Likert-type data as continuous data has been the norm for many years (Byrne, 2010). This application is acceptable provided that assumptions of normality are not violated and variables have a minimum of four response categories (Bentler & Chou, 1987). For variables demonstrating violations of normality, limitations include lower estimates (e.g., Pearson correlation coefficients, factor loadings, factor correlations and error variance) and inflated χ^2 values, particularly with increased skewness of variables and with a two-category response format (Finch, West, & MacKinnon, 1997; Green, Akey, Fleming, Hershberger, & Marquis, 1997). Generally, violations of non-normality affect endogenous variables and less so exogenous variables, since exogenous variables are estimated without error (Kline, 2012). AMOS version 25 provides the Satorra and Bentler (1994) correction to standard errors for non-normal data.

According to Kline (2016) SEM can be used to confirm theory and compare theoretically based models with alternative models and to create new models through exploratory techniques. Model generation is the most common context for SEM and involves the same data as the initial model. However, due to an unsatisfactory fit, a new model was developed that corresponds with the available data; it is somewhat parsimonious and theoretically based (Kline, 2016). Alternative models can be compared if more than one theoretically based model is obtainable for the same data. The model with the best goodness-of-fit indices is retained whereas the other models are rejected (Kline, 2016). Utilising SEM on an a priori basis, in a strictly confirmatory context, a single model is either accepted or rejected based on goodness-of-fit indices (Jöreskog & Sörbom, 1993). In this context, sufficient a priori

information is required (McArdle & Kadlec, 2013). As Kline (2016) contended, ‘the quality of the outputs of SEM depends on the validity of the researcher’s ideas’ (p. 10). Hypotheses would be necessary about all fixed parameters (McArdle & Kadlec, 2013). However, model testing using such a narrow scope is rare (Kline, 2016). Instead, researchers often use less rigid conditions and ‘settle for testing the pattern or structural hypothesis of the parameters’ (McArdle & Kadlec, 2013, p. 296).

Large samples are preferred for SEM techniques; however, the average number of cases for SEM studies is 200 (Kline, 2016). Several key factors determine the required sample size for adequate precision of model estimations and to achieve reasonable power in significance tests, such as the complexity of the model, whether data characteristics meet the statistical assumptions of a particular estimation method, the level of missing data, and the score reliability of measurement models (Kline, 2016).

Commonly, a SEM model is evaluated based on the likelihood ratio test statistic to a chi-square distribution to estimate the probability at which model specifications are true for the collected data (McArdle & Kadlec, 2013). However, proposed models ‘can only ever fit real-world data approximately and never exactly’ (Byrne, 2010, p. 76). This is assuming the chi-square distribution to approximate the degrees of freedom is considered unrealistic among SEM researchers, as the attempt to find a perfect fit of the model in the population has led to model-fitting problems (Byrne, 2010). These limitations led to the development of a number of goodness-of-fit indices, such as the chi-square/degrees of freedom ratio, and are used in addition to the chi-square distribution (Byrne, 2010). A good model fit can be assumed if most fit indices indicate a good fit (Schreiber, Nora, Stage, Barlow, & King, 2006). For a one-time analysis, the Tucker–Lewis Index (TLI), the Comparative Fit Index (CFI) and the root mean square error of approximation (RMSEA) are recommended (Schreiber et al., 2006). For

assessing model fit, reasonable fit indices cut-off levels are TLI (> 0.95), CFI (> 0.95) and RMSEA (< 0.06), for continuous data (Hu & Bentler, 1999) and categorical data (Yu, 2002).

3.6.5 Qualitative data analysis

One-third of participants in the pilot studies and the main study responded to the open-ended question. Inviting parents to comment at the end of the questionnaire provided an opportunity for respondents to add information they deemed important concerning their responses to questions in the survey. Miles and Huberman's (1984) inductive method of analysis was used to code data in terms of inferred underlying meaning based on the theoretical interests underpinning this research.

To help reduce the data volume, codes were reviewed and combined into smaller categories of more meaningful clusters. Common themes were combined and kept in focus by relating the data back to the research questions, which also allowed divergent patterns and alternative themes to emerge. Themes were further interpreted in relation to the literature on parental involvement in children's HL learning and social cognitive theories. Both qualitative information and quantitative results were used to capture a more holistic portrayal of parents' context and motivation for involvement. Overall, emerging qualitative data corroborated quantitative findings.

Further, some parents annotated survey question responses in both pilot studies. These written comments were categorised based on the similarity of concerns raised and further considered based on their frequencies. These comments were collected to assist in validating questionnaire items. Overall, the qualitative information helped identify reasons behind parents' responses, understand missing value patterns, thereby adding to the development and refinement of the questionnaire.

3.7 Summary

The research objectives identified relationships to be examined between independent (e.g., motivators) and dependent variables (e.g., forms of parental home involvement), which suggests the need for the use of SEM. To collect data from a sufficiently large sample, a cross-sectional survey design was chosen to answer the research questions. Several established questionnaires and literature on survey instrument design were consulted for best practice guidance in the development of the questionnaire. Thus, several stages were required for questionnaire development, including piloting the research instrument in Australia. Two pilot studies were conducted in Australia, leading to the refinement of the questionnaire and administration of the main study in the U.S. Due to the limited information available on the population of parents of children attending GHL schools in immigrant countries with English as the ML, a cross-sectional study was conducted. This study design provided the opportunity for all members of the population to partake in the study and add to the existing literature describing the characteristics of this population. Data analysis procedures included statistical procedures using PAF in SPSS version 25, and SEM in Amos version 25.

Chapter 4: Pilot studies and questionnaire refinement

Chapter 3 established the methods and methodology to be used to investigate motivators of parental home involvement in children's GHL learning, including the use of pilot studies (see Section 3.4.6). As one survey instrument was developed for use in the main study, this chapter presents results of Pilot Studies I and II and their contributions to the final questionnaire.

After explaining the methods used in Pilot Studies I and II, and a missing data analysis, the demographic profile of participating parents in Pilot Studies I and II are presented. This chapter continues with a statistical validation of the reliability and validity of the data, and the qualitative analysis of the data of Pilot Studies I and II. It discusses the refinements made to the questionnaire for its use in the main study.

4.1 Pilot Study I

Based on Teijlingen and Hundley's (2002) recommendations for the use of pilot studies, the first pilot study focused on the assessment of the suitability of research methods. Therefore, Pilot Study I aimed to assess the sampling technique and the efficiency of the participant recruitment approach, and to identify issues that may arise in the administration of the questionnaire. Analysis of Pilot Study I comprised a preliminary statistical data analysis, and a qualitative analysis of the open-ended question. The time taken to complete the paper-based questionnaire was also assessed.

4.1.1 Methods

The first pilot study was administered at a local GHL school in South Australia. As described in Section 3.5.2, parents of children attending the GHL school were contacted by an internal representative at the GHL school. One week before the commencement of Pilot Study I, potential participants were emailed a letter (which was also published in the school's

newsletter) by the internal representative at the GHL school (see Appendix B: Information for GHL schools and letter of introduction).

The school representative distributed 100 survey packets, each containing two questionnaires, to students for delivery to their parents. If more than one child in a family attended the GHL school, the eldest child received the packet. Survey packets included information for parents (see Appendix B: Information for GHL schools and letter of introduction) and a paper questionnaire (see Appendix C: Questionnaires). The Parent Involvement Questionnaire for the GHL (PHIQ-GHL I) included 13 questions about the respondents' eldest child at the school, eight questions about the respondents' background, 65 questions concerning motivational influences on parental home involvement in children's GHL learning, 46 questions about parental home involvement activities, and one open-ended question. Volunteers took approximately 45 minutes to complete the questionnaire, however, verbal feedback provided by some parents indicated that the questionnaire was too long.

Data collection procedures occupied three weeks in the second semester of the school year. Two weeks after distribution, the school representative was asked to email a reminder to return the questionnaire. Two drop boxes were positioned at the school's entrance for the collection of completed questionnaires. The drop boxes ensured accessibility and participant anonymity.

4.1.2 Sample

In Pilot Study I, 52 of the 200 questionnaires distributed were completed and returned. Based on information provided for the child and parent, three participants appeared to have completed a questionnaire for two children. Cases filled out for the younger child were removed, leaving 49 included surveys.

The sample comprised more female parents (61.2%) than male parents (38.8%). Over half of all participating parents were born in German-speaking countries (Germany 40.8%,

other German-speaking countries 10.2%). Australia was the country of birth for over one-third of participants (36.7%). Correspondingly, the respondents' ancestry (based on their mothers' and fathers' countries of birth) was mostly German-speaking (46.9%) or English-speaking (32.7%). In most families, either the responding parent was from a German-speaking country and their spouse was from an English-speaking country or vice versa (42.9%), followed by the parent-couple (i.e., the responding parent and their spouse) being born in an English-speaking (18.4%) or German-speaking country (18.4%). This compares to the English ML (EML) as the most used home language for responding parents and their spouses (67.3%). Only one-quarter of parents (24.5%) indicated that they communicated in the GHL at home. This sample was well educated; of all parents with a university degree (76.3%) most held a postgraduate degree (69.7%).

Children of participating parents were 4–18 years of age (mean age = 10.67, SD = 4.1). Half of all children had native-level or advanced-level speaking skills in the GHL (49.0%); the other half had either intermediate or beginner-level GHL speaking skills (46.9%). Further, parents were asked to provide information about their oldest children's grade levels at their regular school and the GHL school. Table 18 compares children's grade levels at their regular school and GHL school, from pre-kindergarten to lower elementary school (pre-kindergarten to Grade 3), upper elementary school (Grade 4–6), middle school (Grade 7–9) and high school (Grade 10–12). Notably, children's grade levels at the GHL school were similar to those at their regular school. Slightly more children were enrolled in lower elementary school classes at their regular school compared to their enrolment at the GHL school. However, more students attended middle and upper elementary school classes at the GHL school compared to their enrolment at their regular school. These differences may indicate that children's proficiency in GHL may have advanced some students to a higher grade at the GHL school. A summary of

parents’ and children’s demographic information can be found in Table 62 and Table 63 (see Appendix H: Sample).

Table 18

Comparison of children’s grade levels at their regular and GHL school

Grade level	Regular School		GHL School	
	N	%	N	%
Pre-Kindergarten to Grade 3	21	42.8	16	32.6
Grade 4 to Grade 6	8	16.3	13	26.5
Grade 7 to Grade 9	7	14.3	7	14.3
Grade 10 to Grade 12	12	24.5	11	22.4
Missing	1	2.0	2	4.1

4.1.3 Missing data analysis

In the missing data analysis (MVA) 134 questionnaire items were included. Open questions asking participants to clarify their response (e.g., Question 79, What other resources?) were not part of the MVA. Univariate statistics indicated 3–4% missing values. Most missing values (2.3%) were found among outcome variables, particularly in sections C3 (‘Speaking the GHL’) and C4 (‘Teaching the GHL and assisting with GHL studies’). Thus, the MVA indicated that several items asking about parental home involvement activities were not applicable to some respondents. Table 61 (see Appendix G: Codes for missing values) presents information about conditions for assigning missing values (e.g., 97 was assigned for invalid responses).

4.1.4 Statistical validation of data

The small number of cases (49) available in the first pilot study allowed factors to be individually explored to meet the minimum ratio of five cases per variable, as suggested by

MacCallum et al. (1999). Due to most missing data pertaining to parental home involvement activities, responses to these scales were not analysed.

The validity of ten scales—that is, instrumental goal orientation, integrative goal orientation I (family), integrative goal orientation II (group belongingness), language beliefs, self-efficacy, role belief, perceived teacher invitations, perceived child invitations, available time, and skills and knowledge—was assessed individually using exploratory factor analysis (EFA) with principal axis factoring (PAF). Examinations of each correlation matrix suggested reasonable factorability with most correlation coefficients in excess of 0.3, as suggested by Tabachnick and Fidell (2007). The KMO measure of sampling adequacy and Bartlett’s test of sphericity indicated that all constructs were appropriate for factor analysis (KMO > 0.5, Bartlett’s test of sphericity $p < 0.001$).

PAF of the scale ‘perceived child invitations’ provided no factor loadings due to the communality of one variable exceeding 1. All items for this factor were retained for Pilot Study II for assessment with a larger sample. Oblique rotation indicated a two-factor solution for parents’ role belief. The first factor consisted of three items in the category ‘facilitating children’s GHL learning’ and two items in the category ‘developing children’s communicative and linguistic competence in the GHL’. The second factor comprised the remaining four items pertaining to ‘developing children’s communicative and linguistic competence in the GHL’ and one item in the category ‘facilitating children’s GHL learning’ (see Section 3.4.2.3 on the development of the scale role belief).

Factor loadings for independent variables ranged from 0.37–0.97; however, most scales had several factor loadings above 0.65, deemed substantial (DeVellis, 2003). Thus, the assessed scales may have had adequate validity of scale based on four or more factor loadings greater than 0.6 (Guadagnoli & Velicer, 1988), or scales with loadings greater than 0.7 with a small sample size of 50 (Stevens, 2002). The results of the PAF are presented in Table 74–Table 83

(see Appendix I: Assessment of scale validity). Overall, eight items were removed. Reasons for removal were secondary factor loadings > 0.32 (Tabachnick & Fidell, 2007) and to shorten the length of the questionnaire (see Table 120 in Appendix J: Modifications and removed items).

Cronbach’s alpha was used to assess the reliability of scales (see Table 19). The alpha coefficient for each individual scale ranged between 0.68 and 0.97, and all but one scale (i.e., perceived teacher invitations) had acceptable internal consistency of > 0.7 (DeVellis, 2003).

Table 19

Reliability Coefficients of Scales of Independent Variables, N = 49

Construct	# of items	Alpha	Valid cases
Integrative goal orientation I (family)	3	.970	49
Integrative goal orientation II (group belongingness)	3	.839	49
Instrumental goal orientation	5	.821	49
Language beliefs	6	.788	49
Self-efficacy	5	.892	48
Perceived teacher invitation	6	.681	49
Perceived child invitation	8	.782	43
Role belief 1	5	.901	48
Role belief 2	5	.873	46
Available time	6	.874	42
Skills and knowledge	5	.921	46

4.1.5 Qualitative analysis

In Pilot Study I, few parents (22.5%) responded to the open-ended question at the end of the questionnaire. However, almost half of all participants (42%) added annotations to 45 survey questions. Most annotations related to parents’ or children’s GHIL skills and parental

home involvement activities and clarified parents' selection of a response category or lack of response. Correspondingly, most responses to the open-ended question concerned parents' level of GHL skills, and parental home involvement. Examples of added annotations and responses to the open-ended question can be found in Table 134 (see Appendix M: Qualitative analysis).

Notably, the most frequent comment related to parents' lack of, or limited level, of GHL speaking skills. Many parents self-identified as native English speakers and clarified their level of GHL speaking skills and connection to the GHL, such as past immersion experiences. For example, one father explained: 'Lived in Germany for 4 years—my German is conversational only, as I had little formal German education in Germany while there and my German proficiency has decreased since returning from Germany' (PIDA15).

Further, some parents indicated that their lack of GHL skills affected their ability to engage in some home involvement activities and influenced their ability to respond to items in the questionnaire related to their use of the GHL. One father stated: 'As a non-native German speaker with a few years German education, I feel I can assist my child sometimes, in some ways, but not in some others' (PIDA38). Therefore, the qualitative analysis of parents' annotations and comments to the open-ended question suggested that there were German speakers and non-German speakers in the Pilot I sample.

4.1.6 Conclusion and refinement of the questionnaire for Pilot Study II

The statistical analysis of data indicated that all scales had acceptable reliability. This indicated that the assessed scales were applicable for parents in the context of GHL schools. However, the length of the questionnaire appeared to have resulted in a low response rate. As only a small number of parents participated in Pilot Study I, validation of the questionnaire was restricted and only very few items were removed from scales to shorten the questionnaire length. The validation of the questionnaire with a bigger sample in the Pilot Study II was

intended to further reduce the number of items. For the same reason, it was decided to not to retest the largest factor in Pilot Study II (i.e., instrumental goal orientation, integrative goal orientation I and integrative goal orientation II).

Findings from the qualitative analysis suggested that there were two groups in the sample of parents of children attending a GHL school: German speakers and non-German speakers. Correspondingly, most parents were either born in a German-speaking country or an English-speaking country. The first group was identified as new German migrants, thus, German speakers. Most non-German speakers were English speakers and few spoke other HLs.

The statistical analysis showed that some questions were difficult for non-German speakers to answer, resulting in missing data. Questions pertaining to forms of involvement for developing children's communicative and linguistic competence in the GHL (i.e., speaking, teaching or assisting with GHL studies) were not applicable for parents with a lack of, or limited, GHL skills. Therefore, the questionnaire for Pilot Study II was modified so that non-German speakers were asked to skip questions related to speaking the GHL, teaching the GHL and assisting with GHL studies. Non-German speakers were also not asked to respond to role belief questions related to parents' involvement activities for developing children's communicative and linguistic competence.

Further modifications were designed to obtain additional information about parents' family context, reduce the burden for respondents and shorten the length of the questionnaire. For example, several modifications were made to reduce the demographic section to two pages. These modifications concerned the layout of the section and the removal of several questions. A summary of modifications and reasons for modifications can be found in Appendix J: Modifications and removed items.

The sampling technique and efficiency of the participant recruitment approach were deemed appropriate and no administrative issues occurred. The paper questionnaire gave

parents an opportunity to add annotations wherever suitable. This was a welcome result, as it gave information to explain the choice of response categories and missing data. For this reason, the format of the paper-based questionnaire was also used for Pilot Study II.

4.2 Pilot Study II

The aim of the second pilot study was to test the feasibility of the survey for German and non-German speakers, assess the validity of constructs to refine and to reduce the length of the questionnaire. Similar to procedures used in Pilot Study I, the analysis of Pilot Study II included a statistical validation of the survey instrument and annotations and responses to the open-ended question. Further, response categories were assessed and questions were examined for their usefulness for German and non-German speakers, to increase the questionnaire's internal validity (Peat, 2002).

4.2.1 Method

Peat (2002) recommended that the internal validity of questionnaires may be increased by repeated pre-testing of the questionnaire, using the same research methods for the pilot study and the main study. In Pilot Study II, GHL schools listed on the website of the Goethe Institute Australia (Goethe Institute Australia, 2013) were invited to participate in the study (see Table 54 in Appendix A: GHL schools). As advised by Teijlingen and Hundley (2002), the GHL school that was part of Pilot Study I was not included in Pilot Study II.

In Pilot Study II, the Parent Involvement Questionnaire for the GHL (PHIQ-GHL II) included eight questions about the respondents' oldest child attending the GHL school, nine questions about the participants' background, 46 questions related to parents' motivational influences and 46 questions about parental home involvement activities. The questionnaire took approximately 40 minutes to complete.

The participant recruitment approach was similar to the one used in Pilot Study I: An internal representative at participating GHL schools received the requested number of survey

packets and distributed them to students. In contrast to Pilot Study I, the school representative was not asked to collect the completed surveys, as the packets included prepaid envelopes addressed to the researcher at Flinders University. Pilot Study II commenced in the second half of semester two and finished at the end of the school year.

4.2.2 Sample

In Pilot Study II, among seven participating GHL schools, 800 questionnaires were distributed by an internal representative at GHL schools; 216 completed paper questionnaires were returned. Based on information provided for the child and parent, six parents appeared to have completed questionnaires for both their children and one participant had filled out four questionnaires. Questionnaires completed for the oldest child were retained (7), all other questionnaires (9) were removed. Further, four participants skipped most questions in the second half of the questionnaire; these were also removed from the data file, leaving a sample of 203 cases that were included in the data analysis. In the revised questionnaire for Pilot Study II, non-German speakers were invited to skip some sections (i.e., role belief 2, speaking the GHL, teaching the GHL, assisting with GHL studies). Parents who followed these prompts were classified as non-German speakers (N = 31); all other parents were classified as German speakers (N = 172).

In Pilot Study II, most participants were mothers (German speakers 67.4%, non-German speakers 61.3%), and about one-third were fathers (German speakers 32.6%, non-German speakers 38.7%). Half of all German speakers were born in a German-speaking country (55.2%) and the other half in English-speaking or other countries (English-speaking countries 35.5%, other countries 9.3%). In contrast, almost all non-German speakers were born in English-speaking countries (77.5%) and one-fifth were born in other countries (22.6%). Correspondingly, German speakers' ancestry (based on their mothers' and fathers' countries of birth) was mostly German-speaking (54.7%) or English-speaking (18.6%). Non-German

speakers' ancestry was mostly English-speaking (61.3%) or other HL-speaking (25.8%). Only a very small number of non-German speakers (9.7%) stated that they had German-speaking ancestry. Similarly, Seo (2017) found that in Korean HL schools in the U.S., parents were either first- or second-generation Korean migrants and differed in their HL proficiency.

German speakers and non-German speakers had diverse linguistic family contexts. Table 20 shows the number of parents in a family who use the GHL in the home broken down into German- and non-German speakers. Almost half of all the parents in the group of German speakers indicated that either the responding parent or their spouse spoke the GHL in the home. This was followed by one-quarter of parent couples speaking the GHL, while one-quarter of the German speakers indicated that no parent used the GHL in the home. In comparison, almost half of all the non-German speakers indicated that no parent in the family spoke the GHL in the home. However, a small number of the non-German speakers indicated that they and their spouse used the GHL in the home. This showed that the non-German speakers may have had some proficiency in the GHL. Similarly, Döpke (1992) found that some of the non-German speakers in her study incorporated words and phrases from the GHL in conversations until their children outgrew their non-German parents' GHL skills. The findings from Pilot Study II therefore suggest there were German and non-German speakers in the sample of parents with diverse ethnic backgrounds and linguistic family contexts.

Table 20

Comparison of Number of Parents Using the GHIL in the Home Grouped by German and Non-German Speakers

Number of parents using the GHIL in the home	German speakers		Non-German speakers	
	N	%	N	%
One parent	80	46.5	11	35.5
Parent-couple	47	27.3	6	19.4
No parent	42	24.4	14	45.2
Missing	3	1.7	3	1.7

Parents had slightly more female (German speakers 55.2%, non-German speakers 58.1%) than male children (German speakers 44.8%, non-German speakers 41.9%). Children were 3–17 years of age (mean age = 8.35, SD = 3.3). More children of non-German speakers than children of German speakers had beginner-level or intermediate-level speaking skills in the GHIL (German speakers 58.8%, non-German speakers 80.6%) than native-level or advanced GHIL speaking skills (German speakers 37.2%, non-German speakers 9.7%).

In pilot study II, parents were asked to provide information about their eldest child's grade levels at their regular school. Table 21 presents grades for children of German speakers and non-German speakers. Most children of German speakers and non-German speakers attended pre-kindergarten to lower elementary school, whilst the smallest number of children attended high school. Thus, overall, most children of German speakers and non-German speakers were young, while the number of older children decreased with increasing grade. A summary of parents and children's demographic information can be found in Table 64 and Table 65 (see Appendix H: Sample).

Table 21

Comparison Grades of Children of German speakers and of Non-German speakers

Grade level regular school	German speakers		Non-German speakers	
	N	%	N	%
Pre-Kindergarten to Grade 3	104	60.5	17	54.9
Grade 4 to Grade 6	38	22.1	4	12.9
Grade 7 to Grade 9	22	12.8	6	19.4
Grade 10 to Grade 12	4	2.3	4	12.9
Missing	4	2.3	0	0.0

4.2.3 Missing value analysis

Univariate statistics indicated 2.3% missing data, with 14 items attaining more than 5% missing data. Most missing values (1.2%) could be found among predictor variables, followed by missing values found in outcome variables (1%). The smallest amount of missingness was found in the demographic sections (0.1%). The MVA indicated that several items were not applicable to respondents. Listwise deletion was used for handling missing data.

4.2.4 Statistical analysis

The statistical analysis of data was conducted individually for German speakers (N = 172) and non-German speakers (N = 31) to compare factor loadings for each construct across these groups. The minimum ratio of five cases per variable was met for German speakers and for half of all variables for non-German speakers (MacCallum et al., 1999). The aim of this analysis was to assess the validity of all 13 scales for German speakers and non-German speakers, and to reduce the overall number of questionnaire items.

The validity of 13 scales was assessed individually for German speakers and non-German speakers using PAF. Eight predictor variables (i.e., language beliefs, self-efficacy, perceived teacher invitations, perceived child invitations, role belief 1, role belief 2, available time, and skills and knowledge) and six outcome variables (speaking the GHL, teaching the

GHL, assisting with GHL studies, regulating GHL input, motivating GHL learning and GHL resources in the home) were included. No data were available from non-German speakers for role belief 2, speaking the GHL, teaching the GHL and assisting with GHL studies. Examinations of each correlations matrix suggested reasonable factorability with most correlations coefficients in excess of 0.3, as suggested by Tabachnick and Fidell (2007). The KMO measure of sampling adequacy and Bartlett's test of sphericity indicated that all constructs were appropriate for factor analysis for both groups (KMO > 0.5, Bartlett's test of sphericity $p < 0.001$).

All scales obtained several factor loadings above 0.65 deemed substantial (DeVellis, 2003). For German speakers, five scales (speaking the GHL, teaching the GHL, assisting with GHL studies, role belief 1 and role belief 2), and two scales for non-German speakers (perceived teacher invitations and role belief 1) all contained factor loadings greater than 0.7, regarded as excellent (Comrey & Lee, 1992). Table 84–Table 106 (see Appendix I: Assessment of scale validity) provide results for all scales assessed for German speakers and non-German speakers.

Overall, 32 items were removed. Reasons for removal were low primary factor loadings < 0.32, secondary factor loadings > 0.32 and to reduce the number of items in the questionnaire. Two items related to GHL school homework showed high missing values and were also removed. To reduce the number of items in the questionnaire, only the item with the largest factor loading was retained to represent a scale component. As a result, several scales consisted of three items (i.e., role belief 1, role belief 2, regulating GHL input, motivating GHL learning), which accords with Kline (2016), who recommended having at least three to five items to represent a scale. A list of removed items can be viewed in Table 122 (see Appendix J: Modifications and removed items).

For German speakers, all factors had respectable to very good internal consistency. Table 22 presents reliability coefficients of scales tested for German speakers. The alpha coefficient for each individual scale ranged between 0.74 and 0.98, which is within the acceptable level of > 0.7 (DeVellis, 2003).

Table 22

Reliability Coefficients of Scales of Independent Variables for German Speakers, N = 172

Construct	# of items	Alpha	Valid cases
Language beliefs	5	.747	164
Self-efficacy	4	.787	157
Perceived teacher invitation	4	.822	152
Perceived child invitation	4	.796	160
Role belief 1	3	.905	172
Role belief 2	3	.911	162
Available time	5	.888	157
Skills and knowledge	5	.893	165
Motivating GHL learning	3	.742	169
Regulating GHL input	3	.763	155
Assisting with GHL studies	4	.969	166
GHL resources in the home	7	.875	166
Teaching the GHL	5	.981	169
Speaking the GHL	4	.918	155

Table 23 presents reliability coefficients of scales tested for non-German speakers. For non-German speakers, the alpha coefficient for each individual scale ranged between 0.61 and 0.91. All but two scales (language beliefs and perceived child invitations) had acceptable internal consistency with alpha exceeding > 0.7 (DeVellis, 2003).

Table 23

Reliability Coefficients of Scales of Independent Variables for Non-German Speakers, N = 31

Construct	# of items	Alpha	Valid cases
Language beliefs	6	.657	28
Self-efficacy	4	.704	28
Perceived teacher invitation	4	.874	30
Perceived child invitation	4	.617	24
Role belief 1	3	.902	30
Role belief 2	-	-	-
Available time	5	.919	29
Skills and knowledge	5	.752	30
Motivating GHL learning	3	.782	31
Regulating GHL input	3	.793	28
Assisting with GHL studies	-	-	-
GHL resources in the home	7	.889	28
Teaching the GHL	-	-	-
Speaking the GHL	-	-	-

Note. Non-German speakers were not asked to complete the scales of role belief 2, assisting with GHL studies, teaching the GHL, speaking the GHL.

4.2.5 Qualitative analysis

In Pilot Study II, more than one-third (35.5%) of participants responded to the open-ended question at end of the questionnaire and a small number of parents (18%) added annotations to 51 survey questions. As in Pilot Study I, most annotations clarified participants' selection of a response category or lack of response, often in relation to non-German speakers' lack of GHL skills, parents' linguistic family context, and homework from the GHL school. Noticeably, GHL use in the home was the most frequent theme in responses to the open-ended question, followed by non-German speakers clarifying their GHL skills and perceived child invitations. Examples of annotations and responses to the open-ended question can be found in Table 135 and Table 136 (see Appendix M: Qualitative analysis).

The linguistic family context concerned the ethnic backgrounds of responding parents and their spouses, their speaking skills in the GHL and whether the responding parent or their spouse spoke the GHL to the children in the home. Some parents identified as having German-speaking ancestry, rather than being German speakers themselves. Most comments indicated that either the responding parent or their spouse supported their children's GHL learning at home, depending on their skills in the GHL. The use of the one-parent one-language strategy (Döpke, 1992) was mentioned by several German speakers, as was the absence of homework provided by teachers at the GHL school. The latter corresponded with the large number of missing values for items related to children's German homework (see Section 4.2.4). Non-German speakers' comments on their home involvement suggested that various levels of GHL skills led to different forms of home involvement. Thus, the qualitative analysis of data in Pilot Study II shows that German speakers and non-German speakers have diverse family contexts and ways to support their children's GHL learning.

4.2.6 Conclusion and refinement of the questionnaire for the main study

Background information analysis showed that parents who completed all sections of the questionnaire differed in their demographic profile from parents who omitted sections specifically intended for German speakers. These two groups of parents were identified as German speakers and non-German speakers. Findings from the statistical analysis showed that all but two scales had acceptable reliability for German speakers and non-German speakers and, thus, were applicable for both groups of parents.

The identification of German speakers and non-German speakers in the sample led to modifications to the questionnaire (PHIQ-GHL III) used in the main study (see Chapter 5). To statistically test if there were two groups of parents of children attending GHL schools, in the main study parents' GHL skills were measured using the same scale used in Pilot Studies I and II to measure children's GHL skills. Most modifications were intended to:

- accommodate the layout of the online survey used for the main study
- provide opportunities for participants to expand on their family context
- shorten the length of the questionnaire (see Table 121 in Appendix J: Modifications and removed items).

The time needed to complete the questionnaire remained a problem in Pilot Study II, leading to a reduction of the number of scale items (see Section 4.2.4) and the removal of the scales ‘language beliefs’ and ‘providing GHL resources in the home’. The scale ‘providing GHL resources in the home’ was conceptually different from all other forms of parental home involvement, as it did not measure the frequency of parental activities in the home. To further reduce the number of items in the questionnaire, it was decided that only one of four language-specific constructs (i.e., language beliefs; instrumental goal orientation; integrative goal orientation I, family; and integrative goal orientation II, group belongingness) was to be included in the final model for the main study. Of all four language-specific constructs, language beliefs had the lowest alpha score (see Table 22 and Table 23), and could not be assessed for non-German speakers in Pilot Study II due to the communality of a variable exceeding one. Further, while ‘language beliefs’ is the more widely discussed construct in the literature, it yielded ambivalent results in its ability to predict the extent of parental home involvement (Seo, 2017). Among the three types of assessed goal orientations, ‘integrative goal orientation II (group belongingness)’ was included in the main study. Individuals with an integrative orientation tend to be more motivated than those with an instrumental motivation (Gardner, 1985b). One explanation may be that instrumental reasons can present an unstable motive (Wright & Kurtoğlu-Hooton, 2006) due to their susceptibility to contextual conditions such as prestige and the socio-economic usefulness of a language (Bourdieu, 1982). In consideration of parents with no family connections to the GHL, ‘integrative goal orientation I (family)’ was not included in the main study.

Lastly, for reasons of comparison between German speakers and non-German speakers, for the main study, it was decided to ask all participating parents to complete all questionnaire items. The substantial decrease of questionnaire items reduced the time required to complete the questionnaire, and for non-German speakers to focus their attention on questionnaire items with limited applicability.

4.3 Summary

This chapter discussed modifications to the developed questionnaire in response to the quantitative and qualitative analysis of Pilot Studies I and II, contributing to the refinement of the questionnaire (PHIQ-GHL III) used in the main study. The qualitative analysis of Pilot Study I provided detailed and in-depth information suggesting the existence of German speakers and non-German speakers in the sample of parents of children attending GHL schools. This was further explored in Pilot Study II. In Pilot Study II, the analysis of parents' demographic information showed that German speakers and non-German speakers differed considerably in their demographic profile and family context. Further, this chapter found that the questionnaire used in Pilot Studies I and II was too long and needed to be shortened to minimise the burden on participating parents. Analysis of qualitative data assisted in refining the questionnaire. Parents' annotations and responses to open-ended questions helped clarify response choices and highlighted issues they experienced with some items. Results of the statistical analysis indicated that final scales assessed for German speakers and non-German speakers were applicable to parents of children attending GHL schools. The results of the statistical analysis indicated that all but one (e.g., perceived child invitations for non-German speakers) construct were adequately reliable for German speakers and non-German speakers. Thus, they could be used in the main study for further assessment in the final model of motivators of parental home involvement using AMOS-20 software.

Chapter 5: Predictors of parental home involvement in children's GHL learning

The first step in achieving the research aim was to develop a framework for this study (see Chapter 2), followed by the establishment of the research methods used to collect and analyse data (see Chapter 3). Further, a survey instrument was developed through which constructs within the framework were operationalised. The survey instrument was tested and refined in Pilot Studies I and II (see Chapter 4). As a result, the administration of the revised questionnaire to a large sample from the population of parents of children attending GHL schools in the U.S. comprised the next research phase.

This chapter describes the administration of the survey instrument PHIQ-GHL III, data preparation, data analysis and results of the quantitative and qualitative analysis of the main study. The data analysis of the main study data led to two important results. First, having argued in Chapter 4 for the existence of two groups of parents within the sample, this assumption was confirmed through a cluster analysis of data of the main study. The two groups were labelled as the GHL language expert group (GHL experts) and the GHL language non-expert group (GHL non-experts). Thus, some parents were more expert in the GHL (GHL experts) than other parents (i.e., GHL non-experts). Second, data analysis using SEM showed that a composite factor of parental home involvement was not supported, which changed the focus of the data analysis with SEM to the most salient form of parental involvement in children's GHL development (i.e., speaking the GHL; see Section 2.2 for a discussion of forms of parental home involvement). As a result, refinements to the research questions were made to account for these two important findings:

Research Question 1: *In GHL Schools, what are GHL experts' and GHL non-experts' demographic profiles?*

Research Question 2: *In GHL Schools, what is the extent of GHL experts' and GHL non-experts' home involvement through speaking the GHL in children's GHL learning?*

a. Do GHL experts and GHL non-experts use different linguistic approaches?

Research Question 3: *In GHL Schools, what factors within parents' personal context, personal beliefs and social environment influence parental home involvement through speaking the GHL in children's GHL learning for GHL experts and GHL non-experts?*

After explaining the methods used for conducting the main study, and a preliminary data analysis (see Sections 5.2.1-5.2.2), the following sections present the context leading to the data analysis with SEM. First, this chapter continues classifying groups within the sample (i.e., GHL experts and GHL non-experts; see Section 5.2.3). Then, it outlines how GHL experts' and GHL non-experts' cultural backgrounds and linguistic family contexts differed (see Section 5.3). This is followed by a discussion of the cultural background and GHL skills of children of GHL experts and GHL non-experts (see Section 5.4) and the answer to Research Question 1 (see Section 5.4.3). Then, the extent of GHL usage in GHL experts' and GHL non-experts' home involvement through speaking the GHL is investigated (see Section 5.5), resulting in the answer to Research Question 2 (see Section 5.5.4).

Section 5.6 presents the central section of this chapter. It investigates the factors that influence GHL experts' and GHL non-experts' speaking of the GHL, and predictors are tested using SEM. This part of the chapter explains the procedures used to test the multigroup model for GHL experts and GHL non-experts, arguing for non-invariance of the factorial structure of the multigroup model (see Section 5.6.2). Further, it is argued that the assessment of individual structural models for GHL experts and GHL non-experts is the most suitable approach to test hypotheses related to Research Question 3 (see Section 5.6.4–5.6.5). Before discussing findings

of the qualitative data analysis (see Section 5.7), an answer to Research Question 3 is presented (see Section 5.6.10).

5.1 Administration of the Main Study

Teijlingen and Hundley (2002) recommended that participants who were part of the pilot study should not be part of the main study. The main survey was administered through GHL schools in the U.S., due to the small number of GHL schools in Australia and to obtain a sufficiently large sample. The use of the same data collection methods for the pilot study and the main study is claimed to increase the internal validity of questionnaires (Peat, 2002). However, for logistical reasons and ease of administration, the questionnaire was converted to an electronic format using the online survey platform Qualtrix (<http://qualtrix.com>).

After opening the link to the online survey PHIQ-GHL III (see Appendix C: Questionnaires), participants read a short introduction before proceeding to the survey. All 78 questionnaire items required either clicking a specific response category or typing a brief response. Filling out the entire questionnaire took volunteers an average of 12 minutes. A final prompt asked participants whether they had any further comments and thanked them for their time and participation.

A comprehensive search for GHL schools in the U.S. (see Section 3.5.2) identified 91 GHL schools (see Appendix A: GHL schools); however, only 31 schools indicated their willingness to participate in the study. Data collection procedures occupied 10 weeks at the end of one school year and, due to a low participant response rate ($N = 50$), was extended for six weeks in the following school year. The overall low response rate from GHL schools might have been due to an unfortunate timing of the survey. For GHL schools, the end of the school year can be filled with exams and the beginning of a school year is often covered with administrative tasks. For parents, managing children's HL and regular schooling, work and family commitments, may prevent from participation in surveys. In addition, some parents may

have also felt less enticed to participate in a study that assessed their home involvement. The methods used to collect the data can be found in Section 3.5.

5.2 Quantitative data: preparation and preliminary analysis

This section presents procedures used to prepare data and the results of the quantitative analysis. Data preparation included analysing missing data and validating scales. Before proceeding with descriptive statistics to investigate the study sample, a cluster analysis was performed, resulting in the classification of two groups within the sample: GHL experts and GHL non-experts.

5.2.1 Missing data analysis

Over 400 online surveys were opened by participants, but not all could be used. Of 426 downloaded surveys, 100 labelled 'not submitted' were deleted. Most of these surveys contained no data and were likely viewed by principals, school committees and parents before deciding to participate in the study. From 326 remaining surveys, three had missing values for Section E (parental involvement activities), five had only completed Sections A and B (child and parent background) and one had missing values in Section D1 (available time). As these surveys seemed to be a random subsample, which permitted their removal (Tabachnick & Fidell, 2007), they were deleted from the database. Another four surveys could not be included, as responses were related to children under the age of five. Further, one participant had answered survey questions concerning their child's learning of Spanish; this survey was also removed.

A missing MVA was performed in SPSS on data from the remaining 313 surveys. The MVA was not performed on questions that allowed respondents to clarify their answers (e.g., B21b 'Where were you born? Please specify'). The coding scheme for the missing data analysis (e.g., 97 for invalid responses) can be found in Appendix G: Codes for missing values. The MVA indicated that the dataset included no variables with five per cent or more missing values

and missing data completely at random was estimated (Tabachnick & Fidell, 2007). The mode was used to replace 51 missing values of categorical variables. Missing value substitution can reduce the variance. However, the extent of loss of variance depends on the number of missing values (Tabachnick & Fidell, 2007). In the main study this was very small.

5.2.2 Scale validity and reliability

For the EFA, the full sample was used due to the small number of retained surveys in the GHIL non-expert group ($N = 128$) to meet the minimum ratio of five cases per variable, as suggested by MacCallum et al. (1999). A preliminary examination of the correlation matrices of independent and dependent variables suggested dependence between factors. Thus, PAF with oblique rotation was used for the validation of the factor structure of independent and dependent variables.

The KMO measure of sampling adequacy and Bartlett's test of sphericity indicated that all constructs were appropriate for FA ($KMO > 0.5$, Bartlett's test of sphericity $p < 0.001$). This applied to both dependent and independent variables.

It was hypothesised that five primary factors (i.e., speaking the GHIL, teaching the GHIL, assisting with GHIL studies, regulating GHIL input and motivating GHIL learning) would emerge, representing the conceptually interrelated subscales of an overall parental home involvement factor. Table 24 presents results of the PAF for dependent variables, showing that four (not five) primary factors represent parental home involvement. Thus, only four subscales achieved eigenvalues over Kaiser's criterion of 1 and in combination explained 76.07 per cent of the variance.

Table 24

Eigenvalues and Variance Explained for Dependent Variables

Factor	Eigenvalue	% Variance explained
Teaching the GHL	8.731	48.505
Assisting with GHL studies	2.627	14.593
Speaking the GHL	1.268	7.042
Motivate GHL learning	1.069	5.937

Note. Only factors with Eigen values > 1 shown.

The reason for four instead of five factors representing the conceptually interrelated subscales of parental home involvement was that two items intended to represent regulating GHL input (i.e., ‘schedule time for my child’s German studies’, and ‘put on German media for my child’) did not load on their hypothesised variable. Instead ‘Schedule time for my child’s German studies’ had a primary factor loading on assisting with GHL studies and the item ‘Put on German media for my child’ loaded on motivating GHL learning. This can be viewed in Table 25, which presents factor loadings for dependent variables. Factor loadings for dependent variables ranged from 0.47–0.99. All four scales had several factor loadings above 0.65, deemed substantial (DeVellis, 2003), and most factor loadings were above 0.70, indicating adequate validity of scales (Guadagnoli & Velicer, 1988).

Table 25

Factor Loadings of Dependent Variables

Factor	Items	Loadings
Teaching the GHL	Explain the meaning of words	.931
	Demonstrate the correct use of certain words and phrases	.885
	Correct my child's German	.844
	Repeat German sentences for my child	.815
	Explain grammatical concepts	.711
Assisting with GHL studies	Help my child with his/her German studies (e.g., schoolwork, reading)	.893
	Oversee my child's German studies	.884
	Check my child's understanding (e.g., schoolwork, reading)	.837
	Schedule time for my child's German studies (e.g., schoolwork, reading)	.757
	Revise with my child what he/she learned at German school	.582
Speaking the GHL	I speak German to my child	.996
	I ask my child questions in German	.937
	I speak English to my child	-.735
	I ask my child to respond in German	.657
Motivating GHL learning	Encourage my child's German language learning	.842
	Ask my child to engage in activities in German	.733
	Praise my child for his/her German studies	.540
	Put on German media for my child (e.g., music, movies, software on electronic devices)	.473

The hypothesised independent variables included eight factors: integrative goal orientation II (group belongingness), self-efficacy, role belief parts 1 and 2, perceived teacher invitations, perceived child invitations, available time, and skills and knowledge. Table 26 presents results of the PAF for independent variables. Items for 'role belief parts 1 and 2' loaded on one factor, creating a one-factor solution for parents' role belief. As a result, seven independent variables had eigenvalues greater than Kaiser's criterion of 1 and in combination explained 71.9 per cent of the variance.

Table 26

Eigenvalues and Variance Explained for Independent Variables

Factor	Eigenvalue	% Variance explained
Skills and knowledge	7.831	30.121
Role belief	2.418	9.301
Available time	2.237	8.604
Perceived teacher invitations	1.926	7.409
Self-efficacy	1.656	6.370
Integrative goal orientation II	1.366	5.256
Perceived child invitations	1.260	4.845

Note. Only factors with Eigen values > 1 shown.

Considering the reliability of scales, Table 27 presents the factor loadings for independent variables ranging from 0.49–0.94. Apart from one scale representing an independent variable (i.e., perceived child invitations), all seven scales had several factor loadings above 0.65 deemed substantial (DeVellis, 2003) and most factor loadings were above 0.70, indicating adequate validity of scales (Guadagnoli & Velicer, 1988).

Table 27

Factor Loadings of Independent Variables

Factor	Items	Loadings
Skills and knowledge	How to explain things to my child about his/her German studies	.947
	Enough about German grammar to help my child	.869
	Enough German to help my child	.803
	How to get German resources for my child	.664
	How to support my child's German language learning	.655
Role belief	Engage in German activities with my child	.847
	Assist my child with learning German	.823
	Provide resources in German for my child	.779
	Revise German school work with my child	.585
Available time	Revise German school work with my child	.928
	Assist my child with German studies (e.g., homework or other)	.884
	Supervise my child's German studies	.794
Perceived teacher invitations	Keeps me informed about my child's progress	.797
	Gives advice about how to assist my child with German at home	.784
	Asks me to help my child with German at home	.784
	Forwards schoolwork if my child cannot attend on any one day	.561
Self-efficacy	I make a significant difference in my child's German language learning	.742
	I can influence my child's German language learning	.720
	My use of German has a direct influence on what my child will learn to say in German	.636
	Others have more influence on my child's German language learning than I do	-.497
Integrative goal orientation II	Identify with the German /Swiss/Austrian culture	.941
	Strong sense of belonging with German speakers	.870
	Learn more about German history, traditions, and customs	.687
Perceived child invitations	Is confident about his/her German skills	.708
	Is reluctant to speak German with me	-.577
	Engages willingly in German studies (e.g., homework or other)	.513

Overall, six items were deleted based on results from the EFA. Table 28 and Table 29 present deleted items from dependent (see Table 28) and independent variables (see Table 29; deleted items highlighted in grey). Five items were removed based on cross-loadings > 0.32 , as suggested by Tabachnick and Fidell (2007). One more item was removed due to a loading of < 0.45 , as preferably factors need loadings ≥ 0.5 to be considered strong (Costello & Osborne, 2005). See Table 123 in Appendix J: Modifications and removed items for the complete list of removed items and reasons for their removal.

Table 28

Removed Items (Highlighted in Grey) from Dependent Variables Based on the EFA

Factor	Items
Teaching the GHL	Explain the meaning of words Demonstrate the correct use of certain words and phrases Correct my child's German Repeat German sentences for my child Explain grammatical concepts
Assisting with GHL studies	Revise with my child what he/she learned at German school Help my child with his/her German studies (e.g., schoolwork, reading) Oversee my child's German studies Check my child's understanding (e.g., schoolwork, reading) Schedule time for my child's German studies (e.g., schoolwork, reading)
Speaking the GHL	I speak German to my child I ask my child questions in German I speak English to my child I ask my child to respond in German
Motivate GHL learning	Encourage my child's German language learning Ask my child to engage in activities in German Praise my child for his/her German studies Put on German media for my child (e.g., music, movies, software on electronic devices)
Regulating GHL input	Schedule time for my child's German studies (e.g., schoolwork, reading) Check if my child uses/reads German books

Table 29

Removed Items (Highlighted in Grey) from Independent Variables Based on the EFA

Factor	Items
Skills and knowledge	How to explain things to my child about his/her German studies Enough about German grammar to help my child Enough German to help my child How to support my child's German language learning How to get German resources for my child
Role belief	Engage in German activities with my child Assist my child with learning German Provide resources in German for my child Revise German schoolwork with my child Teach my child German Practice German with my child
Available time	Revise German school work with my child Assist my child with German studies (e.g., homework or other) Supervise my child's German studies Practice German with my child Engage in German activities with my child
Perceived teacher invitations	Keeps me informed about my child's progress Gives advice about how to assist my child with German at home Asks me to help my child with German at home Forwards schoolwork if my child cannot attend on any one day
Self-efficacy	I make a significant difference in my child's German language learning I can influence my child's German language learning My use of German has a direct influence on what my child will learn to say in German Others have more influence on my child's German language learning than I do
Integrative goal orientation II	Identify with the German /Swiss/Austrian culture Strong sense of belonging with German speakers Learn more about German history, traditions, and customs
Perceived child invitations	Is confident about his/her German skills Is reluctant to speak German with me Engages willingly in German studies (e.g., homework or other) Participates in German activities with me

The reliability of the revised scales was assessed with Cronbach's alpha. Table 30 and Table 31 show Cronbach's alpha values for scales for dependent and independent variables. Reliability analysis indicated that two items in two constructs (i.e., skills and knowledge, and assisting with GHL studies) increased Cronbach's alpha upon removal and were eliminated. For final scales of dependent variables, all factors had respectable to very good internal consistency, with the alpha coefficient for each individual scale ranging between 0.79 and 0.93

(see Table 30), which was well within the acceptable level of > 0.7 (DeVellis, 2003). Alpha coefficients for final scales for independent variables ranged between 0.64 and 0.95 (see Table 31) and all but one scale (i.e., ‘perceived child invitations’) had very good internal consistency, with Cronbach’s alpha values exceeding 0.7 (DeVellis, 2003).

Table 30

Reliability of Scales for Final Dependent Variables

Construct	# of items	Alpha	Valid cases
Speaking the GHL	4	0.921	313
Teaching the GHL	5	0.932	313
Assisting with GHL studies	3	0.909	313
Motivating GHL learning	4	0.799	313

Table 31

Reliability of Scales for Final Independent Variables

Construct	# of items	Alpha	Valid cases
Integrative goal orientation II	3	0.868	313
Self-efficacy	4	0.757	313
Perceived teacher invitations	4	0.819	313
Perceived child invitations	3	0.639	313
Role belief	4	0.856	313
Available time	3	0.906	313
Skills and knowledge	3	0.945	313

Discriminant validity was assessed separately for the final dependent and independent variables. Table 32 shows latent factor correlations for final dependent factors, while Table 33 depicts correlations for final independent variables, indicating acceptable discriminant validity between all independent factors. Correlations among all forms of home involvement (see Table 32) and correlations between most independent variables (see Table 33) were significant.

Strong relationships existed between ‘speaking the GHL’ and ‘teaching the GHL’ and between ‘motivating GHL learning’ and ‘assisting with GHL studies’. This was not surprising, as ‘speaking the GHL’ and ‘teaching the GHL’ pertain to parental strategies to develop children’s communicative and linguistic competence in the GHL and ‘motivating GHL learning’ and ‘assisting with GHL studies’ represent strategies to facilitate children’s GHL learning.

Table 32

Final Dependent Variables: Latent Factor Correlations

	Speaking the GHL	Teaching the GHL	Assisting with GHL studies	Motivating GHL learning
Speaking the GHL	1			
Teaching the GHL	0.64**	1		
Assisting with GHL studies	0.31**	0.56**	1	
Motivating GHL learning	0.43**	0.55**	0.60**	1

** $\rho < 0.01$.

Table 33

Final Predictor Variables: Latent Factor Correlations

	Role belief	Self-efficacy	Integrative goal orientation II	Perceived child invitations	Perceived teacher invitations	Available time	Skills and Knowledge
Role belief	1						
Self-efficacy	0.46**	1					
Integrative goal orientation II	0.36**	0.29**	1				
Perceived child invitations	0.15**	0.16**	0.14*	1			
Perceived teacher invitations	0.32**	0.12*	0.19**	0.13*	1		
Available time	0.41**	0.29**	0.27**	0.25**	0.24**	1	
Skills and knowledge	0.48**	0.56**	0.25**	0.11	0.32**	0.26**	1

** $\rho < 0.01$ * $\rho < 0.05$.

5.2.3 Classifying groups within the sample

The results of Pilot Study II indicated the existence of two groups within the sample (see Section 4.2.6). Table 34 presents the groups for the sample in the main study. Based on parents' GHSL speaking proficiency, a two-step cluster analysis using SPSS software resulted in participants being grouped into four clusters consisting of parents with 1) native-level, 2) advanced-level, 3) intermediate-level, and 4) beginner-level and parents with no GHSL speaking skills. However, the sample size was too small to retain four clusters, so the cluster analysis was restricted to two clusters. This resulted in the first cluster containing 59.1 per cent of all participants and the second cluster comprising 40.9 per cent of respondents.

Table 34

Classification of Groups Within the Sample Based on Cluster Analysis

	Frequency	Percentage
Cluster 1	185	59.1
Cluster 2	128	40.9
Total	313	100.0

Participants' GHL speaking proficiency ranged from none to native-level GHL speaking proficiency. Figure 5 shows Cluster 1, which comprised participants with native-level GHL speaking proficiency (59.1%) and Cluster 2, which comprised participants with other GHL speaking proficiency levels (40.9%) including no GHL speaking proficiency, GHL speaking proficiency on the beginner level, intermediate level and advanced level.



Figure 5. Distribution of GHL speaking proficiency for clusters 1 and 2.

Assessment of participants' GHL listening, reading and writing proficiency for the group of participants with native-level GHL speaking (Cluster 1) and the group of participants with other GHL speaking proficiency levels (Cluster 2), showed substantial differences. Figure

6 presents the distribution of parents' GHL listening, reading and writing proficiency for Clusters 1 and 2. Almost all parents with GHL speaking proficiency on the native level had native-level listening, reading and writing proficiency. Thus, Cluster 1 represented the group of GHL language experts (GHL experts) and Cluster 2 GHL language non-experts (GHL non-experts).

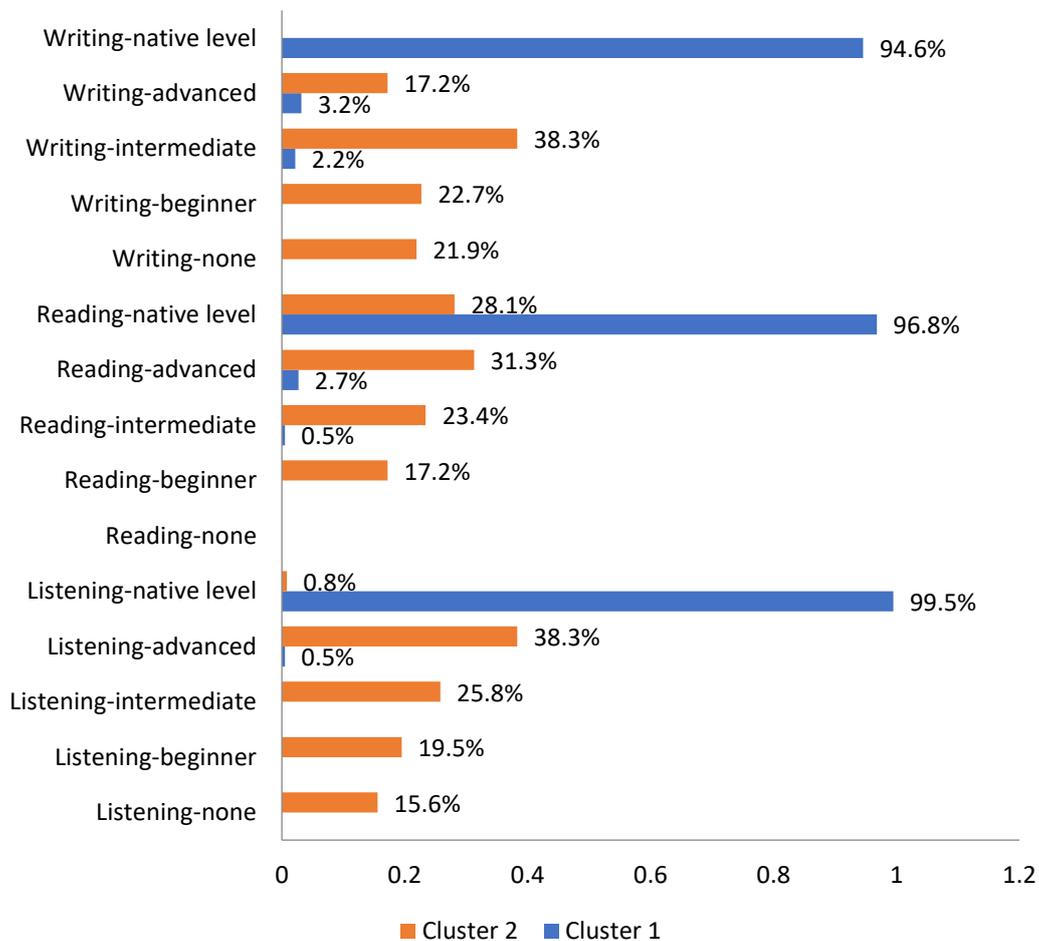


Figure 6. Distribution of parents' GHL listening, reading and writing proficiency for clusters 1 and 2.

Figure 5 and Figure 6 show that mostly GHL experts participated in the main study, whereas only few GHL non-experts with no GHL speaking proficiency, GHL speaking

proficiency on the beginner level, intermediate level and advanced level did so. It may not be surprising that parents who felt less proficient in the GHL were more reticent to respond to a survey about parental home involvement. Yet, the distribution of levels of GHL proficiency amongst participating parents may also present a reflection of the parent cohort in GHL schools (see also Section 5.3.1).

5.3 Demographic profile of GHL experts and GHL non-experts

Having argued in the section above for the existence of two groups within the sample, this section discusses GHL experts' and GHL non-experts' demographic profiles. This is essential for answering Research Question 1:

In GHL schools, what are GHL experts' and GHL non-experts' demographic profiles?

In Chapter 2 (see Section 2.1.2), the diverse cultural backgrounds of children attending GHL schools was addressed. To understand the diversity of backgrounds of parents of children attending GHL schools, their demographic profiles included the distribution of parents' gender across the sample, their highest education level and cultural background. In addition, as almost all GHL experts and GHL non-experts were in two-parent families, their linguistic family contexts were presented through GHL-speaking ancestry amongst parent-couples, the home language of the parent-couple (see Section 2.2.3.1), and parental language input patterns (see Section 2.2.3.1) for speaking the GHL to the children in the home. The results of these analyses are discussed in Sections 5.3.1 - 5.3.3. Table 68 and Table 69 (see Appendix H: Sample), present a summary of the demographic profile of GHL experts (see Table 68) and GHL non-experts (see Table 69).

5.3.1 Gender distribution and educational level of GHL experts and GHL non-experts

The gender distribution of GHL experts and GHL non-experts was similar. Most participants were mothers (GHL experts 70.8%; GHL non-experts 74.2%) and approximately

one-quarter were fathers (GHL experts 27.0%; GHL non-experts 24.2%). Few participants indicated another relationship to the child (GHL experts 2.2%; GHL non-experts 1.6%). However, no further details were provided. As most GHL experts and GHL non-experts were parents of children attending GHL schools in the U.S., all respondents in this study are referred to as parents. All parents at GHL schools were invited to participate. Therefore, it cannot be said with certainty if one parent or two parents in each family completed the questionnaire.

GHL experts' and GHL non-experts' educational levels were similar. Table 35 presents GHL experts' and GHL non-experts' highest levels of education. Most of the 313 participants had a master's degree, followed by a doctoral degree or a bachelor's degree. Few GHL experts and GHL non-experts had college degrees or overseas vocational qualifications, professional degrees (e.g., medical doctor), some college (no degree) and high school degrees.

The high educational levels of participating parents may be perceived as the result of the relatively low response rate found in the main study. However, previously Mischner-Bang (2005) and Glinzner (2010) also found that educational levels of parents of children attending GHL schools are very high. This indicates that GHL schools are most likely to attract children from middle-class families. Correspondingly, it has been found that a growing number of native English-speakers from the middle-class want their children to grow up bilingually (King & Logan-Terry, 2008; Piller, 2001). In relation to GHL Experts, most new German immigrants are professionals and often multilinguals (Ludanyi, 2010). Then again, despite measures taken to achieve non-response bias (see Section 3.4.2), parents from middle-class may have been more likely to participate in this study as is often the case in survey research (Boynton, Wood, & Greenhalgh, 2004).

Table 35

Highest Level of Education for GHL Experts and GHL Non-Experts

Highest education level	GHL experts N = 185		GHL non-experts N = 128	
	N	Percentage	N	Percentage
Grade 11 completed	1	0.5	0	0.0
Grade 12—High school diploma	4	2.2	0	0.0
Some college—no degree	7	3.8	2	1.6
College degree or overseas vocational qualifications	23	12.4	8	6.3
Bachelor's degree	27	14.6	34	26.5
Master's degree	76	41.1	59	46.1
Professional degree	17	9.2	4	3.1
Doctoral degree	30	16.2	21	16.4

5.3.2 Cultural background of GHL experts and GHL non-experts

GHL experts and GHL non-experts had diverse cultural backgrounds. Table 36 shows GHL experts' and GHL non-experts' countries of birth. Most GHL experts were born in GHL-speaking countries. This is not surprising, as GHL experts had native GHL speaking proficiency. In contrast, most GHL non-experts were born in English-speaking countries, while one-fifth of GHL non-experts were born in other countries where neither GHL nor English was the ML.

Table 36

Country of Birth Across the Group of GHL Experts and GHL Non-Experts

Country of birth	GHL experts N = 185		GHL non-experts N = 128	
	N	Percentage	N	Percentage
U.S.	20	10.8	93	72.7
Canada	2	1.1	3	2.3
Great Britain	0	0.0	2	1.5
Germany	133	71.9	1	0.8
Austria	7	3.8	0	0.0
Switzerland	9	4.9	0	0.0
Other countries	14	7.5	29	22.7

Note. Other countries included GHL experts: Italy, China, Ecuador, Hungary, Iran, Kazakhstan, Peru, Brazil, Romania and Spain. GHL non-experts: Basque Country, Bolivia, Brazil, Chile, China, Colombia, Ecuador, France, Hong Kong, India, Indonesia, Spain, Mexico, Poland, South Africa, South Korea, Spain, Ukraine and Venezuela.

Corresponding with GHL experts' country of birth, almost all had GHL-speaking ancestry (98.9%) and most had lived, on average, 14 years in the U.S. (mean number of years lived in the U.S. = 14.31, SD = 11.19; (see Table 68 in Appendix H: Sample). Slightly more GHL non-experts had GHL-speaking ancestry (57.8%) compared to no GHL-speaking ancestry (42.2%), indicating that more than half of all GHL non-experts were second- or later-generation German-speaking migrants. Thus, most parents in the sample had German-speaking backgrounds and most were first-generation German-speaking migrants (i.e., GHL experts). Further, the results showed that approximately one-fifth of parents in the sample had English-speaking or other HL backgrounds.

5.3.3 GHL experts' and GHL non-experts' linguistic family contexts

In this section, GHL experts' and GHL non-experts' linguistic family contexts are presented, including GHL-speaking ancestry of parent-couples, the home language of the parent-couple, and whether responding parents and their spouses speak the GHL to their

children in the home (i.e., parental language input patterns for speaking the GHL) (see Section 2.2.3.1).

Linguistic family contexts differed between GHL experts and GHL non-experts in several ways. Table 37 shows GHL-speaking ancestry for the responding parent and their spouse. For GHL experts, the most frequent contexts were that only the responding parent or both the responding parent and their spouse had GHL-speaking ancestry. In contrast, for GHL non-experts, the most common contexts were that only the responding parent or their spouse had GHL-speaking ancestry. In addition, one-fifth of GHL non-experts stated that neither the responding parent nor spouse had GHL-speaking ancestry. This corresponds with findings by Mischner-Bang (2005) that children of families with no German-speaking background also attend GHL schools. Overall, the large number of home environment contexts with GHL-speaking ancestry is not surprising, as the core purpose of GHL schools is to maintain the HL and culture of ethnic groups (Nelson-Brown, 2005; Otcu, 2010). GHL non-experts motives for sending their children to GHL schools are provided in the analysis of responses to the open-ended questions (see Section 5.7.1, Table 51).

Table 37

GHL-Speaking Ancestry for the Responding Parent and Their Spouse for GHL Experts and GHL Non-Experts

Ancestry	GHL experts N = 185		GHL non-experts N = 128	
	N	Percentage	N	Percentage
Parent-couple both with GHL-speaking ancestry	70	37.8	44	34.4
Only responding parent has GHL-speaking ancestry	111	60.0	28	21.9
Only spouse has GHL-speaking ancestry	1	0.5	28	21.9
Parent-couple no GHL-speaking ancestry	1	0.5	26	20.3
N/A	2	1.1	2	1.6

GHL experts and GHL non-experts differed in their choice of the parent-couple home language. Table 38 presents the distribution of parent-couple home languages for GHL experts and GHL non-experts. Close to one half of all GHL experts used the GHL at least to some extent to communicate with their spouses, whereas most GHL non-experts used the EML. Overall, for almost two-thirds of parents in the sample, the EML was the home language, indicating that most home environments were EML supportive rather than GHL supportive (see Table 1, Section 2.2.3.1).

Close to one-fifth of GHL non-experts and some GHL experts used other HLs to communicate with their spouses. Other HLs included French, Hungarian and Spanish for GHL experts and Chinese, Japanese, Polish, Russian, Hindi, Urdu and Spanish for GHL non-experts. This suggests that some GHL experts and GHL non-experts raised their children using a trilingual strategy (see Table 1, Section 2.2.3.1).

Table 38

Home Language Use of the Parent-Couple for GHL Experts and GHL Non-Experts

Home language	GHL experts N = 185		GHL non-experts N = 128	
	N	Percentage	N	Percentage
GHL	51	27.6	1	0.8
EML	96	51.9	101	78.9
GHL and EML	27	14.6	6	4.7
Other HL	9	4.9	19	14.8
N/A	2	1.1	1	0.8

GHL experts and GHL non-experts used a range of parental language input patterns (De Houwer, 2007) (see Section 2.2.3.1) for speaking the GHL to the children in the home. Parental language input pattern for speaking the GHL to the children in the home examined whether the responding parent and their spouse spoke the GHL to the children in the home. The classification of parental language input patterns was based on parents' response to the question 'Who speaks German to the children in the home?'. Table 39 presents parental language input patterns for speaking the GHL to children in the home by the responding parents and their spouses. In Group A (parent), only the responding parent spoke the GHL to the children, whereas in Group C (spouse), only the spouse spoke the GHL to the children. Thus, parental language input patterns in Group A (parent) and Group C (spouse) compared with De Houwer's (2007) type of parental input pattern, where only one parent speaks the HL to the children (see Section 2.2.3.1).

In Group B (parent and spouse), both the responding parent and their spouse spoke the GHL to the children. This indicated that in Group B (parent and spouse) the EML was learnt from the wider community. Thus, parental language input patterns in Group B (parent and spouse) compares with De Houwer's (2007) type of parental language input patterns where

both parents speak the HL to the children (see Section 2.2.3.1). Lastly, parental language input patterns for speaking the GHL to the children in the home in Group D (no-one) showed that the responding parent and their spouse did not use the GHL when communicating with their children. Parents' use of the OPOL strategy and the one-language-first strategy is discussed in Section 5.5.3.

Table 39

Parental Language Input Patterns of Speaking the GHL to the Children in the Home

Group	Responding parent	Spouse
Group A: Parent	Yes	No
Group B: Parent and spouse	Yes	Yes
Group C: Spouse	No	Yes
Group D: No-one	No	No

GHL experts and GHL non-experts differed in parental language input patterns for speaking the GHL to the children in the home. Table 40 presents the frequency of GHL experts' and GHL non-experts' parental language input patterns for speaking the GHL to the children in the home (see Table 39). For GHL experts, the most frequent parental language input pattern was that only the responding parent spoke the GHL to children (Group A, parent). In contrast, for GHL non-experts, the most common parental language input pattern was that the parent-couple did not communicate with children in the GHL (Group D, no-one). Almost one-quarter of parents in the sample stated that the parent-couple spoke the GHL with children in the home (Group B, parent and spouse). This parental language input pattern applied to almost twice as many GHL experts than it did GHL non-experts. Overall, only a small number of parents declared that their spouse was the only parent speaking the GHL to the children, and almost all

of them belonged to the group of GHL non-experts. Thus, most parents who partook in this study stated that they spoke the GHL to children in the home.

Table 40

Frequency of Parental Language Input Patterns for Speaking the GHL to Children in the Home

Parental language input patterns for the GHL	GHL experts N = 185		GHL non-experts N = 128		Full sample N = 313	
	N	Percentage	N	Percentage	N	Percentage
Group A: Parent	121	65.4	43	33.6	164	52.4
Group B: Parent and spouse	54	29.1	16	12.5	70	22.4
Group C: Spouse	2	1.1	20	15.6	22	7.0
Group D: No-one	8	4.3	49	38.3	57	18.2

5.4 Demographic profile of children of GHL experts and GHL non-experts

The section above discussed the demographic profile of GHL experts and GHL non-experts and highlighted differences between these two groups of parents in the study sample. The final section provides information about the cultural background of children of GHL experts and GHL non-experts.

This section outlines the demographic profile of children of GHL experts and GHL non-experts, including general information such as gender distribution across the sample, age and grade levels. Further, Chapter 1 indicated that children attending GHL schools have a wide range of GHL skills. To understand the diversity of GHL skills of children attending GHL schools, information about GHL speaking, listening, writing and reading skills of children of GHL experts and GHL non-experts, and children’s GHL skills across grade levels are

discussed. A summary of demographic information of children of GHL experts and GHL non-experts can be found in Table 70 and Table 71 in Appendix H: Sample.

5.4.1 Gender distribution, age and grade levels of children of GHL experts and GHL non-experts

Approximately the same number of children of GHL experts and GHL non-experts were female (55.7% for GHL experts and 50% for GHL non-experts) and male (44.3% for GHL experts and 50% for GHL non-experts). Most parents' responses to survey questions concerned younger children. Table 41 presents children's age ranges across groups. Most children were between 5 and 11 years old, followed by 12–14-year-old children. The smallest number of children was in the 15–18 years category. Similarly, Mischner-Bang (2005) found that most children attending GHL schools in the U.S. were between 4 and 10 years of age. The predominance of younger children in GHL schools may show that younger children are more likely than older children to adhere to their parents' decisions about their ethnic group membership (Noro, 2009). Declining student numbers in middle and high-school in GHL schools could be an indication of the influence of the wider social environment (i.e., peers in regular schools) on children's agency.

Table 41

Children's Ages for GHL Experts and GHL Non-Experts

Age range	GHL experts N = 185		GHL non-experts N = 128	
	N	Percentage	N	Percentage
5–11 years	128	69.2	94	73.5
12–14 years	32	17.3	19	14.8
15–18 years	25	13.5	15	11.7

Corresponding with children’s ages, most children attended kindergarten and elementary school. Table 42 shows children’s grade levels at regular school. Most children of GHL experts and GHL non-experts attended kindergarten to Grade 6, followed by Grade 7–9 and Grade 10–12. This indicates a general tendency of student numbers decreasing with grade level in GHL schools. One reason for decreasing student numbers at GHL schools could be that teenage children want to follow other interests. For example, Muenstermann (1998) found that students’ attendance at a GHL school in Australia competed with school sport programs on Saturday mornings.

Table 42

Children’s Grade Level at Regular School for GHL Experts and GHL Non-Experts

Grade level	GHL experts N = 185		GHL non-experts N = 128	
	N	Percentage	N	Percentage
Kindergarten–Grade 6	131	70.8	98	76.5
Grade 7–9	35	19.0	19	14.9
Grade 10–12	19	10.2	11	8.6

5.4.2 GHL skills of children of GHL experts and GHL non-experts

Children of GHL experts and GHL non-experts differed in their GHL skills. Table 43 presents the GHL skills of children of GHL experts and GHL non-experts. Notably, most children of GHL experts had GHL speaking and listening skills at the native and advanced levels. Conversely, most children of GHL non-experts had beginner-level or intermediate-level speaking and listening skills in the GHL. Differences in GHL writing and reading skills between children of GHL experts and children of GHL non-experts were less prominent. Nevertheless, most children of GHL experts had beginner and intermediate writing and reading skills in the GHL, while most children of GHL non-experts had writing and reading skills in

the GHL at the beginner level. Thus, skill levels for speaking, listening, writing and reading in the GHL of children of GHL experts and GHL non-experts may be one reason for the diversity of GHL skills found in children attending GHL schools.

Table 43

GHL Speaking, Writing, Reading and Listening Skills of Children of GHL Experts and GHL Non-Experts

GHL skill	GHL skill level	GHL experts		GHL non-experts	
		N	Percentage	N	Percentage
Speaking	None	0	0.0	3	2.3
	Beginner	28	15.1	70	54.7
	Intermediate	45	24.4	29	22.7
	Advanced	35	18.9	15	11.7
	Native-speaker level	77	41.6	11	8.6
Writing	None	23	12.4	19	14.8
	Beginner	53	28.6	63	49.2
	Intermediate	53	28.6	31	24.2
	Advanced	32	17.4	12	9.4
	Native-speaker level	24	13.0	3	2.4
Reading	None	21	11.4	18	14.1
	Beginner	41	22.2	58	45.3
	Intermediate	45	24.3	30	23.4
	Advanced	42	22.7	17	13.3
	Native-speaker level	36	19.4	5	3.9
Listening	None	0	0.0	2	1.6
	Beginner	14	7.6	61	47.7
	Intermediate	32	17.3	35	27.3
	Advanced	57	30.8	16	12.5
	Native-speaker level	82	44.3	14	10.9

Differences in GHL skills between children of GHL experts and children of GHL non-experts were evident across all grade levels. Table 72 and Table 73 in Appendix H: Sample, present GHL speaking, writing, reading and listening skills of children of GHL experts and GHL non-experts across grade levels. The greatest diversity in GHL skills of children of GHL

experts and GHL non-experts was found in kindergarten and Grade 1. This finding in the present study compares with Ludanyi (2013), who concluded that students at GHL schools in the U.S. do not have a common starting point for their GHL learning. However, differences between GHL skills of children of GHL experts and GHL non-experts decreased with increasing grade levels. Children's higher GHL skills in secondary school were not surprising, as many students prepare for their exams in the GHL.

5.4.3 Answer to Research Question 1

What are GHL experts' and GHL non-experts' demographic profiles?

GHL experts and GHL non-experts differed considerably in their demographic profiles. One reason for the diverse background of parents of children attending GHL schools was their contrasting demographic and linguistic profiles. Parents' personal life contexts, such as country of birth, ancestry and language skills in the GHL and other HLs, contributed to differences between GHL experts and GHL non-experts. GHL experts were a relatively homogeneous group, as most were born in German-speaking countries, almost all had German-speaking ancestry and all had native-level speaking skills in the GHL. In contrast, GHL non-experts were a heterogeneous group. They differed in their GHL proficiency and connection to the GHL. While most GHL non-experts were born in an English-speaking country, more than half had German-speaking ancestry, followed by English-speaking and other ancestry.

Further, results of the qualitative analysis (see Section 5.7.1) showed that GHL non-experts with no German-speaking ancestry were connected to the GHL through immersion experiences in German-speaking countries, their professions, education or their spouses. Thus, this study is consistent with findings in the literature that parents of children attending GHL schools have diverse cultural backgrounds (Glinzner, 2010; Mischner-Bang, 2005; Muenstermann, 1998, 2001).

In addition, the linguistic family context of GHL experts and GHL non-experts provided another point of difference between these two groups of parents. More GHL experts than GHL non-experts were the only parent with German-speaking ancestry, and their parental language input patterns for the use of the GHL show that approximately the same number of GHL experts were the only person speaking the GHL to the children. In contrast, more GHL non-experts' spouses than GHL experts' spouses were the only parent in the family with German-speaking ancestry. Correspondingly, parental language input patterns for the use of the GHL show that more GHL non-experts' spouses than GHL experts' spouses were the only person speaking the GHL to the children in the home. Most GHL non-experts communicated with their spouses in the EML, while only half of GHL experts did so. One-quarter of GHL experts communicated in the GHL with their spouses, followed by the use of both the GHL and EML. Some GHL non-experts and GHL experts used another HL when communicating with their spouses, though this applied more to GHL non-experts than it did to GHL experts. Overall, in most homes of parents in the sample, the EML was more supported through the parent-couple home language than was the GHL.

5.5 GHL experts' and GHL non-experts' home involvement

Sections 5.3 and 5.4 describe the demographic profile of GHL experts and GHL non-experts and their children. Important insights are provided concerning GHL experts' and GHL non-experts' cultural backgrounds, family contexts and the diversity of children's GHL skills. This section presents findings for GHL experts' and GHL non-experts' home involvement. Based on the preliminary analysis of GHL experts' and GHL non-experts' home involvement using PAF (see Section 5.2.2), the following information was analysed to understand how GHL experts and GHL non-experts were involved in their children's GHL learning: speaking the GHL (i.e., frequency with which parents communicate in the GHL with the child), teaching the GHL (i.e., frequency with which parents use teaching strategies), assisting with GHL studies

(i.e., frequency with which parents help with GHL school work) and motivating GHL learning (i.e., frequency with which parents encourage children's GHL learning).

Section 5.5.1 provides an overview of the extent to which GHL experts and GHL non-experts engage in these forms of home involvement. Section 5.5.3 presents an in-depth analysis of GHL experts' and GHL non-experts' home involvement through speaking the GHL by investigating the range of linguistic approaches used. This is crucial for answering Research Question 2:

In GHL Schools, what is the extent of GHL experts' and GHL non-experts' home involvement through speaking the GHL in children's GHL learning?

a. Do GHL experts and GHL non-experts use different linguistic approaches?

5.5.1 Forms of home involvement

To identify any significant differences between GHL experts' and GHL non-experts' home involvement, independent samples *t*-tests were performed for the four forms of home involvement. Results are presented in Table 44. Levene's test revealed that the assumption of equality of variances was violated for the analysis related to speaking the GHL, $F(1,311) = 79.41, p = 0.0$, and teaching the GHL, $F(1,311) = 35.42, p = 0.0$. For these analyses, a *t* statistic not assuming homogeneity of variance was computed. All tests were found to be statistically significant, favouring GHL experts for all four forms of parental home involvement.

Table 44

Differences Between GHL Experts' and GHL Non-Experts' Home Involvement in Children's GHL Learning

Forms of parental home involvement	GHL experts N = 185 M (SD)	GHL non-experts N = 128 M (SD)	t statistic	df
Speaking the GHL	3.0 (0.77)	1.8 (0.45)	17.55***	302.92
Teaching the GHL	4.1 (0.81)	3.0 (1.18)	9.32***	208.33
Assisting with GHL studies	3.6 (0.92)	3.3 (1.01)	2.87**	311
Motivating GHL learning	3.9 (0.79)	3.5 (0.80)	4.19***	311

Note. **Difference between experts and non-experts is significant at the 0.01 level.

***Difference between experts and non-experts is significant at the 0.001 level.

There was no statistically significant difference between GHL Expert-mothers and GHL Expert-fathers for the most salient form of home involvement (i.e., speaking the GHL) $t(179) = -0.79, p \geq 0.05$. This also applied to GHL Non-Expert-mothers and GHL Non-Expert-fathers $t(124) = 1.80, p \geq 0.05$. This result does not suggest that the children of the participating mothers and fathers perceived similar HL input. For example, some GHL expert-mothers and GHL expert-fathers may always speak the GHL to their children, however, the amount of time these GHL expert-mothers and GHL expert-fathers spend caring for their children may differ.

5.5.2 Classifying linguistic approach

The classification of linguistic approach was based on parental language input patterns for speaking the GHL to children in the home (see Table 39, Section 5.3.3) and parents' responses to two items (i.e., 'I speak German to my child' and 'I speak English to my child') in the speaking the GHL scale (see Table 4, Section 3.4.2.1). The response options were: 1) *never*, 2) *sometimes*, 3) *mainly*, and 4) *always*. This analysis resulted in the classification of several linguistic approaches used by GHL experts and GHL non-experts. Table 45 presents the linguistic approaches used by parents in the sample, including the OPOL strategy, the one-

language-first strategy, mixed strategy and EML only. Parental language input patterns for speaking the GHL to children in the home (see Table 39) showed that only GHL experts and GHL non-experts in Groups A (parent) and B (parent and spouse) indicated that they spoke the GHL to children. Therefore, the focus of this analysis was on GHL experts' and GHL non-experts' linguistic approaches in Groups A (parent) and B (parent and spouse).

In addition, the response to a third item in the speaking the GHL scale (i.e., I request my child to respond in German) gave information about the extent to which parents requested children to communicate in the GHL, and an indication of parents' choice of discourse strategy in parent-child interactions (see Section 2.2.3.1). However, as the focus of this analysis was on the consistency of parents' use of the GHL when addressing their children, parents' choice of discourse strategy is only mentioned briefly in this section.

The definition of the OPOL strategy (Döpke, 1992) (see Section 2.2.3) assumes that one parent continuously addresses the children in the HL, whereas the other parent addresses the children in the ML. Thus, the OPOL strategy was applied if the responding parent (i.e., Group A, parent; see Table 39) stated that they always spoke the GHL to the children. Due to the limitations in the scope of this study, the extent of the use of the OPOL strategy by the responding parents' spouse (Group C, spouse) could not be measured.

According to the definition of the one-language-first strategy (Grosjean, 2010); see Section 2.2.3.1), this linguistic approach is applied if both parents communicate with children in the HL. Therefore, the use of the one-language-first strategy was specified if the responding parents and their spouses spoke the GHL to the children (i.e., Group B, parent and spouse; see Table 39) and if parents always addressed their children in the GHL. In addition, as per the strict definition of the one-language first strategy (Grosjean, 2010), the parent-couple home language was required to be the GHL. Due to the limitations of the scope of this study, the

extent of use of the one-language-first strategy by the responding parents' spouses could not be measured.

Mixed strategy (Barron-Hauwaert, 2004) or 'free-alternation' strategy (Grosjean, 2010) (see Section 2.2.3.1) was applied if parents used both the GHL and EML to various degrees. Several forms of mixed strategy were identified, including strategies that indicated a preference for one language over the other (i.e., GHL-dominant mixed strategy and EML-dominant mixed strategy), a mixed strategy in which both languages were used in equal amounts (i.e., balanced mixed strategy) and mixed strategies, in which the use of the GHL and EML indicated the use of another HL (i.e., trilingual mixed strategy) (see Section 2.2.3.1).

Lastly, the use of EML only was specified if parents always spoke English to their children. Table 45 shows that some parents who claimed to always speak English stated that they sometimes used German. This shows that trying to capture the parents' speech behaviour with categorical data has limitations. Juan-Garau and Perez-Vidal (2001) made a similar discovery in parents' language choice in an OPOL situation. A violation of the OPOL strategy was ruled out, as parents always addressed the children in their own mother tongue (Juan-Garau & Perez-Vidal, 2001). This suggests that in a bilingual context, it can be difficult for parents to completely exclude the use of the ML. This corresponds with Carroll (2017) who proposed that mixing languages is an integral part of a bilingual setting.

Table 45

Classification of GHL Experts' and GHL Non-Experts' Linguistic Approaches

Linguistic approach	Parental input pattern for the GHL	Scale component: I always speak German to my child	Scale component: I always speak English to my child
One-parent one-language	Group A (parent)	Always	Never (sometimes)
One-language-first	Group B (parent and spouse)	Always	Never (sometimes)
Mixed strategy	Groups A (parent), B (parent and spouse), C (spouse), D (no-one)	Mainly, sometimes, never	Mainly, sometimes, never
EML only	Groups A (parent), B (parent and spouse), C (spouse), D (no-one)	Never (sometimes)	Always

5.5.3 Parents' linguistic approaches

Analysis of parents' use of the GHL and EML showed that GHL experts and GHL non-experts differed in their choice of linguistic approach. Table 46 presents the results for GHL experts' and GHL non-experts' use of the OPOL strategy, the one-language-first strategy, mixed strategy and EML only (see Section 5.5.2. for the classification of linguistic approaches).

Most GHL experts and GHL non-experts applied a form of mixed strategy. Table 46 shows that more than one-third of GHL experts spoke the GHL continuously to their children by applying either the OPOL strategy or the one-language-first strategy. In addition, more than one-fifth of GHL experts applied the GHL dominant mixed strategy. Approximately the same number of GHL experts used the EML dominant mixed strategy or balanced mixed strategy. Nevertheless, overall, more than half of all GHL experts communicated with their children in the GHL. In contrast, very few GHL non-experts did so, and for most of them the EML was used as medium of communication by applying the EML-dominant mixed strategy or EML only. (See Table 124, Appendix K: Linguistic approaches and discourse strategies for GHL non-experts' use of the EML in Groups C, spouse and D, no-one).

Further, Table 46 shows that very few parents in Groups A (parent) and B (parent and spouse) used a trilingual mixed strategy. However, almost half of GHL non-experts in Groups C (spouse) and D (no-one) who used a mixed strategy used a trilingual mixed strategy (see Table 124, Appendix K: Linguistic approaches and discourse strategies). GHL non-experts' use of a trilingual mixed strategy corresponded with one-fifth of all GHL non-experts using another HL as the parent-couple home language (see Table 38, Section 5.3.3). This suggests that some GHL non-experts, who stated they did not speak the GHL to their children (i.e., Groups C, spouse and D, no-one), may have used another HL to communicate with their children. This may indicate a need for additional data on GHL non-experts' use of other HLLs to gain a more comprehensive understanding of the extent of use of trilingual mixed strategy by parents of children attending GHL schools.

Table 46

GHL Experts' and GHL Non-Experts' Choice of Linguistic Approach in Groups A (Parent) and B (Parent and Spouse)

Parental language input patterns for the GHL	Linguistic approach	GHL experts N = 185		GHL non-experts N = 128	
		Frequency	Percentage	Frequency	Percentage
Group A (parent)	OPOL	44	23.8	0	0.0
	GHL dominant	25	13.5	2	1.6
	EML dominant	34	18.4	24	18.8
	Balanced	14	7.6	4	3.1
	mixed				
	Trilingual	2	1.1	0	0.0
	mixed				
Group B (parent and spouse)	EML only	2	1.1	13	10.2
	One-language-first*	30	16.2	1	0.8
	GHL dominant	15	8.1	1	0.8
	EML dominant	5	2.7	9	7.0
	Balanced	4	2.1	1	0.8
	mixed				
	Trilingual	0	0.0	0	0.0
mixed					
	EML only	0	0.0	4	3.1
Sum		175	94.6	59	46.1

Note. *Includes one parent with parent-couple home language being the EML.

In addition, Table 46 shows that the number of GHL experts using the OPOL strategy is small (23.8%) compared to the large number of GHL experts in Group A (parent) (i.e., 65.4%, see Table 40). In contrast, half (16.2%) of all GHL experts in Group B (parent and spouse) (i.e., 29.1%, see Table 40) applied the one-language-first strategy. Thus, a greater percentage of GHL experts in Group B (parent and spouse) continuously spoke the GHL to children compared to GHL experts in Group A (parent). Likewise, results for the mixed strategy supported GHL experts' tendency to use the GHL more frequently if GHL experts and their spouses spoke the GHL to the children (Group B, parent and spouse) than if only GHL experts spoke the GHL to the children (Group A, parent). Thus, results indicated that the

spouses' use of the GHL (i.e., parental language input patterns for the use of the GHL, see Table 39) may have been important for GHL experts' choice of linguistic approach.

As a side note, it was indicated that one item of the 'speaking the GHL' scale (i.e., 'I request my child to respond in German') provided information about the extent to which parents requested children to respond in the GHL, and an indication of parents' choice of discourse strategy in parent-child interactions. Table 125 in Appendix K: Linguistic approaches and discourse strategies, presents GHL experts' and GHL non-experts' discourse strategies for the most commonly used linguistic approaches in Groups A (parent) and B (parent and spouse). GHL experts who always spoke the GHL to the children (i.e., OPOL strategy, one-language-first strategy) were more likely to request their children to always or mainly respond in the GHL; thus, they applied a monolingual discourse strategy. This corresponds with Juan-Garau (2001), who observed that parents in an OPOL situation were likely to use monolingual discourse strategies when they addressed their children. In contrast, parents who less frequently spoke the GHL to the children (i.e., EML-dominant mixed strategy) sometimes or never requested their children to respond in the GHL; thus, they applied a dual-lingual discourse strategy. This suggested a relationship between parents' choice of linguistic approach and discourse strategy. Further, in Group B (parent and spouse), in which the parent-couple spoke the GHL to the children, GHL experts were more likely to choose a monolingual GHL discourse strategy, than in Group A (parent), in which parents were the only person speaking the GHL to the children. This indicated the influence on GHL experts' spouses' use of the GHL with the children on the responding parents' choice of discourse strategy. GHL non-experts were more likely to choose dual-lingual discourse strategies than were GHL experts.

5.5.4 Answer to Research Question 2

In GHL Schools, what is the extent of GHL experts' and GHL non-experts' home involvement through speaking the GHL in children's GHL learning?

a. Do GHL experts and GHL non-experts use different linguistic approaches?

Findings in the present study confirmed the results of previous studies (Glinzner, 2010; Hu, 2006)—that parents of children attending HL schools varied in their home involvement through speaking the HL. One reason for the variability of parental home involvement through speaking the GHL were the notable differences between GHL experts' and GHL non-experts' use of the GHL. Further, GHL experts also varied in their frequency of use of the GHL.

Overall, results of the descriptive analysis showed that GHL experts' and GHL non-experts' home involvement through speaking the GHL presented a continuum—at one end, the frequent use of the GHL was positioned, and at the other end, the GHL was never used in communications with children at home. Along this continuum, GHL experts and GHL non-experts used a range of linguistic approaches. Figure 7 depicts a continuum for GHL experts' and GHL non-experts' home involvement through speaking the GHL. The graph shows GHL experts' and GHL non-experts' responses to three items in the 'speaking the GHL' scale indicating the use of the GHL, the EML and their requests for children to respond in the GHL. Parents' use of the GHL (German) is presented as blue columns, their use of the EML (English) is highlighted in red, speaking another HL (other HL) white, and parents' requests for children to respond in the GHL (Request Response in GHL) is presented as a green line. Notably, most GHL experts were positioned on the upper half of the continuum, indicating frequent use of the GHL, whereas most GHL non-experts were situated on the lower half of the continuum. At the upper end of the continuum (for how parents realised the decision to use the GHL), one-quarter of all GHL experts always spoke the GHL to their children and used the OPOL strategy (Group A, parent). Less than one-fifth of GHL experts and one GHL non-expert used the one-

language-first strategy (Group B, parent and spouse). However, a greater percentage of GHL experts in Group B (parent and spouse) than in Group A (parent) used the GHL exclusively when communicating with their children. Thus, GHL experts were more likely to communicate in the GHL with their children if the parent-couple's home language was the GHL and their spouses spoke the GHL to the children. More than one-fifth of GHL experts and very few GHL non-experts spoke mainly the GHL to their children and applied the GHL-dominant mixed strategy. Around the midpoint of the continuum, a small number of GHL experts and GHL non-experts applied the balanced mixed strategy. Thus, they used the GHL and EML to an approximately equal extent when communicating with their children.

At the lower half of the continuum (for how parents realised the decision to use the GHL in the home), the use of the EML was the dominant language in parent-child conversations and the GHL was only used occasionally. More than one-fifth of GHL experts and one-quarter of GHL non-experts spoke mainly the EML to their children and used the EML-dominant mixed strategy. At the lower end of the continuum, close to half of all GHL non-experts and a very small number of GHL experts spoke always the EML and applied the EML only. Some GHL experts and GHL non-experts indicated that the GHL and EML were not the only languages used in the home and applied a trilingual mixed strategy.

GHL experts' and GHL non-experts' requests for children to respond in the GHL may indicate parents' choice of discourse strategy in parent-child interactions. Interestingly, as shown in Figure 7, GHL experts were more likely to choose a monolingual GHL discourse strategy by always requesting children to respond in the GHL, if GHL experts used the GHL exclusively themselves. In contrast, GHL experts and GHL non-experts who spoke the GHL less frequently to their children rarely requested that their children respond in the GHL, indicating a bilingual discourse strategy or EML monolingual discourse strategy.

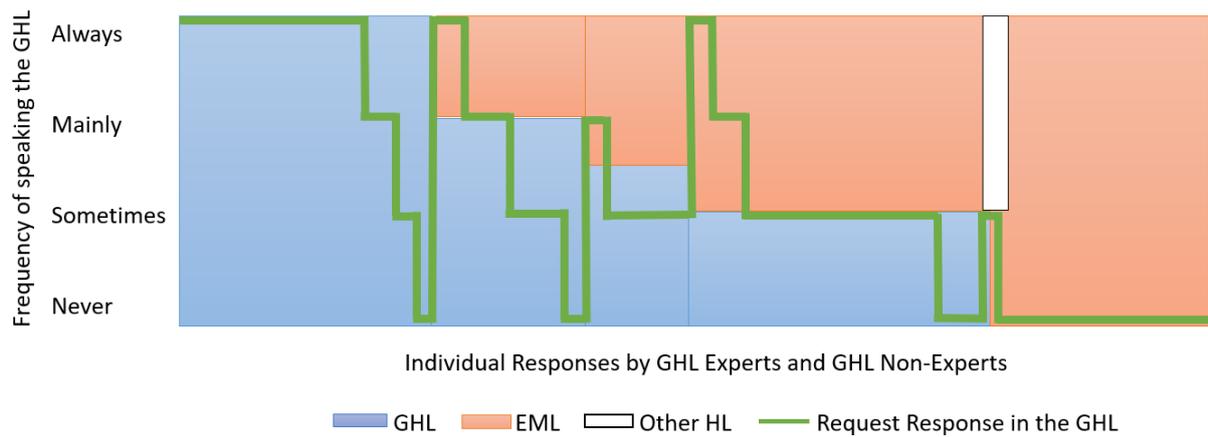


Figure 7 The continuum of GHL experts' and GHL non-experts' home involvement through speaking the GHL.

5.6 Predictors of GHL Experts' and GHL Non-Experts' Home Involvement

Section 5.5 discusses differences between GHL experts' and GHL non-experts' home involvement through speaking the GHL. To investigate influences on GHL experts' and GHL non-experts' home involvement through speaking the GHL, this section presents results of testing the model of predictors of parental home involvement in children's GHL learning using SEM. This was crucial for answering Research Question 3:

In GHL Schools, what factors within parents' personal context, personal beliefs and social environment influence parental home involvement through speaking the GHL in children's GHL learning for GHL experts and GHL non-experts?

In this section, the proposed model of predictors of parental home involvement (PHI) in children's GHL learning for GHL experts and GHL non-experts (PHI multigroup model) and the research hypotheses are introduced. Then, statistical tests of the PHI multigroup model are presented, leading to the analysis of the structural models for speaking the GHL for GHL experts and GHL non-experts. Assessments of the structural models for the other forms of

parental involvement—teaching the GHL, assisting with GHL studies and motivating GHL learning—can be found in Appendix L: SEM models. The models were assessed based on a range of recommended fit indices (see Section 3.6.4) (e.g., chi-square/degrees of freedom ratio, chi-square distribution, TLI, CFI, RMSEA). The GFI, AGFI and NFI are reported, but because of their sensitivity to small sample sizes (Bentler, 1990; Byrne, 2010; Hooper, Coughlan, & Mullen, 2008), these fit indices were not included in assessing the fit of models. In the final part of this section, findings related to hypothesis testing are discussed and Research Question 3 is answered.

5.6.1 Parental Home Involvement multigroup model and research hypotheses

Based on the theoretical framework (see Section 2.4.1), the proposed model of predictors of parental home involvement was developed. The graphic representation in Figure 8 presents the proposed model of predictors of parental home involvement in children’s GHL learning for GHL experts and GHL non-experts (PHI multigroup model). From the EFA, five latent predictor variables and four outcome variables were included (see Section 5.2.2). Based on the literature review (see Section 2.4.2 and 2.4.3), a research hypothesis for each linkage in the model was proposed (see below). It was anticipated that role belief (RB), self-efficacy (SE), skills and knowledge (SK) and perceived child invitations (CI) would have a significant direct effect on parental home involvement (PHI). Parental home involvement was predicated as a composite variable of speaking the GHL (Speak), teaching the GHL (Teach), assisting with GHL studies (Assist) and motivating GHL learning (Mot). Role belief and self-efficacy were proposed mediators for perceived teacher invitations (TI), perceived child invitations, available time (Tim), skills and knowledge and integrative goal orientation II (IGO).

H1: There is a direct positive relationship between parents’ skills and knowledge and parental home involvement.

H2: There is a direct positive relationship between perceived child invitations and parental home involvement.

H3: There is a direct positive relationship between parents' self-efficacy to help children learn the GHL and speaking the GHL with the child.

H4: There is a direct positive relationship between parents' role belief to help children learn the GHL and parental home involvement.

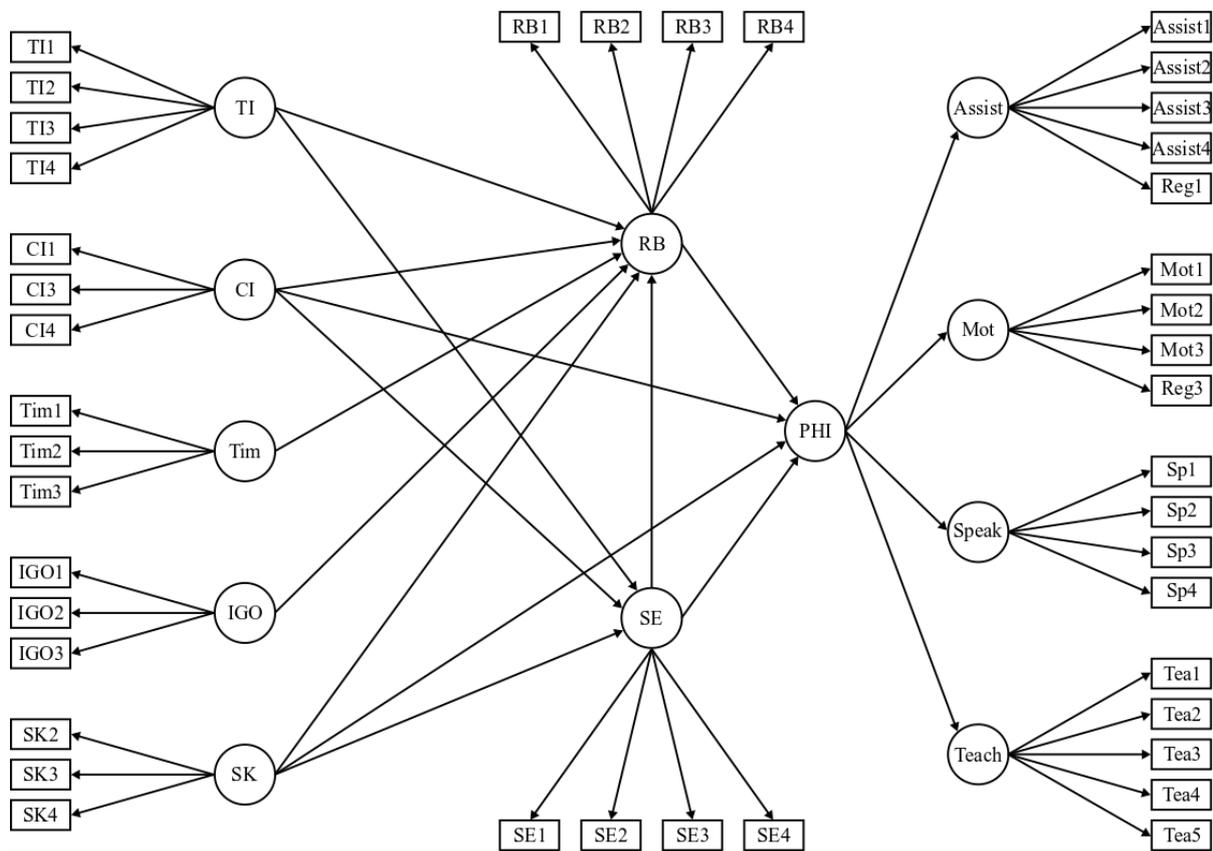


Figure 8. PHI multigroup model for GHL experts and GHL non-experts.

Note: TI (perceived Teacher Invitations), CI (perceived Child Invitations), Tim (available Time), IGO (Integrative Goal Orientation, group belongingness), SK (Skills and Knowledge), RB (Role Belief), SE (Self-Efficacy), PHI (Parental Home Involvement), Assist (Assisting with GHL studies), Mot (Motivating GHL learning), Speak (Speaking the GHL), Teach (Teaching the GHL)

5.6.2 Parental Home Involvement multigroup model: testing for measurement equivalence across GHLE experts and GHLE non-experts

The hypothesised measurement model was tested for factorial equivalence of scores between groups (GHLE experts and GHLE non-experts) using the multiple-group automated procedure in the AMOS program. This was done to assess whether relationships between theoretical constructs in the model could be interpreted similarly across groups. Further, the hypothesised measurement model was assessed to test whether subdimensions of parental home involvement constituted a second-order latent factor of parental home involvement. Figure 9 shows the unconstrained standardised parameter estimates for GHLE experts (red parameters) and GHLE non-experts (blue parameters) for the hypothesised model (for clarity, error terms are not shown in the model). Results revealed evidence of non-invariance related to item 2 (SE2) in the self-efficacy scale (red path coefficient from SE to SE2) and item 2 (Sp2) in the speaking the GHLE scale (red path coefficient from Speak to Sp2), suggesting that items designed to measure these two variables were not operating equally across the two groups. Differences in second-order factor loadings of motivating GHLE learning (GHLE experts 0.96; GHLE non-experts 0.58) and speaking the GHLE (GHLE experts 0.44; GHLE non-experts 0.77) (red path coefficient from PHI on Mot and Speak) indicated non-invariance of the second-order factorial structure of parental home involvement. The test of the constrained measurement model yielded a χ^2 value of 88.161(df = 31), $p < 0.001$, indicating non-invariance of the measurement model.

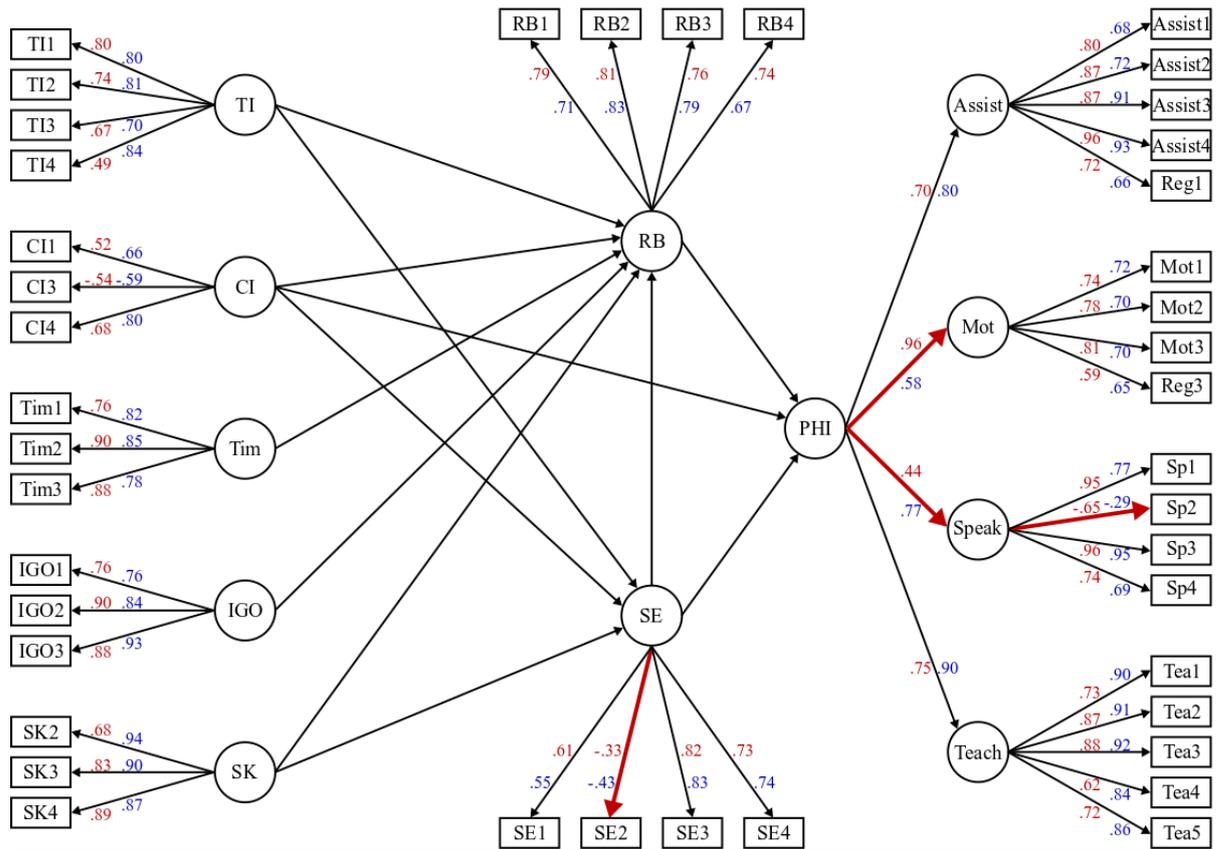


Figure 9. Invariance testing of the PHI multigroup model for GHF experts and GHF non-experts.

Goodness-of-fit statistics for the unconstrained measurement model are presented in Table 47. Goodness-of-fit statistics indicated that the hypothesised multigroup model did not provide a good fit to the data. The normed chi-square had an acceptable fit for the hypothesised measurement model of 1.689 (< 3) and the RMSEA had an acceptable value, but the CFI did not show acceptable fit (see Section 3.6.4).

Table 47

Fit Indices for the Unconstrained PHI Multigroup Model for GHL Experts and GHL Non-Experts

Fit indices	Recommended values	Hypothesised multigroup model df = 1592
Chi-square χ^2	χ^2 close to df (1592)	2688.598
P-value of the chi-square statistic	≥ 0.05	0.00
CMIN/DF	≤ 2 or 3	1.689
GFI	≥ 0.95	0.725
AGFI	≥ 0.90	0.688
RMR	≤ 0.05	0.073
RMSEA	< 0.05 close fit 0.06 good fit	0.046
90 C.I.	$\leq 0.05 - < 0.08$	0.043-0.049
PCLOSE	> 0.5	0.984
NFI	close to 0.95 commonly accepted	0.731
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.871
TLI	close to 0.95 commonly accepted	0.860
PNFI	0.5 to 0.9	0.675
PGFI	0.5 to 0.9	0.639

Based on the inadequate fit of a single model accommodating both GHL experts and GHL non-experts, modification indices (MI) for GHL experts and GHL non-experts were examined. For both groups, MI values > 10 were observed with expected parameter change (EPC) values of 0.380 to 0.575 for regression weights of predictor variables loadings on the outcome variables ‘speaking the GHL’, ‘teaching the GHL’, ‘assisting with GHL studies’ and ‘motivating GHL learning’. This indicated that the PHI multigroup model for GHL experts and GHL non-experts needed to be assessed individually for each group. Subdimensions of parental

home involvement were assessed individually for GHL experts and GHL non-experts, showing they did not constitute a secondary latent factor of parental home involvement.

Before testing the proposed structural models in a single-group analysis, a CFA was used to test the structural validity of one-factor generic models of the final dependent and independent factors with four or more indicators for GHL experts and GHL non-experts. Table 109 and Table 110 in Appendix I: Assessment of scale validity, present the results demonstrating that the chi-square/degrees of freedom ratio (CMIN/DF) test was acceptable for most constructs and indicated a good fit between the hypothesised and observed model. Reduced model fit was indicated for ‘speaking the GHL’ for GHL experts. A misfit was shown for ‘assisting with GHL studies’ for both groups, and ‘perceived teacher invitations’ for GHL experts. For GHL experts, one item (TI4: ‘My child’s German teacher forwards schoolwork if my child cannot attend on any one day’) of perceived teacher invitations was dropped due to a low factor loading compared to the other loadings, reducing the construct to three items. ‘Motivating GHL learning’ passed the chi-square test after adding an error covariance between item 2 (Mot2: ‘Ask my child to engage in activities in German’) and item 4 (Reg3: ‘Put on German media for my child’; see Figure 20, Appendix L: SEM models), indicating that these items represented the same component for GHL non-experts (e.g., intrinsically motivating children’s GHL learning through engaging in activities of interest). Final factor loadings for variables with fewer than four items were assessed through EFA and ranged from 0.58 to 0.99 (see Table 111–Table 115, Appendix I: Assessment of scale validity).

Nevertheless, as the second-order model of parental home involvement was not an optimal representation of forms of parental home involvement in children’s GHL learning for GHL experts and GHL non-experts, the most salient outcome variable—‘speaking the GHL’ (see Section 2.2.3)—became the focus of the SEM analysis and is discussed below for GHL experts and GHL non-experts. Appendix L: SEM models, provides the final structural models

for the remaining forms of parental involvement: ‘teaching the GHL’, ‘assisting with GHL studies’ and ‘motivating GHL learning’ for GHL experts and GHL non-experts. The proposed models (GHL experts Figure 10; GHL non-experts Figure 11) were used to test the relative importance of predictors individually for each model. Results indicated some variability concerning direct effects on the outcome variable for each PHI model. However, indirect effects of predictor variables on the outcome variable were the same for all forms of parental home involvement, though they differed between GHL experts and GHL non-experts.

5.6.3 The proposed structural model for speaking the GHL for GHL experts and GHL non-experts

This section introduces the proposed structural model for ‘speaking the GHL’ for GHL experts and GHL non-experts. Identical to the proposed multigroup model (see Figure 9), the proposed structural model for GHL experts (see Figure 10) and GHL non-experts (see Figure 11) included five latent predictor variables, integrative goal orientation II (IGO), perceived teacher invitations (TI), perceived child invitations (CI), available time (Tim), and skills and knowledge (SK), and two mediating variables, self-efficacy (SE) and role belief (RB). In contrast to the proposed multigroup model, for GHL experts, the constructs ‘self-efficacy’ and ‘available teacher invitations’ consisted of three items each. Self-efficacy consisted of ‘I make a significant difference in my child’s GHL language learning’, ‘I can influence my child’s GHL language learning’ and ‘My use of GHL has a direct influence on what my child will learn to say in GHL’. Perceived teacher invitations consisted of ‘Keeps me informed about my child’s progress’, ‘Gives advice about how to assist my child with GHL at home’ and ‘Asks me to help my child with GHL at home’. For GHL non-experts, the outcome variable speaking the GHL (Speak) consisted of three items (e.g., ‘I make a significant difference in my child’s GHL language learning’, ‘I can influence my child’s GHL language learning’ and ‘My use of GHL has a direct influence on what my child will learn to say in GHL’; see Table 115, Appendix I:

Assessment of scale validity). Based on results for tests of the proposed multigroup model (see Section 5.6.2), the research hypotheses were adjusted and are presented in Sections 5.6.6–5.6.9.

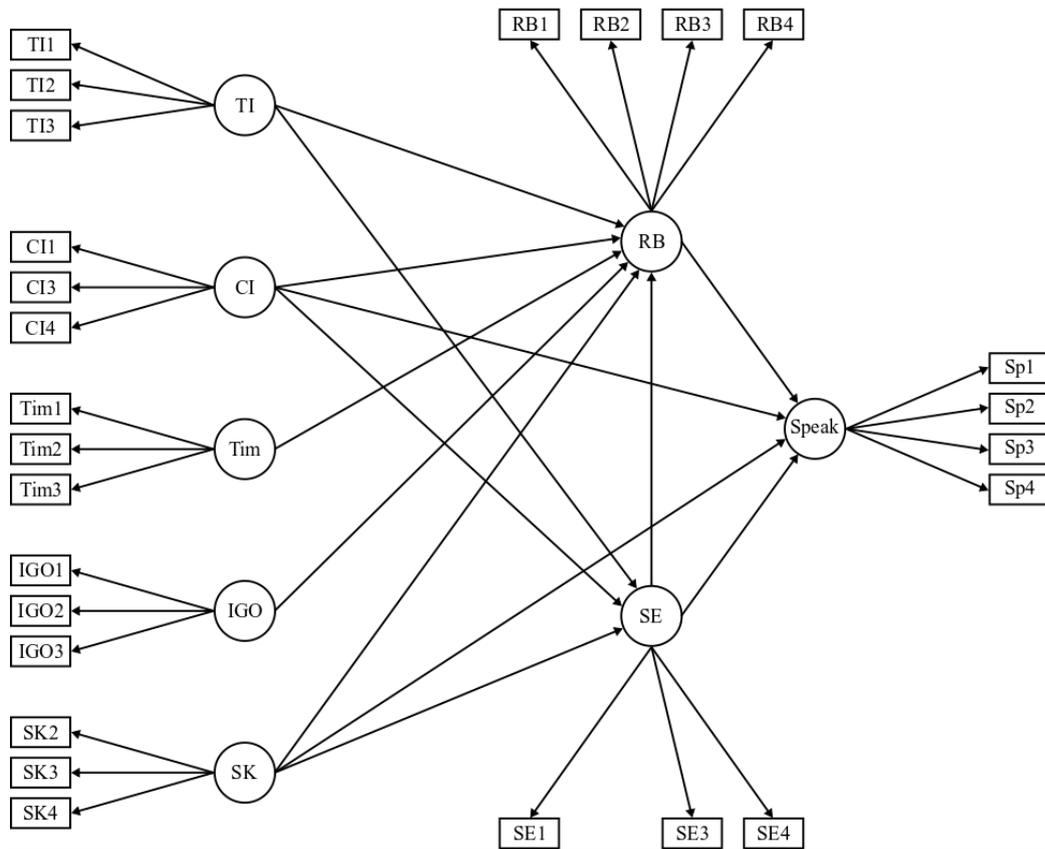


Figure 10. Proposed PHI speaking model for GHL experts.

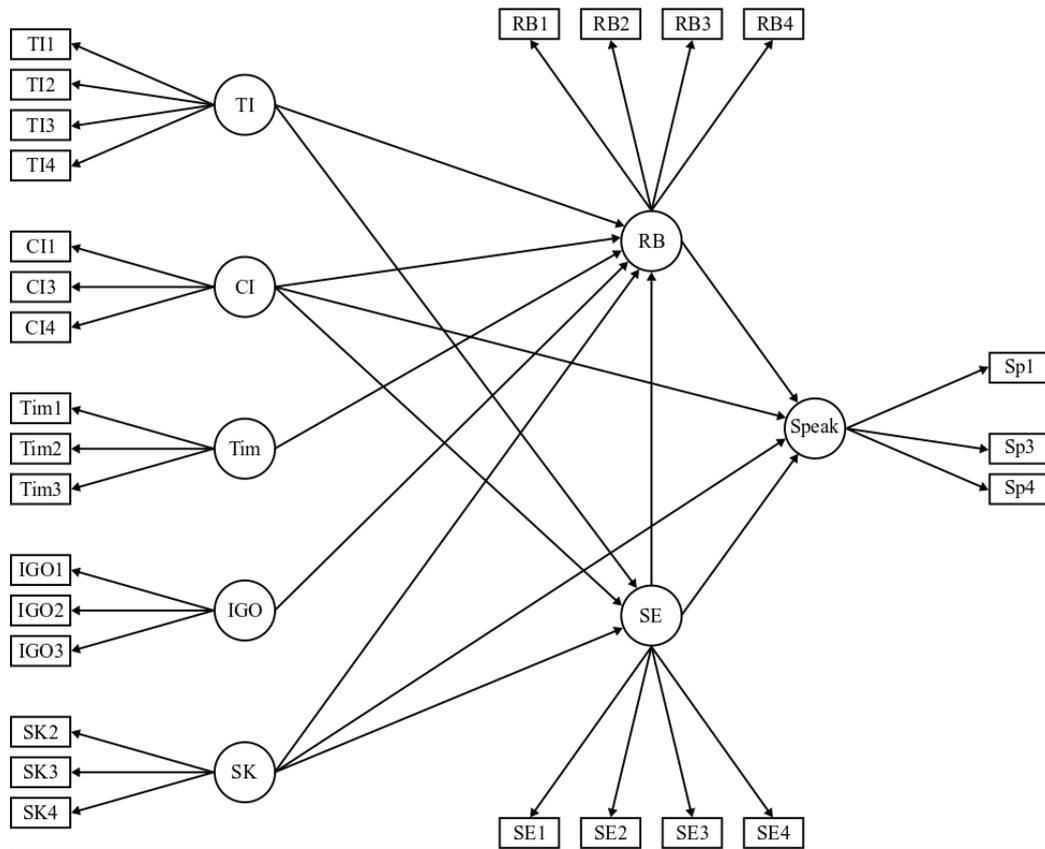


Figure 11. Proposed PHI speaking model for GHL non-experts.

5.6.4 Structural model analysis of the PHI speaking model for GHL experts

This section discusses results of the analysis of the PHI speaking model for GHL experts. Figure 12 presents results of the analysis of the PHI speaking model for GHL experts. Results showed that parents' perceived child invitations and self-efficacy had significant direct effects on the outcome variable speaking the GHL.

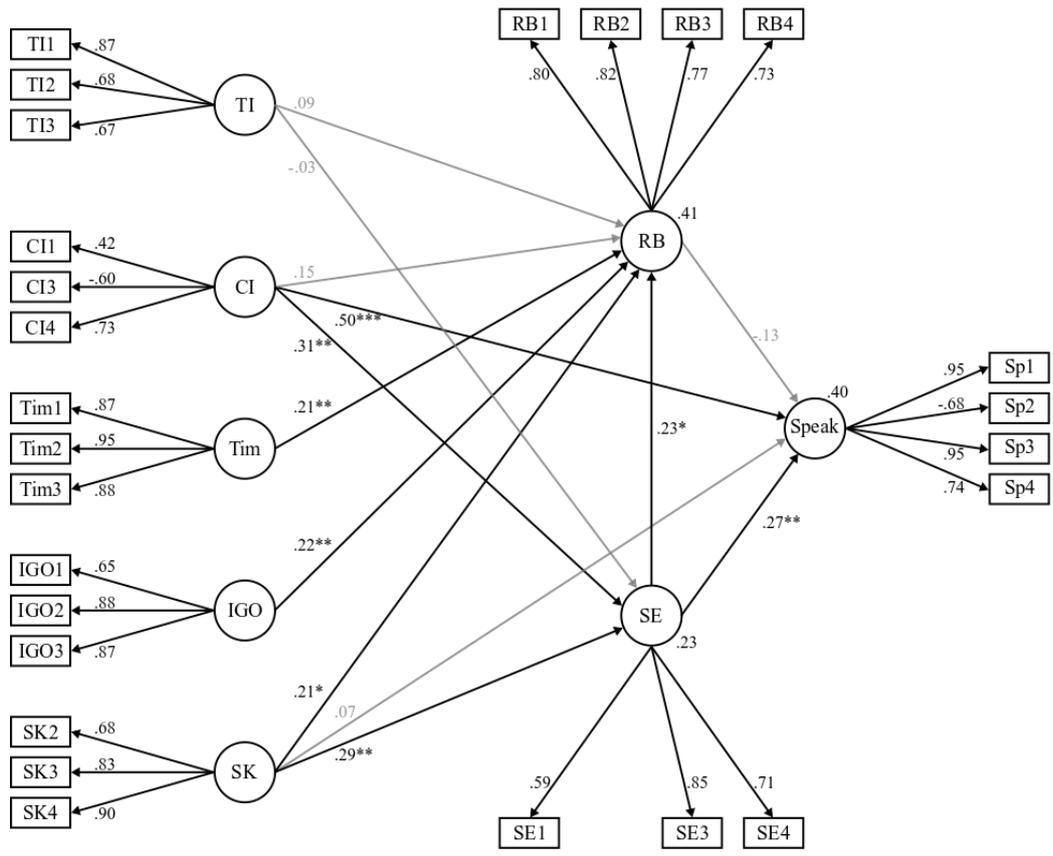


Figure 12. Final PHI speaking model for GHL experts.

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Parents' perceived child invitations had a greater effect on the outcome variable than self-efficacy, indicating the importance of perceived child invitations for GHL experts' use of the GHL. This suggests that perceived child invitations was crucial for GHL experts' choice of language in the home. Thus, 'strong perceived child invitations' led to GHL experts' frequent use of the GHL, whereas 'weak perceived child invitations' was more likely to lead to GHL experts' use of the EML.

Further, results showed that parents' role belief and skills and knowledge did not have a significant effect on GHL experts' decision to speak the GHL with their children. The latter finding was not surprising, as all GHL experts had high levels of expertise in the GHL. It appears that this was attributable to the limited variation in SK within this group. However,

model assessments of the structural models for ‘teaching the GHL’, ‘assisting with GHL studies’ and ‘motivating GHL learning’ showed that parents’ role belief had a significant direct effect on assisting with GHL studies and motivating GHL learning (see Appendix L: SEM models).

Further, parents’ perceived invitations from the teacher did not show significant associations with the mediating variables (i.e., role belief and self-efficacy) and outcome variable for GHL experts. This suggests that teachers’ school–home partnership practices did not affect parental home involvement in the GHL expert group. Alternatively, it may indicate a lack of school–home partnership practices by teachers at GHL schools.

The assessment of the model fit for the PHI speaking model for GHL experts is presented in Table 48. Fit indices show that the model in Figure 12 fitted well, with most fit indices showing good fit with the exception of GFI, AGFI and NFI. However, as noted previously, the GFI, AGFI and NFI were not included in assessing the fit of models (see Section 5.6.1). The model explained 40 per cent of the variance for GHL experts speaking the GHL with their children.

Table 48

Fit Indices for PHI Speaking Model for GHL Experts, N = 185

Fit indices	Recommended values	Hypothesised model df = 276
Chi-square χ^2	χ^2 close to df (276)	388.912
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.409
GFI	≥ 0.95	0.865
AGFI	≥ 0.90	0.828
RMR	≤ 0.05	0.034
RMSEA	< 0.05 close fit 0.06 good fit	0.047
90 C.I.	$\leq 0.05 - < 0.08$	0.036-0.058
PCLOSE	> 0.5	0.659
NFI	close to 0.95 commonly accepted	0.859
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.954
TLI	close to 0.95 commonly accepted	0.946
PNFI	0.5 to 0.9	0.730
PGFI	0.5 to 0.9	0.680

5.6.5 Structural model analysis for the PHI speaking model for GHL non-experts

This section discusses results of the analysis of the PHI speaking model for GHL non-experts. Figure 13 presents the final PHI speaking model for GHL non-experts. For GHL non-experts, skills and knowledge, self-efficacy and perceived child invitations had significant direct effects on the outcome variable speaking the GHL.

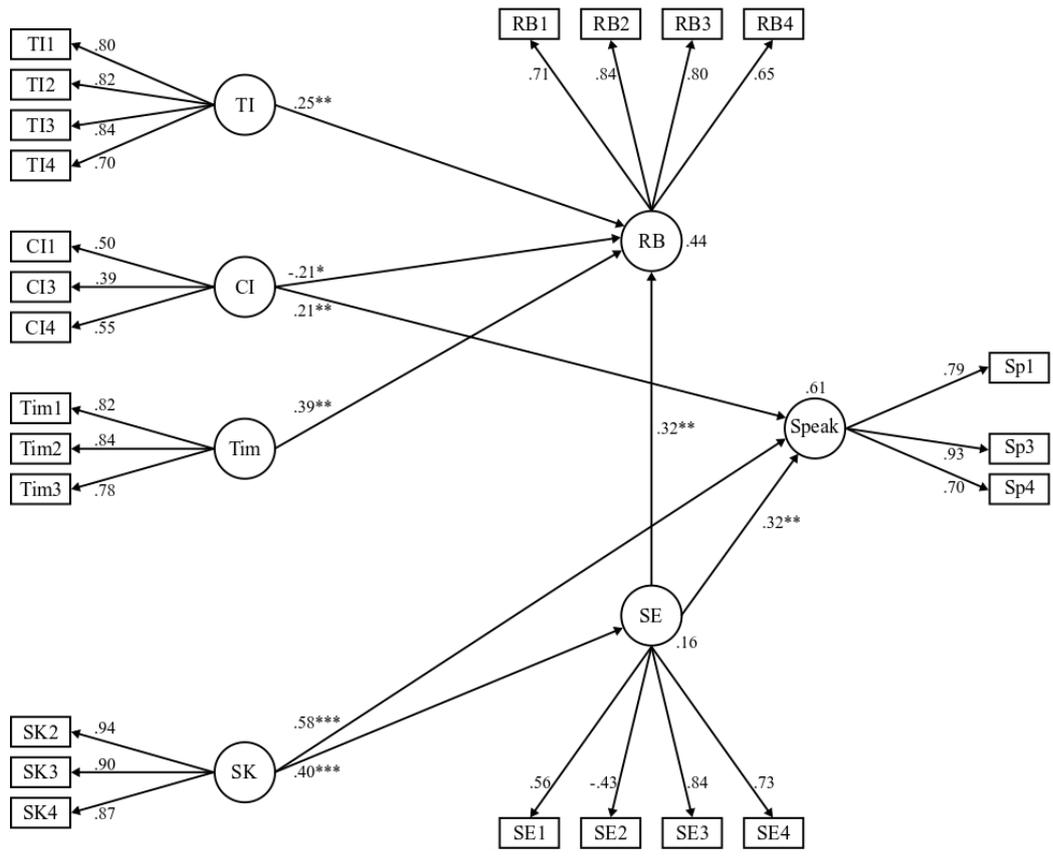


Figure 13. Final PHI speaking model for GHL non-experts.

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

GHL non-experts' skills and knowledge had the greatest direct and indirect effect on the outcome variable. Thus, GHL non-experts were more likely to speak the GHL with their children if they had the necessary skills and knowledge, the sense of efficacy to help their children learn the GHL and, to a lesser extent, if GHL non-experts perceived children's characteristics and behaviour as inviting (i.e., perceived child invitations).

As for GHL experts, parents' role belief had no significant effect on GHL non-experts' speaking the GHL. However, model assessments of the structural models for 'teaching the GHL', 'assisting with GHL studies' and 'motivating GHL learning' showed that for all models, parents' role belief had a significant direct effect on the outcome variable (see Appendix L: SEM models). Further, integrative goal orientation II (group belongingness) did not show

significant associations to mediating variables or the outcome variable in all structural models and subsequently was removed.

An examination of the regression weights revealed that estimates of the independent variable 'perceived child invitations' (CI) were rather low given their values were below 0.6 and 0.5 respectively (CI1, CI3, CI4). Similarly, two regression weights of the independent factor 'self-efficacy' (SE) were low (SE1, SE2), while the remaining two estimates were sound. Thus, for GHL non-experts, the assessment of 'perceived child invitations' (CI) and 'self-efficacy' (SE) within the PHI speaking model signalled the need for further investigation to improve the model structure.

The assessment of the model fit for the PHI speaking model for GHL non-experts is presented in Table 49. Fit indices for the final PHI speaking model for GHL non-experts showed that most fit indices had acceptable fit. Results for the proposed PHI speaking model for GHL non-experts can be viewed in Table 126 in Appendix L: SEM models. They show that a good fit to the data was not provided. CMIN/DF, RMR, CFI, PNFI and RMSEA showed an acceptable fit to the data; however, the confidence interval of the RMSEA values and the TLI were below the recommended values. This indicates that modifications to the model were necessary to fit the data better. The final PHI speaking model for GHL non-experts in Figure 13 shows that in modifying the model, the construct integrative goal orientation II (IGO) and other insignificant paths were removed to increase the parsimony of the model (Byrne, 2010). Overall, five paths were deleted from the model: 'perceived teacher invitations' (TI) to 'self-efficacy' (SE), 'perceived child invitations' (CI) to 'self-efficacy', 'integrative goal orientation II' (IGO) to 'role belief' (RB), 'skills and knowledge' (SK) to 'role belief' and 'role belief' to 'speaking the GHL' (Speak). The final PHI speaking model for GHL non-experts explained 61 per cent of the variance for GHL non-experts speaking the GHL with their children.

Table 49

Fit Indices for the Final PHI Speaking Model for GHL Non-Experts, N = 128

Fit indices	Recommended values	Hypothesised model df = 238
Chi-square χ^2	χ^2 close to df (238)	314.210
P-value of the Chi-square statistic	≥ 0.05	0.001
CMIN/DF	≤ 2 or 3	1.320
GFI	≥ 0.95	0.835
AGFI	≥ 0.90	0.793
RMR	≤ 0.05	0.040
RMSEA	< 0.05 close fit 0.06 good fit	0.050
90 C.I.	≤ 0.05 –< 0.08	0.034–0.065
PCLOSE	> 0.5	0.479
NFI	close to 0.95 commonly accepted	0.828
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.951
TLI	close to 0.95 commonly accepted	0.943
PNFI	0.5 to 0.9	0.714
PGFI	0.5 to 0.9	0.663

5.6.6 Hypothesis testing: the influence of parents' skills and knowledge on speaking the GHL

H1: There is a direct positive relationship between parents' skills and knowledge and speaking the GHL with the child.

The construct of parents' skills and knowledge for helping their children learn the GHL was defined as the degree to which parents believed themselves to have the skills and knowledge essential for helping their children learn the GHL. Results of the statistical analysis showed that parents' skills and knowledge had the strongest effect on parental home

involvement through speaking the GHL for GHL non-experts, but not for GHL experts. However, one reason that skills and knowledge had no significant effect on GHL experts' home involvement through speaking the GHL could have been its low variance within the group of GHL experts (see Table 117, Appendix I: Assessment of scale validity). In contrast, GHL non-experts varied considerably in their skills and knowledge for helping their children learn the GHL, indicating that GHL non-experts with high levels of skills and knowledge were more likely to believe that they could help their children learn the GHL. This corresponds with Piller's (2001) finding that limited HL skills can be an obstacle to communicating with children in the HL.

Nevertheless, research results partially supported hypothesis H1, which assumes that parents' perceived skills and knowledge positively predicts parental home involvement. This result is consistent with the finding of Walker et al. (2005), who identified a specific relationship between low scores for life context variables such as skills and knowledge and parental home involvement. However, this finding was not consistent with findings of Chrispeels and Gonzales (2007) and Lareau (2000) and the model proposed by Hoover-Dempsey and Sandler (1995) and Hoover-Dempsey et al. (2005), who suggested that generally, high levels of skill and knowledge have a positive effect on parental home involvement. Yet, the low variability within the group of GHL experts indicated the need for further investigation into the effect of skills and knowledge on GHL experts' home involvement through speaking the GHL.

5.6.7 Hypothesis testing: the influence of perceived child invitations on speaking the GHL

H2: There is a direct positive relationship between perceived child invitations and parental home involvement through speaking the GHL.

The construct of parents' perceived invitations from the child is defined as the degree to which parents perceive the child's characteristics and behaviour as an invitation to help them learn the GHL. Findings supported hypothesis H2, which assumes that parents' perceived invitations from the child positively predict parental home involvement through speaking the GHL. It is important to note that perceived child invitations had only acceptable alpha reliability (see Section 5.2.2); the assessment of the model structure of perceived child invitations (see Sections 5.6.4 and 5.6.5) indicated that this scale had potential for improvement, particularly for GHL non-experts. Nevertheless, research results corresponded with findings that children determine the language of communication with their parents (Clyne, 1991; Piller, 2001; Schüpbach, 2006; Schwartz, 2008). For example, Cunningham and King (2018) reported that in bilingual settings in the Netherlands, children's unwillingness to speak the HL led to parents' abandoning the HL (Cunningham & King, 2018). Further, research results for GHL experts corresponded with studies in which child invitations were the strongest predictor of parental home involvement in children's regular schooling (Reininger & Santana López, 2017; Walker et al., 2005). Thus, perceived child invitations to help was a powerful predictor of parental home involvement through speaking the GHL, particularly for GHL experts.

5.6.8 Hypothesis testing: the influence of parents' self-efficacy on speaking the GHL

H3: There is a direct positive relationship between parents' self-efficacy to help children learn the GHL and speaking the GHL.

The construct of parents' self-efficacy was defined as the degree to which parents believed they were capable of influencing their children's GHL learning. Study results showed

that parents' self-efficacy had a significant positive effect on parental home involvement through speaking the GHL for GHL experts and GHL non-experts.

Thus, research results from the present study support hypothesis H3, which proposes that parents' self-efficacy to influence their children's GHL learning positively predicts parental home involvement through speaking the GHL. This finding corresponds with De Houwer's (1999) suggestion that parents who have a greater level of parental impact belief will sense that they have an important task to fulfil. Thus, they will use the HL more than parents with a weak impact belief. Similarly, Glinzner (2010) identified a distinct difference between GHL native speaking parents' self-efficacy and non-GHL native speakers' self-efficacy. GHL native speakers had higher levels of self-efficacy in helping their children learn the GHL than did non-GHL native speakers, and were more involved than parents with low levels of self-efficacy (Glinzner, 2010). The result from the present study also corresponds with findings from the literature on parental home involvement in children's regular schooling, in which a strong sense of efficacy explained a small but significant portion of the variance of home-based involvement (Anderson & Minke, 2007; Deslandes & Bertrand, 2005; Green et al., 2007; Grolnick et al., 1997; Ice & Hoover-Dempsey, 2011; Reininger & Santana López, 2017).

Based on the theoretical framework, the construct of self-efficacy was developed to measure the effect of parents' sense of efficacy to influence their children's GHL learning on parental home involvement in children's GHL learning. Self-efficacy was not specifically developed to measure parents' capability to speak the GHL to the children. However, according to Bandura (2006b), self-efficacy scales need to be adopted for specific tasks. Thus, a self-efficacy scale measuring parents' sense of capability to speak the GHL to their children may result in a stronger impact of self-efficacy on the outcome variable.

5.6.9 Hypothesis testing: the influence of parents' role belief on parents' speaking the GHL

H4: There is a direct positive relationship between parents' role belief to help children learn the GHL and speaking the GHL.

The construct of parents' role belief for helping their children learn the GHL was defined as the degree to which parents believed they should be involved in their children's GHL learning. Research results from the statistical analysis did not support hypothesis H4, which proposes that parents' role belief positively predicts parental home involvement through speaking the GHL. Results of the present study are not consistent with earlier studies that reported parents' role belief as a significant predictor of parental home involvement (Green & Hoover-Dempsey, 2007; Grolnick et al., 1997; Walker et al., 2011). However, findings in this study are consistent with Reininger and Santana Lopez's (2017) research, in which parents' role belief was not deemed a significant predictor of parental home involvement in children's regular schooling. The authors suggested that the reason for the non-significant result was that the construct of parents' role belief did not include educational activities in the home. Similarly, one reason for the non-significant result in the present study may be that the final construct for parents' role belief did not include an item representing speaking the GHL (see Table 11, Section 3.4.2.3). It may also be attributed to other factors in the model overshadowing any relationship between role belief and speaking the GHL.

However, the statistical analysis of the structural models 'teaching the GHL', 'assisting with GHL studies' and 'motivating GHL learning' showed that parents' role belief to help children learn the GHL positively predicted parental home involvement (see Appendix L: SEM models). In the literature on parental home involvement in children's regular schooling, forms of parental home involvement are portrayed as traditional learning mechanisms such as

instruction, modelling, reinforcement and encouragement (Walker et al., 2010). ‘Teaching the GHL’, ‘assisting with GHL studies’ and ‘motivating GHL learning’ resemble traditional learning mechanisms in parental home involvement in children’s regular schooling (see Section 2.2.2). Thus, research results for the structural models ‘teaching the GHL’, ‘assisting with GHL studies’ and ‘motivating GHL learning’ are consistent with previous studies that found that parents’ role belief was a significant predictor of parental home involvement (Green & Hoover-Dempsey, 2007; Grolnick et al., 1997; Walker et al., 2011).

5.6.10 Answer to Research Question 3

In GHL Schools, what factors within parents’ personal context, personal beliefs and social environment influence parental home involvement through speaking the GHL in children’s GHL learning for GHL experts and GHL non-experts?

The analysis with SEM was used to investigate predictors of parental home involvement through speaking the GHL pertaining to parents’ personal context (i.e., skills and knowledge, and available time), personal beliefs (i.e., self-efficacy beliefs, role belief and integrative goal orientation II) and parents’ social environment (i.e., perceived child invitations and perceived teacher invitations). Results showed that for GHL experts, the social environment through perceived child invitations, followed by GHL experts’ personal beliefs through self-efficacy, had significant direct effects on GHL experts’ speaking the GHL. In contrast, for GHL non-experts, the personal context through skills and knowledge, followed by personal beliefs through self-efficacy and the social environment through perceived child invitations, had significant direct effects on GHL non-experts’ home involvement through speaking the GHL.

This study was framed by Bandura’s (1986) social cognitive theory and human behaviour and was viewed from an agentic perspective (Bandura, Caprara, Barbaranelli, Regalia, & Scabini, 2011). For GHL non-experts, the strongest predictor for speaking the GHL

to children was skills and knowledge. From an agentic perspective (Bandura et al., 2011), the predictive power of any influencing factors on parental home involvement in children's GHL learning caused parents to believe that their behaviour could produce effects. This suggested that high levels of skills and knowledge influence GHL non-experts to believe that speaking the GHL to their children has a positive effect on their children's GHL learning. Not surprisingly, skills and knowledge were not predictors for GHL experts' speaking the GHL, as all had a high level of expertise in the GHL.

With respect to the strongest predictor of GHL experts' speaking the GHL to children, from an agentic perspective, strong perceived invitations from the child influenced GHL experts to believe that speaking the GHL to their children positively influenced their children's GHL learning. In contrast, weak perceived invitations from the child (e.g., children's unwillingness to use the GHL and requests for parents to speak the EML) caused GHL experts to believe that speaking the GHL to children had no or little effect on their children's GHL learning.

The foundation of human agency originates in people's personal beliefs, the belief in their capability to perform a task and that the task performance can produce effects (Bandura et al., 2011). The dimension of parents' personal beliefs describes parents' interpretation of the external environment and their own behaviour, as revealed in their beliefs about self and others. Results showed that parents' self-efficacy belief was the second-strongest predictor of GHL experts' and GHL non-experts' home involvement through speaking the GHL. This indicated that GHL experts and GHL non-experts spoke the GHL to their children if they felt capable of helping their children learn the GHL, and if GHL experts and GHL non-experts believed that helping their child learn the GHL affected their child's GHL skills positively. Parents' sense of efficacy was influenced by skills and knowledge (personal context) for GHL non-experts and perceived child invitations (social environment) for GHL experts. Thus, GHL experts'

interpretation of their social environment (specifically, perceived invitations from the child) indirectly influenced GHL experts' home involvement behaviour through speaking the GHL. The indirect influence of perceived child invitations on GHL experts' speaking the GHL indicated that strong perceived invitations from the child caused GHL experts to believe that they were able to help their children learn the GHL. Further, it created a belief that helping their children learn the GHL had a positive effect on their children's GHL development. In contrast, GHL non-experts' interpretation of their personal context (specifically, their skills and knowledge) indirectly influenced GHL non-experts' home involvement behaviour: high levels of skills and knowledge caused GHL non-experts to believe that they were able to help their children learn the GHL and that doing so positively influenced their children's GHL learning.

Lastly, parents' role belief had no direct effect on GHL experts' and GHL non-experts' home involvement through speaking the GHL. This indicated that GHL experts' and GHL non-experts' home involvement through speaking the GHL was unrelated to what they believed they should do to help their children learn the GHL.

5.7 Qualitative analysis and results

The sections above discussed findings from quantitative data analyses. This section presents results of the qualitative data analysis. Overall, more than one-third of parents in the sample (37.7%) responded to the open-ended items in the questionnaire, including one-third of GHL experts (31.9%) and almost half of all GHL non-experts (46.1%). The methods used to collect and analyse the data can be found in Section 3.6.5. Responses were coded in reference to the research questions. The analysis of qualitative data comprised:

- GHL experts' and GHL non-experts' and their children's demographic information (see Section 5.7.1),

- influences on GHL experts' and GHL non-experts' home involvement through speaking the GHL (see Section 5.7.2).
- and GHL experts' and GHL non-experts' home involvement through speaking the GHL (see Section 5.7.3).

The purpose of this section is to present findings of the qualitative analysis. Qualitative data were collected through open-ended questions in the main study. The validity of responses was assessed through comparison with findings for the quantitative analysis. Most comments clarified responses to survey questions. By doing so, parents provided additional information about their family context, their home involvement through speaking the GHL, and influences on their use of the GHL.

5.7.1 Responses related to parents' family context

This section presents results of the qualitative analysis related to GHL experts' and GHL non-experts' family contexts. These included GHL experts' and GHL non-experts' and their spouses' ancestry (see Table 50) and GHL non-experts' connection to the GHL (see Table 51).

Notably, comments from GHL experts in Group A (parent) indicated that they were new German-speaking migrants; thus, they were first-generation GHL speakers in the U.S., while their spouses had English-speaking ancestry or other HL ancestry. For example, one mother explained: 'My husband is Bulgarian and I'm German' (PID289, GHL expert; Group A, parent). This corresponded with GHL experts in Group A (parent)—the only person speaking the GHL to children (see Table 39). Further, some comments from GHL experts in Group B (parent and spouse) indicated that the responding parent and their spouse were GHL native speakers. This showed that in the group of GHL experts, some parent-couples were first-generation GHL-speaking immigrants. Similarly, Muenstermann (2001) noted that in a GHL

school in Australia, most parents were German native speakers in mixed marriages and a small group of parent-couples were first-generation GHL speakers.

In contrast, some GHL non-experts indicated that their parents were German-speaking migrants; thus, some GHL non-experts were second-generation GHL speakers. Similarly, Ludanyi (2010) stated that GHL schools in the U.S. were often attended by children of second- or later-generation GHL-speaking immigrants. In addition, some GHL non-experts said whether they spoke the GHL at home when growing up:

Even though both my parents were native German speakers, they did not raise me (and my sister) speaking German. They were ashamed of their German heritage because of WWII and wanted to blend in. My father completely lost his German accent when speaking English. I learned German later in university. I was inspired to learn German after visiting my relatives in Germany at age 15 for the first time. I could not communicate with my grandmother, aunts and uncles and several of my cousins (PID164, GHL non-expert; Group A, parent).

The latter comment shows that the father did not learn the GHL in the home. The less-than native-level GHL skills of GHL non-experts with GHL-speaking ancestry corresponded with Fishman's (2010) suggestion that HL skills decline with every generation of HL speakers.

Table 50

Summary of Responses of GHL Experts' and GHL Non-Experts' Related to Their Ancestry

Ancestry		GHL expert	GHL non-expert
First-generation German-speaking ancestry		Responding parent (Group A, parent) Responding parent and spouse (Group B, parent and spouse)	Spouse (Group B, parent and spouse)
Second-generation German-speaking ancestry	Maternal and paternal side	Responding parent (Group A, parent; D, no-one)	N/A
	Maternal or paternal side	N/A	Responding parent (Group A parent; E, no-one) Spouse (Group A, parent; C, spouse)
German-speaking ancestry	Maternal and/or paternal side	N/A	Responding parent and spouse (Group D, no-one)
English ancestry		Spouse (Group A, parent)	N/A
Other HL ancestry		Spouse (Group A, parent)	N/A

Note. N/A corresponds to no comments in this category.

Table 51 presents the analysis of GHL non-experts' responses related to their connection to the GHL. GHL experts' connection to the GHL was their ancestry as shown in Table 50. Examples of responses can be found Table 136 in Appendix M: Qualitative analysis. Notably, only GHL non-experts explained a non-ancestry related connection to the GHL. Responses indicated that some GHL non-experts were connected to the GHL through an intrinsic interest in the GHL, and through immersion in GHL-speaking countries. The latter was related to past immersion experiences by the responding parent or their spouse, past immersion experiences of the family and the anticipation of living in German-speaking countries with the family. For example, one mother explained: 'We are US military and are moving to Germany in 6 months (March 2015). We are all learning German and hope to become proficient while we live there (for approx 3+ yrs)' (PID014, GHL non-expert, Group D, no-one). Then again, past immersion experiences of the family provided reasons for children of GHL non-experts attending GHL schools. For example, one mother stated: 'We are

Americans who lived in Germany while our child was 2–4.5 years old. She attended a local school and became fluent. She attends German Saturday school to maintain her skills’ (PID145, GHL non-expert; Group A, parent). Past immersion experiences may also explain how some GHL non-experts gained GHL skills. This corresponds with Muenstermann (1998), who reported that parents with no GHL ancestry gained GHL skills through various GHL immersion experiences abroad. Examples of comments for GHL experts’ and GHL non-experts’ and their spouses’ ancestry can be found in Table 137 and Table 138 in Appendix M: Qualitative analysis.

Table 51

Summary of Responses of GHL Experts’ and GHL Non-Experts’ Related to Their Connection to the GHL

Connection to the GHL		GHL expert	GHL non-expert
Intrinsic interest in the GHL	Child’s interest	N/A	Child’s interest in the GHL (Group D, no-one)
	Parents’ interest		Parents’ interest in the GHL
	Grandparents’ interest		Grandparents’ interest in the GHL (Group A , parent)
Immersion experience	Responding parent	N/A	As school student (Group A, parent; D, no-one) As adult (Group D, no-one)
	Spouse		As school student (Group C, spouse)
	Past family immersion experiences		Child became fluent (Group A, parent; D, no-one) Job opportunity (Groups A, parent; D, no-one)
	Future family immersion experiences		Job opportunity (Group D, no-one) Moving country (Group D, no-one)

Note. N/A corresponds to no comments in this category.

5.7.2 Responses related to influences on parental home involvement

This section presents results of the qualitative analysis related to influences on parental home involvement in regard to parents’ perceived child invitations, their skills and knowledge, and goal orientation. Table 52 presents the analysis of GHL experts’ and GHL non-experts’ responses related to influences on their home involvement through speaking the GHL. Most

comments related to parents' perceived child invitations. Several GHL experts explained that their children used overt and implicit strategies to enact their linguistic preference. For example, one mother in Group A (parent) explained:

Even though German is my native language, and my American husband also understands and speaks German, it is very hard to consistently speak German to our children. They claim they don't understand and tell me to speak English, and rarely answer in German. (GHL expert, PID 136; Group A, parent)

Likewise, one mother in the GHL non-expert group in Group C (spouse) described her children's unwillingness to speak the GHL with her:

I am a native English speaker who is fluent in German, but it has never worked well for me to try to speak German with the kids while we are in the US. They don't really accept this from me. I think other German/American families experience this, too, so I wanted to mention it. (PID 076, GHL non-expert; Group C, spouse)

Similarly, De Houwer (2009) found that in a Dutch–English bilingual family, a bilingual child only wanted to be addressed in the parents' own language. This corresponds with other findings that bilingual children address each parent in their own language (Barron-Hauwaert, 2004). One explanation may be that children develop a person–language bond (Grosjean, 2010).

Nevertheless, children of GHL non-experts in Group C (spouse) were exposed to the GHL by the responding parent's spouse. In contrast, for children of GHL experts in Group A (parent), the responding parent was the only person speaking the GHL to the children. Thus, the unwillingness to speak the GHL of children of GHL experts and their preference for their parents' use of the EML may have limited children's exposure and use of the GHL. However, other responses demonstrated the willingness of children of GHL experts to speak the GHL and indicated the interest in GHL learning from children of GHL non-experts. Likewise,

Glinzner (2010) found that children provided a range of implicit and explicit feedback perceived as inviting or uninviting by their parents, whether they were GHL native speakers or GHL non-native speakers.

GHL experts' responses related to their skills and knowledge showed that a lack of GHL grammatical knowledge did not affect their ability to communicate in the GHL with their children. However, it did influence their ability to explain German grammar to their children:

Because I grew up speaking and hearing German and didn't really learn formal grammar (that I remember), it can be difficult to help my child based on grammatical rules. I know the correct grammar intuitively, by sound or fell [sic], but struggle to explain it so that he can understand as a beginning learner. (PID118, GHL expert; Group D, no-one)

In contrast, some GHL non-experts indicated that their lack of skills and knowledge in the GHL affected their ability to assist their children with GHL studies and to communicate in the GHL with their children:

As a non-native speaker, it is difficult for me to help my child with his homework and learning of German, but I do the best I can. I know mostly nouns or singular words that I've taught myself, but cannot put a sentence together ... teachers to speak German with him and help him string words together into sentences, as that is the one thing I cannot do at home. (PID162, GHL non-expert; Group D, no-one)

This example is consistent with the findings from the quantitative analysis using SEM, which showed that skills and knowledge had a significant direct effect on GHL non-experts' speaking the GHL to their children (see Section 5.6.5).

GHL experts' and GHL non-experts' responses related to an integrative goal orientation and an instrumental goal orientation. GHL non-experts' integrative goal orientation was related to children's GHL learning at the GHL school. This corresponded with findings from SEM and

demonstrated that integrative goal orientation II had no significant associations with GHL non-experts' beliefs (i.e., self-efficacy or role belief) or behaviour (i.e., speaking the GHL; see Section 5.6.5). In contrast, GHL experts' integrative goal orientation II was related to communicating with the children in the GHL: as described by one mother:

I believe it is very important to keep up my German heritage and connection to my relatives and language and to pass it onto my children. I only wish more people felt the same way! (PID310, GHL expert; Group A, parent)

This indicated an association with GHL experts' speaking the GHL. Findings of the analysis using SEM showed that integrative goal orientation II had a significant direct effect on GHL experts' role belief. However, role belief had no significant relationship with speaking the GHL. Findings indicated that GHL experts' role belief may warrant further investigations for its effect on GHL experts' speaking the GHL (see Section 5.6.9). Examples of GHL experts' and GHL non-experts' comments related to influences on their home involvement can be found in Table 147 and Table 148 in Appendix M: Qualitative analysis.

Table 52

Summary of Responses Related to Influences on GHL Experts' and GHL Non-Experts' Home Involvement Through Speaking the GHL

Type of influence	Categories	Response made by	
		GHL expert	GHL non-expert
Perceived child invitations	Child implicit and overt strategies to enact linguistic preference	Unwillingness to respond in the GHL (Group A, parent) Preference for parents' use of GHL (Group B, parent and spouse)	Unwillingness to use the GHL with parent (Group C, spouse)
	Child intrinsic interest in GHL learning	N/A	Learning at GHL school (Groups A, parent; B, parent and spouse; D, no-one)
	Child willingness to speak HL	Addressing parent in their language (Group A, parent)	N/A
Parents' skills and knowledge	Lack of knowledge and skills	Explaining German grammar (Group D, no-one)	Literacy (Group D, no-one) Literacy, speaking the GHL (Group D, no-one)
Parents' goal orientation	Integrative	Parent speaking the GHL (Group A, parent)	Child's GHL learning (Group A, parent)
	Instrumental	N/A	Child's GHL learning (Group D, no-one)
	Integrative and instrumental	Communicate with relatives and career (Group B, parent and spouse)	N/A

Note. N/A corresponds to no comments in this category.

Few comments by parents were related to other matters, including the parent-couple home language, other forms of home involvement, perceived teacher invitations, requests for advice about parental home involvement and government support for GHL learning at regular schools. Examples of comments pertaining to other matters can be found in Table 149 in Appendix M: Qualitative analysis.

5.7.3 Responses related to parental home involvement through speaking the GHL

This section presents results of the qualitative analysis related to GHL experts' and GHL non-experts' home involvement. Table 53 presents the analysis of GHL experts' and GHL non-experts' responses related to their home involvement through speaking the GHL. GHL experts' and GHL non-experts' responses were cross-checked with their linguistic

approach that was identified in Section 5.5 and is presented in the first column of Table 53. The following two columns summarise GHL experts' and GHL non-experts' responses. Further, Table 53 indicates if responses belonged to GHL experts and GHL non-experts in Groups A (parent), B (parent and spouse), C (spouse), or D (no-one).

All comments by GHL experts specified their use of the GHL. For example, comments of GHL experts using the OPOL strategy (Group A, parent) indicated that the responding parent spoke the GHL and the spouse spoke the EML or another HL to the children. Some GHL experts who applied the OPOL strategy also used additional resources to provide a GHL immersion experience for their children, as explained by one mother: 'Kids spend summers in DE with grandparents' (PID299, GHL expert; Group A, parent). Similarly, comments by GHL experts in Groups A (parent), B (parent and spouse) and C (spouse), who applied a balanced mixed strategy or the EML-dominant mixed strategy, indicated that they used the time and place strategy when travelling to GHL-speaking countries with their children. However, in the latter instance, GHL experts who spoke the GHL less frequently to their children used the immersion experience to compensate for limited GHL exposure in the home:

When I take the kids to visit my family in Germany in the summer (about 1 month) we/they speak German. My children speak German/are spoken to in German about one month each summer. (PID047, GHL expert; Group A, parent)

Only one comment addressed GHL expert's choice of discourse strategy. However, the statement was of particular interest, as it highlighted the importance of a monolingual discourse strategy for children's GHL learning and corresponds with findings presented in Section 5.5.3. The comment was made by a mother using the one-language-first strategy (Group B, parent and spouse):

I wanted to add that it is not this easy to raise bilingual children. You have to be involved continuously and remind them over and over again to speak German. Many

of our friends who both are German parents have let it ‘slip’ and their children barely speak any German. (PID301, GHL expert; Group B, parent and spouse)

Most comments by GHL non-experts asserted that they did not speak the GHL to the children. Yet, some GHL non-experts who stated that they raised children with more than two languages (i.e., trilingual strategy) spoke the GHL to their children. Table 53 shows that comments by GHL non-experts using balanced mixed strategy specified the use of trilingual strategy, including the use of the GHL in the home:

My wife and I mix both languages ... By providing German classes, it also allows us extra help so my wife can focus a little more on their third language which is Russian. (PID211, GHL non-expert; Group B, parent and spouse)

This corresponds with a proposition made in Section 5.5.3, that the use of a balanced mixed strategy may indicate that some parents raised children with more than two languages. In contrast, some GHL non-experts in Group D (no-one), who applied the ‘other HL-dominant mixed strategy’, did not use the GHL in the home, as explained by one mother: ‘We speak Spanish and English at home. My son is taking French at school and learning German on Saturdays’ (PID033, GHL non-expert; Group D, no-one). Most other comments by GHL non-experts in Groups C (spouse) and D (no-one) indicated that children were exposed to the GHL through others, such as the GHL school or grandparents. Results corresponded with parents in Groups C (spouse) and D (no-one) (see Table 39) not speaking the GHL to the children. Examples of GHL experts’ and GHL non-experts’ comments can be found in Table 143–Table 146, Appendix M: Qualitative analysis.

Table 53

Summary of Responses Related to GHL Experts' and GHL Non-Experts' Home Involvement Through Speaking the GHL Across Groups A (Parent), B (Parent and Spouse), C (Spouse) and D (No-One)

Linguistic approach	Response made by	
	GHL expert	GHL non-expert
OPOL	GHL/EML (Group A, parent) GHL/other HL (Group A, parent) GHL/Immersion (Group A, parent)	N/A
One-language-first	GHL (Group B, parent and spouse)	N/A
GHL-dominant mixed strategy	GHL/EML (Group A, parent) GHL/EML (Group B, parent and spouse)	GHL/EML (Group A, parent)
EML-dominant mixed strategy	Trilingual strategy (Group A, parent) Trilingual strategy (Group B, parent and spouse) Time and place strategy (Group A, parent)	GHL school (Group A, parent) Au-pair and Immersion (Group C, spouse)
Balanced mixed strategy	Time and Place strategy (Group A, parent) GHL/EML (Group B, parent and spouse) Trilingual strategy (Group C, spouse)	Trilingual strategy (Group B, parent and spouse)
EML only	N/A	Time and place strategy (Group A, parent) GHL school (Group C, spouse) GHL school (Group D, no-one)
Other HL-dominant mixed strategy	N/A	Trilingual strategy (Group A, parent) Trilingual strategy (Group D, no-one)

Note. N/A corresponds to no comments in this category.

In addition, Table 141 in Appendix M: Qualitative analysis, summarises parents' responses related to languages spoken in the home to the children (see examples of comments in Table 142 in Appendix M: Qualitative analysis). Most responses concerned the responding parents' and their spouses' language choice patterns with the children. Specifically, parents pointed out the use of other HLs when communicating with the children. This indicated that parents felt the need to clarify the family context in which three or more languages were spoken to the children. Findings of the qualitative analysis and quantitative analysis suggest that the

use of more than two languages when communicating with children at home was not uncommon.

5.8 Summary

This chapter presented results of the analysis of the main study data to answer research questions concerning the demographic profile of parents of children attending GHL schools, their home involvement efforts through speaking the GHL and factors that explain the extent of parental home involvement. Results from the two-step cluster analysis using SPSS software revealed the existence of two groups within the sample of parents of children attending GHL schools in the U.S. (i.e., GHL experts and GHL non-experts). GHL experts' and GHL non-experts' personal contexts influenced their level of proficiency in the GHL, leading to differences in their home involvement through speaking the GHL. GHL experts and GHL non-experts varied in the degree of GHL input they offered their children in the home through their choice of linguistic approaches, including the OPOL strategy, the one-language-first strategy, mixed strategy and EML only. Correspondingly, children of GHL experts and GHL non-experts differed notably in their speaking, reading, writing and listening skills in the GHL. Parents in this study also employed several other forms of home involvement to facilitate children's GHL learning, including teaching the GHL, assisting with GHL studies and motivating GHL learning.

The central finding of this study was revealed through the analysis of the model of motivators of parental home involvement through speaking the GHL using SEM in the Amos program. First, the PHI multigroup model was tested for invariance of the measurement model for GHL experts and GHL non-experts. The model also tested the validity of a second-order factorial structure of parental home involvement. Due to non-invariance, post-hoc model fitting was instigated, followed by testing the modified measurement model and structural model individually for each group (i.e., GHL experts and GHL non-experts) and for each subconstruct

of parental involvement. Results showed that for GHL experts, parental home involvement in children's GHL learning was closely related to: (1) perceived invitations from the child, and (2) self-efficacy for helping the child learn the GHL. For GHL non-experts, parental home involvement in children's GHL learning was related to: (1) skills and knowledge for helping the children learn the GHL, (2) self-efficacy for helping the child learn the GHL, and (3) perceived child invitations. Thus, perceived child invitations for GHL experts and skills and knowledge for GHL non-experts were found to be powerful predictors of parental home involvement in children's GHL learning. The conclusion drawn from these findings can be found in Chapter 6, including recommendations for future research.

Chapter 6: Discussion, conclusion and implications

Chapter 1 stressed the importance of parental home involvement next to formal HL instruction at HL schools for children's HL learning. It noted that one of the challenges of school-home partnerships at HL schools could be parents' reliance on HL schools to maintain and develop children's HL skills. The principal objective of this study was to gain a greater understanding of the extent of parental home involvement of children attending GHL schools, to investigate the motivators that explain the extent of parental home involvement, and how these factors affect parents' role in the school-home partnership in GHL schools. To achieve the aims of this study, a theoretical model of motivators of parental home involvement in children's GHL learning was developed based on an in-depth literature review.

Bandura's (1986) social cognitive theory informed the data collection and analysis to understand the effects of parents' personal context (i.e., skills and knowledge and available time), personal beliefs (i.e., role belief, self-efficacy and integrative goal orientation II) and the social environment (i.e., perceived child invitations and perceived teacher invitations) on parents' behaviour (i.e., parental home involvement). Based on the theoretical framework, a survey was developed to gather data on parents' characteristics, beliefs and the forms of interaction in which they engaged. These data were then used to test the proposed model of predictors of parental home involvement in children's GHL learning using SEM with AMOS (version 25). The survey provided an opportunity for parents to add information through open-ended questions. Findings of the qualitative analysis of parents' comments were used to complement the findings of the quantitative analyses.

Data analysis of the main study data revealed the existence of two groups within the population of parents at GHL schools—GHL experts and GHL non-experts—and that a composite factor of parental home involvement was not supported. These findings shifted the

focus of the data analysis to differences between GHL experts and GHL non-experts and parental home involvement through speaking the GHL. Thus, the research questions were refined to incorporate these changes:

Research Question 1: *In GHL Schools, what are GHL experts' and GHL non-experts' demographic profiles?*

Research Question 2: *In GHL Schools, what is the extent of GHL experts' and GHL non-experts' home involvement through speaking the GHL in children's GHL learning?*
a. Do GHL experts and GHL non-experts use different linguistic approaches?

Research Question 3: *In GHL Schools, what factors within parents' personal context, personal beliefs and social environment influence parental home involvement through speaking the GHL in children's GHL learning for GHL experts and GHL non-experts?*

The existence of GHL experts and GHL non-experts within the population of parents at GHL schools was a major finding of this study. Further, the findings demonstrated that GHL experts' and GHL non-experts' lives are embedded in different personal and social contexts. They differ in their home involvement behaviour and affect their children's GHL learning in different ways. The most salient predictor of parents speaking the GHL was different for GHL experts and GHL non-experts (see Section 5.6.4–5.6.5).

Sections 6.1–6.3 discuss the findings in greater detail. First, the findings of GHL experts are discussed, followed by the findings for GHL non-experts, starting with a brief summary of results in relation to the discussed finding. There are differences between the sociocultural and sociohistorical profiles of German speakers and other ethnic groups. However, due to the lack of research conducted in GHL schools, studies in other HL schools are used for a comparison of findings.

6.1 GHL experts and GHL non-experts differ as partners in the school–home partnerships in GHL schools

Findings in this study identified two distinctly different groups within the population of parents of children at GHL schools. These two groups differed significantly in their demographic and linguistic profiles. The most salient difference between these two groups was their self-reported speaking skills in the GHL. The two groups were labelled as the German language expert group (GHL experts) and the German language non-expert group (GHL non-experts). GHL experts were characterised by native-level GHL-speaking skills, while GHL non-experts had less than GHL native-level speaking skills (see Figure 5, Section 5.2.3). In this section, GHL experts' and GHL non-experts' characteristics are discussed within the context of school–home partnerships at GHL schools.

6.1.1 GHL experts have the potential to be strong partners in school-home partnerships in GHL schools

This study has revealed that possessing native-level GHL skills is related to parents' country of birth and German-speaking ancestry. GHL experts' skills in the GHL were based on their native-level GHL-speaking skills; almost all had GHL native-level writing, reading and listening skills (see Figure 6, Section 5.2.3). Almost all GHL experts were born in a German-speaking country and had German-speaking ancestry (see Table 36 and Table 37, Section 5.3). Further, more than one-third of GHL experts' spouses had German-speaking ancestry.

This study shows that most GHL experts were the only German speaker in the family and only one-third of GHL experts and their spouses communicated in the GHL. The latter corresponds with a linguistic family context termed as 'minority language at home' (ml@home), in which parents use the HL together in the home (Barron-Hauwaert, 2004). The number of GHL experts who communicated with their spouses in the GHL was similar to the

small number reported in Seo's (2017) study of first-generation Korean parents at Korean HL schools. A small number of native speakers of the HL used the HL as home language with their spouses.

Overall, the group of GHL experts resembled findings of previous studies of GHL schools, in which most parents of students attending a GHL school were new German-speaking migrants (Glinzner, 2010; Muenstermann, 2001). Therefore, while most GHL experts' linguistic family contexts indicated that they are the only German speaker in the home, their cultural and linguistic background suggested that they can provide a rich linguistic and cultural home environment and are potentially strong partners in the school-home partnership in GHL schools.

6.1.2 GHL non-experts are limited as partners in the school-home partnership in GHL schools

The group of GHL non-expert participants was large, yet considerably smaller than the group of GHL experts. GHL non-experts had a vastly different demographic and linguistic profile from GHL experts. GHL non-experts were defined based on their less than native-level GHL-speaking skills (see Figure 5, Section 5.2.3). This research found that possessing less than native-level GHL skills is related to parents' country of birth, but not to German-speaking ancestry. Most GHL non-experts were born in the U.S. and more than half had German-speaking ancestry (see Table 36 and Table 37, Section 5.3). Almost all GHL non-experts communicated in the EML with their spouses and a small number used other HLs as a home language.

According to the findings, GHL non-experts identified as English-native speakers and had varied levels of GHL-speaking skills as a result of diverse life contexts. GHL non-experts with no GHL ancestry gained GHL-speaking skills through various life contexts related to their education, profession or marriage to a German speaker. For example, one mother explained:

‘We are US military and are moving to Germany in six months (March 2015). We are all learning German and hope to become proficient while we live there (for approximately three years)’ (GHL non-expert). Findings in this study correspond with Muenstermann (2001), who found that parents with no German-speaking background gained GHL skills through various GHL immersion experiences abroad. However, most GHL non-experts had limited speaking skills in the GHL. In a few cases, GHL non-experts’ spouses were the German speaker in the family, as indicated by one mother: ‘My husband is a native German’ (PID138, GHL expert). Yet, this applied to less than one-fifth of GHL non-experts. This indicates that most GHL non-experts sent their children to GHL schools without the GHL non-experts or their spouses being able to provide GHL input in the home. Further, the analysis indicated that instead of the GHL, some GHL non-experts used other HLs in the home, further restricting their home involvement through speaking the GHL. Overall, the diverse backgrounds of GHL non-experts corresponded with the results of other authors who found that parents of children attending HL schools had various backgrounds (Clyne, 1982; Muenstermann, 2001).

The largest number of GHL non-experts were second or later generations of German migrants. However, the less than native-level speaking proficiency of GHL non-experts with German-speaking ancestry indicated that they did not learn the GHL from their parents, sometimes due to the political past of their home country. For example, one father stated:

Even though both my parents were native German speakers, they did not raise me (and my sister) speaking German. They were ashamed of their German heritage because of WWII and wanted to blend in ... I learnt German later in university. (PID164, GHL non-expert)

The detrimental effects of both world wars on the use of the native tongue by German speakers in English-speaking countries is well discussed in the literature (Harmstorf & Cigler, 1985; Ludanyi, 2010). The less than native-level proficiency of second or later generations of

German migrants aligned with the findings of Spolsky (2010) and Clyne and Kipp (2006)—HL skills are likely to decline with every generation.

Limited HL skills have been identified as an obstacle to reinforcing a language at home that children learn at school (Goren, 2003) and communicating in that language with their children (Piller, 2001). Thus, despite the cultural roots of some GHL non-experts, overall, most GHL non-experts held limited skills in the GHL and were therefore restricted as partners in the school-home partnership with GHL schools, as was the home support that teachers at GHL schools could expect from GHL non-experts. The findings suggested that GHL non-experts with German-speaking ancestry sent their children to GHL schools to maintain cultural roots in the family, even if GHL non-experts' ability to transmit the GHL in the home had been lost. Then again, GHL non-experts without German-speaking ancestry sent their children to GHL schools to learn a second or third language for educational purposes.

HL schools are originally set up to provide HL literacy instruction for children from homes where one or more HLs are spoken (Baker & Wright, 2017; Hitchens Chik et al., 2017). Thus, teachers at HL schools are likely to expect parental home involvement such as helping with homework (e.g., Salahshoor, 2017; Seo, 2017). GHL non-experts' limitations as partners in the school-home partnership in GHL schools indicate that teachers in GHL schools need to adjust their expectations for GHL non-experts' home involvement. This is further discussed in implications and recommendations for GHL schools (Section 6.4.3.1).

6.2 GHL experts and GHL non-experts have different types of interactions with children over the GHL

According to Epstein's (1987) concept of school, home and community partnership, the shared responsibility for children's GHL learning between parents and teachers at GHL schools is partly achieved through activities conducted independently in the home and the school.

Findings from the present study show that parental home involvement for children attending GHL schools is variable, as has been indicated in previous studies (Mischner-Bang, 2005).

Most GHL experts were the only person speaking the GHL to the children, which is often linked to the OPOL strategy (Döpke, 1992) in contrast to the one-language-first strategy, in which GHL experts and their spouses speak the GHL to children (see Section 2.2.3.1). Nevertheless, GHL experts varied in the frequency of use of the GHL, whereas most GHL non-experts simply communicated in the EML with their children. In this section, GHL experts' and GHL non-experts' use of the GHL is viewed from an agentic perspective to provide an understanding of parental home involvement within school-home partnerships at GHL schools.

6.2.1 GHL experts prefer to speak the GHL to their children

This study showed that approximately two-thirds of all GHL experts spoke the GHL to their children. However, only just over one-third did so exclusively. About two-thirds of GHL experts in OPOL situations communicated in the GHL with their children. In homes in which the parent-couple spoke the GHL to the children, GHL experts spoke the GHL more frequently, applying the one-language-first strategy or the GHL-dominant mixed strategy (see Table 46, Section 5.5.3).

According to this study's findings, most GHL experts' choice of linguistic approaches facilitated children's GHL learning. The data indicate that more than one-third of GHL experts spoke the GHL exclusively to their children through the use of the OPOL strategy or the one-language-first strategy; further, most of these GHL experts also requested their children to respond in the GHL. Parents' continuous use of the HL when addressing their children (Arnberg, 1987; Baker, 2011; Hoff et al., 2012) and their expectations for children to respond in the HL (De Houwer, 2015; Juan-Garau & Perez-Vidal, 2001; Lanza, 2004; Yamamoto, 2001) is more likely to lead to children's use of the HL (De Houwer, 2015) than if parents mix

languages (Döpke, 1996; Grosjean, 2010; Hoff & Core, 2015). For example, De Houwer (2007) reported that children were most likely to speak the HL if either one parent or both spoke the HL to children in the home. Possible reasons for the success of linguistic approaches such as the OPOL strategy and the one-language-first strategy is that they valorise the HL (Carroll, 2017), increase the need to use the HL in the family (Grosjean, 2010) and aid children's development of fluency in the HL (Pearson, 2007). Correspondingly, the present study showed that most children of GHL experts had native-level or advanced-level speaking skills in the GHL (see Table 43, Section 5.4.2). Thus, GHL experts' use of the OPOL strategy, the one-language-first strategy and, to a lesser extent, the GHL-dominant mixed strategy, demonstrated a strong partnership between the home and the GHL school, where HL schools can provide formal instruction to children who are raised in homes in which one or more HLs are spoken (Baker & Wright, 2017). In contrast, GHL experts' use of the EML-dominant mixed strategy or the use of EML only demonstrated a weak partnership between the home and the school, as most of the responsibility to develop children's oral and literacy skills in the GHL was transferred to GHL schools. Thus, the importance of the role of GHL schools for children's GHL learning (Fishman, 2014) is likely to depend on the extent of GHL Experts' home involvement through speaking the GHL and the strength of the school-home partnership. Further research is needed to investigate the role of GHL schools in GHL experts' FLP amongst other GHL resources that offer authentic HL input (e.g., online communication, see Section 2.2.5).

This research found that GHL experts in GHL-dominant homes were more likely to speak the GHL consistently to the children; conversely, GHL experts in OPOL situations were more likely to mix languages. This finding shows that in OPOL situations, where two languages are present, GHL experts were more likely to translanguage - using their full language repertoire for effective communication with their children (see Section 2.2.3.1).

Nevertheless, in the literature, parents' use of the mixed strategy has prompted discussions about its effects on children's HL development. For example, the mixed strategy has been found to reduce the amount of HL input children receive (Hoff & Core, 2015) and affects children's HL development (Byers-Heinlein, 2013; Döpke, 1998; Hoff & Core, 2015). Several authors have warned that the use of the HL and ML in parent-child interactions may lead to solely communicating in the ML and abandoning the HL (Cunningham & King, 2018; De Houwer, 2015; Grosjean, 2010). Correspondingly, in the present study, one mother explained: 'I started out speaking only German with my son; however, through the years, I've slipped more and more into speaking English with him and need to really focus on keeping German alive' (PID196, GHL expert, GHL-dominant mixed strategy). Thus, this study confirmed the findings of other authors that it is difficult for parents to adhere to a strict OPOL strategy (De Houwer, 2007; De Houwer & Bornstein, 2016). Both parents speaking the HL to the children provides an easier context in which parents can raise children bilingually (Cunningham, 2011; Harding-Esch & Riley, 2003). Similarly, Seo (2017) reported that in Korean HL schools, HL dominant parents who communicated in the HL with their spouses spoke the HL exclusively with their children. Thus, the parent-couple communicating with each other in the GHL may be a practical reason for the more frequent use of the GHL by GHL experts in GHL-dominant homes. Findings for the home involvement of GHL experts may be relevant for new migrants of similarly placed HLs (i.e., migrants from northern European countries such as the Netherlands) (Clyne, 1991; Kipp et al., 1995; Kloss, 1966), who send their children to HL schools to develop and maintain their HL skills.

6.2.2 GHL non-experts rarely speak the GHL to their children

This research has shown that most GHL non-experts communicated in the EML with their children, some used another HL and very few used the GHL. Only one GHL non-expert

spoke the GHL consistently to the children and this took place within a linguistic family context in which the parent-couple spoke the GHL to the children (see Table 46, Section 5.5.3).

The present study has demonstrated that GHL non-experts take one of several courses of action. Of the very small number of GHL non-experts who reported communicating in the GHL with their children, most adopted a form of mixed strategy (i.e., GHL-dominant mixed strategy). Yet, Barron-Hauwaert (2004) and Döpke (1992) found that sometimes non-native HL speakers create an artificial OPOL situation and apply the non-native strategy (Barron-Hauwaert, 2004) in which one native ML-speaking parent communicates in the HL with their children with the goal of raising their children bilingually. However, in this study, most GHL non-experts' use of the GHL suggested that they transferred the responsibility of children's GHL learning to the GHL school or to their spouses. For example, one mother stated: 'I just want to explain that, in our house, the Dad is the native German speaker and the one who speaks German most often with the kids' (PID076, GHL non-expert, EML-dominant mixed strategy). The latter comment indicated that the GHL non-expert sometimes spoke the GHL to the children. This corresponds with a strategy commonly found in bilingual families, in which the ML speaker supports the spouse's use of the HL in the home through the occasional use of the HL (Barron-Hauwaert, 2004; Cunningham, 2011). Similarly, Juan-Garau and Perez-Vidal (2001) reported that the ML speaker in a family is 'satisfied with more of a bilingual context and even code-switches on occasion' (p. 82). The transfer of responsibility may also take place in families where nannies or au-pairs have a primary care-taker role and speak their native tongue with the children. For example, King and Logan-Terry (2008) found that nannies took on a teacher role and used teaching strategies whereas mothers, who were either native or proficient second language speakers of the HL, were reluctant to take on a teacher role and were also more likely to accommodate children's preference for the ML in comparison to nannies.

In the present study, while a small number of GHL non-expert participants relied on their German-speaking spouses to facilitate the GHL in the home, most GHL non-experts' home involvement through speaking the GHL indicated that they transferred the responsibility for children's GHL learning to the GHL school. For example, one GHL non-expert mother stated: 'My daughter was 4–5 years old while we lived in Germany ... We are trying to maintain whatever is possible through attending German school in the US' (PID028, GHL non-expert, trilingual mixed strategy). Thus, GHL non-experts' goals and expectations for their children's GHL learning were linked to GHL instruction at GHL schools indicating the importance of these resources for GHL non-experts raising children with more than one language. Findings for GHL non-experts may also be relevant for parents who are non-native speakers of a HL and wish for their children to grow up bilingually by means of using local HL resources such as HL schools.

A closer examination of GHL non-experts' use of other forms of home involvement indicated that they support their children's GHL learning through teaching the GHL, assisting with GHL studies and motivating the child to learn the GHL (see Table 44, Section 5.5.1). Thus, GHL non-experts in this study applied strategies to facilitate children's GHL learning rather than to develop children's communicative and linguistic competence in the GHL. Findings from the present study suggest that for GHL non-experts, the GHL is rarely used as a medium to communicate with their children. This correlates with a study on the home involvement of second-generation Korean parents at Korean HL schools (Seo, 2017).

The dominance of the ML in the home affects children's HL learning and use (De Houwer, 2007; De Houwer & Bornstein, 2016; Pauwels, 2005; Takeuchi, 2006). Correspondingly, most children of GHL non-experts had low GHL-speaking skills (see Table 43, Section 5.4.2). Similarly, Seo (2017) found that at Korean HL schools, children of ML-dominant parents received less HL input in the home, had difficulties learning the HL in HL

schools and were less proficient than children of HL dominant parents. However, in the present study, a small number of children of GHL non-experts had native-level speaking skills. Their native-level speaking skills were due to family immersion experiences abroad. One mother stated: ‘We are Americans who lived in Germany while our child was 2–4.5 years old. She attended a local school and became fluent’ (PID145, GHL non-expert, EML-dominant mixed strategy). With exceptions such as the latter example, the children of GHL non-experts were likely to be second language learners of the GHL. According to Kagan (2005), second-language learners should be taught separately from native speakers or HL learners. However, this can be difficult in GHL schools in which students have a range of GHL-speaking skills and student numbers are rarely large enough to form separate classes. Often children with diverse GHL skills are taught within one class, sometimes resulting in teachers using resources for second-language learners, which does not provide suitable HL input for native speakers and HL learners. Accordingly, in GHL schools, research is needed to gain a more comprehensive understanding of the teaching resources and approaches required to teach second language learners next to HL learners and native speakers. Further, GHL instruction as the sole means of GHL input for the children of GHL non-experts may warrant further investigations into the group of GHL non-experts.

6.3 GHL experts and GHL non-experts differ in what influences their home involvement through speaking the GHL

According to the findings of this study, the most powerful motivator for parental home involvement through speaking the GHL was different for GHL experts and GHL non-experts. One reason for this difference is that GHL experts and GHL non-experts differed significantly in their ability to communicate in the GHL. GHL experts with the ability to converse in the GHL face challenges to home involvement in the form of perceived child invitations. In contrast, the data indicated that the greatest impediment to GHL non-experts’ use of the GHL

was their lack of skills and knowledge to help children learn the GHL. Based on empirical research through SEM, this section provides a discussion of parents' reasons for their extent of home involvement through speaking the GHL.

6.3.1 GHL experts' children decide parents' language choice in the home

Parents' perceived invitations from the child was the strongest predictor for GHL experts' home involvement through speaking the GHL (Figure 12, Section 5.6.4), suggesting that GHL experts spoke the GHL more frequently if they perceived strong invitations for involvement from the child. The second-strongest predictor for GHL experts' use of the GHL was their sense of self-efficacy for helping their child learn the GHL.

This study showed that the greatest challenge for GHL experts' use of the GHL was perceived invitations from the child. Thus, this study using SEM, confirms what has been repeatedly demonstrated in studies using qualitative methods: children decide the language of communication with their parents (Clyne, 1991; Crump, 2017; Piller, 2001; Revis, 2019; Schüpbach, 2006; Seals, 2017). One reason for children's impact on their parents' behaviour is that parents tend to respond to their children's needs and requests (Grusec, 2011; Hoover-Dempsey et al., 1995; Hoover-Dempsey et al., 2005). Consequently, parents may also change their language behaviour to suit their children's HL skills (De Houwer & Bornstein, 2016). According to Gafaranga (2011), children use many strategies to influence their parents' language choice. Likewise, in this study, the results indicated that children used strategies to initiate a switch to their preferred language. For example, one mother, who was the only person speaking the GHL to the children, explained, 'it is very hard to consistently speak German to our children. They claim they don't understand and tell me to speak English, and rarely answer in German' (PID136, GHL expert, OPOL context, EML-dominant mixed strategy). The latter statement also illustrates the siblings' preference for the ML (Seals, 2017) which can lead to a shift to the ML in the home (Obied, 2009). Cunningham and King (2018) depicted a similar

situation in the Netherlands, where children were unwilling to speak the HL with their HL-speaking parent and requested them to use the ML. Children's tendencies to use the ML instead of the HL is well documented in the literature (Baker & Wright, 2017; Cunningham, 2011; De Houwer, 2015). This challenge is likely to increase when children's language preference for the EML peaks due to the dominance of the EML in children's social networks (e.g., children commencing kindergarten or school). In the present study, all children of GHL experts were preschool aged and older (see Section 5.4.1). In the process of school children starting to negotiate their own ethnic identity (Noro, 2009), their preference for communicating with their parents in the ML may have indicated a desire to avoid difference from other children in the wider community (Schüpbach, 2006). This can lead to parents' frustrations with their children's refusal to interact in the HL and to parents withdrawing efforts to communicate in the HL. Children's persevering unwillingness to use the GHL indicates goal directed behaviour to influence their parents' home involvement and, thus, child agency (Crump, 2017; Revis, 2019; Seals, 2017) for deciding the language of communication in the home.

As we have observed, parents' perceived child invitations are an indication of children's preferred language of communication. Further, the effect of perceived child invitations on GHL experts' use of the GHL shows that GHL experts are prepared to adhere to their children's requests, resulting in GHL experts' using a range of linguistic approaches. Therefore, GHL experts' perceived invitations from the child—in the form of children's characteristics and behaviour towards the GHL—present an obstacle to their parental home involvement through speaking the GHL. This also presents a great challenge to the school–home partnership in GHL schools. To fully understand the dynamics of parent–child interactions, further investigations are needed to investigate the factors that influence children to show behaviour that is perceived as more or less inviting for parents. Several studies on infant bilingualism (Döpke, 1992; Lanza, 2004) have shown how parents can manage their young children's language mixing. Further

research is needed to shed light on GHL experts' strategies to manage perceived negative child invitations of school-aged children (e.g., language mixing and overt expressions of dislike of the GHL) (see Section 3.4.2.6) of GHL experts seeking to apply the OPOL strategy.

The results of this research indicate that self-efficacy enables GHL experts' exercise of agency and use of the GHL. As people are unlikely to engage in a task without a sense of capability to succeed, self-efficacy has a central position in Bandura's (1986) social cognitive theory. A strong sense of self-efficacy can provide a feeling of control and enable personal agency (Bandura, 1997, 2001). Personal agency suggests that GHL experts' competency for speaking the GHL provided a sense of efficacy and control and was used to direct their own behaviour and influence social conditions (Bandura, 2001) through the use of the GHL to facilitate children's GHL learning and language socialisation (see Section 2.4.2). This suggests that GHL experts with strong beliefs in their capability to help their children learn the GHL also felt more capable to counter resistance from children. Further, this study indicates that GHL experts within a linguistic family context in which the parent-couple speaks the GHL to the children were more likely to exclusively speak the GHL to their children (see Section 5.5.3). Thus, they were more likely to perceive child invitations as inviting, and exercise agency to communicate in the GHL with their children, than were GHL experts who were the only parent speaking the GHL to the children. Correspondingly, Juan-Garau and Perez-Vidal (2001) concluded that 'the parent who speaks the minority language is the one who strives harder to negotiate a monolingual context with his or her child' (p. 82). Efficacy-relevant information (Bandura & Locke, 2003) in the form of social modelling or social persuasion by GHL experts' spouses may increase GHL experts' self-efficacy and may explain the advantageous context of the parent-couple speaking the GHL to the children. Further investigations are needed to shed light on why GHL experts have increased self-efficacy beliefs and perceive invitations from children as more inviting within a linguistic family context in which the parent-couple speaks

the GHL to the children than do GHL experts who are the only parent speaking the GHL to the children.

6.3.2 GHL non-experts' lack of knowledge and skill is a barrier to their home involvement through speaking the GHL

Although somewhat variable, GHL non-experts had on average low scores for skills and knowledge for helping the child learn the GHL. Skills and knowledge were the strongest predictor of GHL non-experts' home involvement through speaking the GHL. Skills and knowledge also had an indirect effect on GHL non-experts' use of the GHL through parents' self-efficacy. Self-efficacy was the second-strongest predictor, followed by perceived child invitations (see Section 5.6.5).

This study shows that parents' low skills and knowledge in helping children learn the GHL result in most GHL non-experts communicating in the EML with their children (see Section 5.5.3). Correspondingly, the finding reported by Walker et al (2005) identified a specific relationship between low scores for life context variables, such as skills and knowledge, and parental home involvement. Similarly, parents' limited language skills have been identified as an obstacle to reinforcing a language at home that children learn at school (Goren, 2003; Piller, 2001). For example, in the present study, one mother in the GHL non-expert group admitted, 'I rarely speak German to them due to my poor grammar' (PID114, GHL non-expert). However, according to Bandura (1997), people with the same skill sets can show different performance behaviours depending on their beliefs in what they can achieve with these skills. In the present study, about one-fifth of GHL non-experts had advanced-level GHL-speaking skills. However, only four of them exercised personal agency and communicated in the GHL with their children. Then again, GHL non-experts who felt capable of communicating with their children in the GHL were confronted with children's strategies to enforce their own language preferences. For example, one mother explained:

I am a native English speaker who is fluent in German, but it has never worked well for me to try to speak German with the kids while we are in the US. They don't really accept this from me. (PID 076, GHL non-expert)

Nevertheless, this study indicates that for most GHL non-experts, skills and knowledge present the biggest obstacles to home involvement through speaking the GHL; most GHL non-experts are less likely to believe that they can influence their children's GHL learning. As low feelings of capability can lead to seeking out others to achieve a desired goal on their behalf (Bandura, 2001), GHL non-experts held proxy agency for children's GHL learning. This suggests that most GHL non-experts sought out GHL schools, as they are better suited to teaching the GHL to their children. Findings from the present study correlate with those of Holmen et al. (1992), who concluded that parents wanted their children to learn the HL from someone who could teach the language accurately. This research supports the notion that people need to feel capable of performing a task to engage in a task (Bandura, 1986; Bandura et al., 2011).

6.4 Conclusion and implications

The research approach used in this study was effective in gathering the data required to fill the gap in research on parental home involvement in children's GHL learning. In doing this, motivators of parental home involvement through speaking the GHL were addressed. The findings are reviewed and summarised next to provide a portrayal of GHL experts and GHL non-experts as partners in school-home partnerships in GHL schools. This is followed by an evaluation of this study's contribution to the research literature and suggestions for future directions to extend our understanding of parental home involvement in school-home partnerships in HL schools. Finally, recommendations for HL schools and parents of children attending GHL schools are offered to increase parental home involvement in children's GHL learning.

6.4.1 Concluding remarks

School-home partnerships indicate a shared responsibility between the family and teachers at GHL schools for children's GHL learning. In HL schools, teachers are responsible for teaching HL literacy to students who commonly come from homes where the HL is spoken. Although Clyne's (1982) work on HL schools was done some time ago, there is very strong evidence that confirms his observation that many parents have a tendency to assign HL schools with the entire responsibility for their children's HL learning. In GHL schools, the large number of parents transferring responsibility for children's GHL learning can be explained by the existence of two groups of parents: GHL experts and GHL non-experts. Children's broad range of GHL-speaking skills in GHL schools can also be explained through the existence of GHL expert and GHL non-expert parents of children in GHL schools and presents a great challenge to teachers at GHL schools. Conversely, the large number of children of GHL non-experts attending GHL schools may (in some schools) contribute to this wide-ranging spectrum of skills, as a minimum number of students are required to form classes. Due to low numbers of German migrants entering the U.S., more second- and later-generation German-speaking migrants reside in the U.S. than new migrants. Unsurprisingly, their numbers are increasing in GHL schools (Mischner-Bang, 2005). Thus, it is a challenge for GHL schools to accommodate the increasing number of students of GHL non-experts and simultaneously provide suitable GHL instruction to children of GHL experts. Teachers at GHL schools cannot accomplish alone what needs to be a collaborative effort between parents and teachers at GHL schools. Parental home involvement has a strong impact on children's GHL-speaking skills through their parents' continuous use of the GHL and their communication of the value and need for the GHL in children's lives. The influence of perceived child invitations on GHL experts' use of the GHL suggests that children are not passive bystanders in school-home partnerships. Rather, they take an active role in their own GHL learning. Motivators of parental home

involvement through speaking the GHL indicate opportunities for GHL schools to facilitate parental home involvement of GHL experts and GHL non-experts, as is further discussed in this chapter.

6.4.2 Theoretical contributions and future directions

The literature review addressed gaps in the knowledge of parental home involvement in the GHL learning of children attending GHL schools. It also outlined key factors of personal and social influences on parental home involvement behaviour. Based on well-known theories in the field, a model of motivators of parental home involvement in children's GHL learning was developed and validated to explain relationships within the model from a social-cognitive perspective. Results from the present study are supported by empirical evidence in the literature and generated the following academic contributions and recommendations for future directions.

The central contribution this study has made is through its methodological approach. Despite the need for large-scale studies in this field (Carroll, 2017), most extant research related to parental home involvement in children's HL learning has used a case study design. Therefore, by using quantitative methods and SEM to examine the complex relationship within the model, this study has filled a methodological gap in the literature. The survey instrument developed for this study was validated for parents of children attending GHL schools in English-speaking countries. It provides a sound starting point for investigating motivators of parental home involvement at HL schools in other ethnic communities. The replication of this study will add to the generalisability of the model for GHL experts and GHL non-experts at GHL schools.

Statistical analyses show that future research at GHL schools should differentiate between GHL experts and GHL non-experts. For school-home partnerships at GHL schools, it is essential to differentiate between GHL experts and GHL non-experts. This presents another

contribution to knowledge about parental home involvement in children's GHL learning in GHL schools.

For this study, valid and reliable measures were developed for four forms of parental home involvement (i.e., speaking the GHL, teaching the GHL, assisting with GHL studies and motivating GHL learning) and motivators of parental home involvement (i.e., perceived teacher invitations, skills and knowledge, role belief, available time and integrative goal orientation II). This extended the parental involvement literature to parental home involvement in children's GHL learning by enabling examination of motivators of parental home involvement in children's GHL learning through variables suggested in the literature for parental home and school involvement in children's regular schooling.

The present study supports the robustness of the developed model for GHL experts and, to a lesser extent, for GHL non-experts. Therefore, despite statistical tests of the model supporting it, the extension of the model through the inclusion of additional factors is recommended. For example, language beliefs were not part of the final model due to low reliability of the scale in Pilot Study II. Likewise, limitations on the number of questions that could be included in the survey led to the removal of parents' instrumental goal orientation scale during pilot studies. However, the inclusion of these factors is likely to increase understanding of motivators of parental home involvement in the GHL learning of children attending GHL schools for GHL experts and GHL non-experts. Further, this study suggests the influence of the spouse's use of the GHL in the home on parental home involvement through speaking the GHL. The inclusion of the spouses' linguistic approaches may further enhance our understanding of what motivates GHL experts' and GHL non-experts' use of the GHL and of the linguistic family context of children attending GHL schools.

Research to date has confirmed the powerful influence of invitations from the child on parental home involvement in children's regular schooling. Therefore, this study extended the

application of the influence of perceived child invitations on parental home involvement in children's GHL learning at GHL schools. However, to ascertain the extent of this influence on GHL experts' home involvement, this construct requires further testing among other important factors such as language beliefs. Further, while 'perceived child invitations' had acceptable measures, the findings suggest that this scale can be improved. The construct of perceived child invitations was developed for the population of parents of children attending GHL schools. Thus, 'perceived child invitations' may be improved through the addition of items specifically designed for each group of parents and accounting for differences between GHL experts and GHL non-experts.

6.4.3 Practical implications and recommendations

In HL schools, parents and teachers form a school-home partnership with a shared focus on children's successful HL learning. This study identified the implications of school-home partnerships in HL schools for current practice at GHL schools and for parental home involvement. Based on the integration of findings from this study with findings from the literature, the first set of recommendations describes actions for HL school leaders and teachers. It is followed by a second set of recommendations that outline how the present study may benefit parents of children attending GHL schools.

Recommendations for practice for GHL schools

Prior to teachers reaching out to parents, school leaders at GHL schools should engage teachers in training programs that highlight the important role of parents in children's GHL learning and the barriers to this. Of critical importance is for teachers to differentiate between the extent of home involvement that GHL experts and GHL non-experts can bring to the school-home partnership. Role expectations of parents and teachers for children's GHL learning needs to be developed and publicised, and teachers should clearly explain the need for GHL experts and GHL non-experts to be partners in the educational process of children's GHL

learning. This can be achieved by providing guidelines that outline children's learning goals in the GHL at each grade level and how parental home involvement can contribute to achieving these goals. Further, GHL schools should be encouraged to support group-specific networking (i.e., groups of GHL experts and GHL non-experts) between parents of children attending GHL schools and encourage the sharing of ideas to support children's GHL learning.

This study shows that GHL experts have the potential to be strong partners in the school-home partnership; however, their home involvement through speaking the GHL is variable in frequency. Further, this study demonstrates that 'perceived child invitations' is a powerful predictor of GHL experts' use of the GHL and confirmed the influence of children's behaviour and attitudes on parental home involvement (Reininger & Santana López, 2017; Walker et al., 2005) and HL use (Clyne, 1991; Cunningham & King, 2018; Piller, 2001; Schüpbach, 2006; Schwartz, 2008). Therefore, based on statistical analyses using SEM and related research, it is recommended that teachers at GHL schools target students' behaviour and attitudes for GHL practice in the home to increase parents' perceived invitations from the child. For example, for GHL experts, teachers could develop homework tasks that require children to collect information from their parents. Specific homework tasks that involve GHL experts could be discussions of parents' family trees. For GHL experts, this will provide an opportunity to use the GHL in parent-child interactions at home, allowing parents to become actively involved in children's GHL learning. In turn, increased perceived invitations from the child can have a positive impact on GHL experts' self-efficacy and their belief that they can affect their children's GHL learning through personal agency.

This study shows that GHL non-experts are limited as partners in the school-home partnership in GHL schools. In the present study, findings for parents' personal life contexts show that GHL non-experts' level of skills and knowledge to help the child learn the GHL were the biggest impediment to their home involvement through speaking the GHL. This

confirms the findings of other studies about the effect of limited skills and knowledge on parental home involvement (Walker et al., 2005) and use of the HL (Piller, 2001). Further, this study shows that GHL non-experts are likely to be receptive to perceived invitations for involvement from the teacher. GHL non-experts' perceived teacher invitations influence GHL non-experts' role belief, and in turn, their home involvement in teaching the GHL, assisting with GHL studies and motivating children towards GHL learning. However, this study also indicates that GHL non-experts perceived no or very few invitations for involvement from GHL teachers and desired advice on how to help their children learn the GHL. As a preliminary step, GHL non-experts may find details about children's learning goals useful for determining if they have the skills and knowledge to help their children learn the GHL at home. As GHL non-experts have diverse backgrounds and GHL skills, the first homework assignment for children of GHL non-experts could be a letter from the parent to the teacher describing their cultural and linguistic background, any links to the GHL, children's characteristics and GHL proficiency. This could inform the teacher of the potential of GHL non-experts as partners in children's GHL learning and influence GHL non-experts' role belief for helping their child learn the GHL. In turn, based on the information provided by GHL non-experts in this study, teachers at GHL schools could identify the strengths of GHL non-experts as partners in the educational process and specify attainable tasks for GHL non-experts' home involvement through teaching the GHL, assisting with GHL studies and motivating children towards GHL learning. In addition, teachers could develop homework tasks that encourage children to teach their parents what they have learned at school. The inclusion of GHL non-experts in children's GHL learning at GHL schools ensures that GHL non-experts perceive that their help is important and welcome.

Recommendations for GHL experts and GHL non-experts

One impediment to GHL experts exposing their children to the GHL in the home might be their lack of understanding of influences that affect their home involvement and lack of appreciation of their influence on children's GHL learning. GHL experts may need to consider whether GHL learning should be left in the children's control or if, for the benefit of the children, this control should be recovered by parents to direct children's GHL learning. Based on findings of this study and other relevant literature (e.g., Caldas, 2006), one way to counter children's refusals to communicate in the GHL may be for GHL experts to acknowledge children's language preferences, but explain their rules for language use in the home. Congruently, GHL experts need to be persistent in their use of the GHL and in their expectations for children to respond in the GHL at home. This will provide GHL experts with an increased feeling of self-efficacy and control over their children's GHL learning.

GHL non-experts appear to be more aware of their shortcomings due to their lack of skills and knowledge to help their children learn the GHL. GHL non-experts who feel that their lack of proficiency in the GHL is an impediment to their use of the GHL will not be able to reinforce children's need to speak the GHL in the home. However, GHL non-experts can assist and encourage children's GHL learning. Further, they can support children's valorisation of GHL learning; for example, by demonstrating a strong interest in children's GHL learning, a positive attitude towards the GHL and culture (Holmen & Others, 1992) by providing language resources in the home (Baker, 2014; Caldas, 2006; Döpke, 1996; Grosjean, 2010) and actively engaging in school events at the GHL school (Dauber & Epstein, 1989). This can also provide additional opportunities for diasporic contact for children.

This study shows that children at GHL schools may have none, one or two GHL-expert parents. Due to the increased challenges faced by the GHL-speaking parent in an OPOL situation, it is highly recommended that GHL non-experts encourage their GHL-speaking

spouses to communicate with their children in the GHL. GHL non-experts' role in OPOL situations are important, as their attitude towards children's GHL learning may enhance or decrease children's motivation to learn the GHL (Holmen & Others, 1992). However, this study indicates that the most effective way for GHL non-experts to increase their home involvement is through improving their skills and knowledge to help their children learn the GHL. This would provide GHL non-experts with more confidence to interact with their children in the GHL and provide an increased sense of contribution to children's GHL learning.

6.4.4 Limitations

This study had a number of limitations in terms of the samples and measures used. The sample of the main study was limited to 313 parents of children attending 31 GHL schools in the U.S. Most participating GHL schools were well-established institutions in large cities and were members of the GLSC. This may have influenced the type and level of parental home involvement and parents' background in comparison to smaller, independent GHL schools in rural areas. Further, while about one-third of operating GHL schools in the U.S. facilitated parent participation in the main study, in some GHL schools, only a small number of parents responded to the online survey. Overall, the study was limited by a low response rate to the main study and the pilot studies. The low response rate in the main study resulted in two clusters rather than four and may have affected findings for GHL non-experts (see Section 5.2.3). For this reason, it cannot be said with confidence that all parents in GHL schools in the U.S. were represented by the participants in this study.

Further, while the home is not an isolated system without influence from the sociocultural environment, due to study limitations, the scope of the study explored a small number of motivators of parental home involvement with a focus on factors that may be influenced by teachers at HL schools. The influence of the sociocultural context, and parents' contact with the German-speaking community and the wider community was neglected. Thus,

another limitation of this study was that the developed model only included a small number of factors.

There were also limitations in the developed questionnaire, its measures and interpretations of findings. To avoid the burden of a lengthy questionnaire for participants and the risk of invalid responses, the number of survey questions was considerably reduced during pilot studies, which may have decreased the reliability of the measures of these constructs (DeVellis, 2003). In addition, there were also limitations arising from self-report data (see Section 3.2). Lastly, it needs to be acknowledged that the researcher's professional experience as teacher and principal of a GHL school, and her close relationship with the German-speaking community in Australia might have influenced the interpretation of the findings. At the time of the study, the researcher was in close contact with the German-speaking school community and German-speaking families (see Section 3.1).

Appendices

Appendix A: GHL schools and German migration

GHL schools in Australia

Table 54

Founding Years of Participating GHL Schools in Australia

Founding year	German Heritage Language School	State	Website	Study
1899 and 1975	German Saturday School Inc.	Victoria, VIC	http://www.germansaturdayschool.org.au/	Pilot study II
1958	ACT German Language school	Canberra, CA	http://www.actgermanschool.org.au/	Pilot study II
1959	The School for the German Language Inc.	South Australia, SA	germanschool.org.au/	Pilot study I
1950s*	Temple Society - Bentleigh Moorabbin	Victoria, VIC	No website	Pilot study II
1963*	Brisbane German Language School	Queensland, QLD	http://www.brisbane-german-language-school.org.au/	Pilot study II
2009*	“Deutschstunde” German classes for kids	New South Wales, NSW	https://www.facebook.com/Deutschstunde	Pilot study II
2013	German Saturday School Sydney	New South Wales, NSW	http://www.germansaturdayschoolsydney.org.au/	-
2014	Geckos Inc. - German Community School Melbourne	Victoria, VIC	http://www.geckos.org.au/	Pilot study II
Not specified	Temple Society - Bayswater-Boronia German School	Victoria, VIC	No website	Pilot study II

Note. *Data gathered through personal communication with the school principal.

GHL schools in the U.S.

Table 55

Founding Years of GHL Schools in the U.S.

Founding year	German Heritage Language School	State	Website
1874	German Saturday School Boston	Massachusetts, MA	http://gssb.org/
1892	German-American School, Garden City	New York, NY	http://german-american-school.org/
1934	Deutsche Sprachschule Inc.	New Jersey, NJ	http://www.deutschesprachschuleinc.org/
1935	GSSF, German School of San Francisco – GASANC	California, CA	www.germanschool.com
1960	The German-American School of Palo Alto Saturday School – GASANC	California, CA	www.gaspa-ca.org
1960	German Language School Cleveland	Ohio, OH	http://www.deutschesprachschule.org/
1962	German School Association, Greater St Louis	Missouri, MO	www.germanstl.org/germanschool/
1962	German School of the East Bay	California, CA	http://germanschooleastbay.wordpress.com/contact/
1963	The German School of Fremont	California, CA	http://www.gs Fremont.org/
1964	sbds - South Bay Deutscher Schulverein	California, CA	http://www.sbds.org/
1964	German American Society Portland	Oregon, OR	http://www.germanamerican.org/language-courses.html
1964	Deutsche Sprachschule of Central New Jersey Inc.	New Jersey, NJ	https://sites.google.com/site/germanschoolnj/home
1965	GLSW, German Language School Westwood	New Jersey, NJ	http://www.germanschoolnj.org
1967	German Language School of Marin - GASANC	California, CA	www.germanschoolmarin.com
1967	NHGA, German Lang School	New Hampshire, NH	http://nhgerman.org/
1968	GLSMC, German Language School of Morris County, NJ	New Jersey, NJ	http://www.glsmc.org
1968	Tri-State German-American School	Kentucky, KY	http://tristategermanschool.org/
1970	Tacoma German Language School	Washington, WA	www.tacomagermanlanguageschool.com
1973	DANK Chicago Northern Suburbs	Illinois, IL	www.chicagogermanschools.org

1974	Deutsche Schule Charlotte	North Carolina, NC	http://www.dsclt.com
1975	The Immanuel German School / Deutsche Sprachschule Philadelphia	Pennsylvania, PA	http://www.theimmanuelgermanschool.org
1977	Deutsches Haus at New York University	New York, NY	http://deutscheshaus.as.nyu.edu/page/dhkids
1978	German School of CT Stamford	Connecticut, CT	http://www.germanschoolct.org
1982	Deutsche Sprachschule Bloomfield	Michigan, MI	www.DSB-USA.org
1983	The German School of Atlanta, Inc.	Georgia, GA	http://www.germanschoolatlanta.com
1987	Deutsche Samstagsschule Houston	Texas, TX	http://www.deutschesamstagschule.org/
1990	German Language Learning Club, Yorkville	New York, NY	http://www.germanlearn.com/scheduleandlocation.html
1990	The German Language School White Plains, at DSNY	New York, NY	http://www.germanlanguage-schoolwhiteplains.org/
1993	Die DonauSchule	Pennsylvania, PA	http://www.donauschule.org/home.html
1996	German School Upstate South Carolina	South Carolina, SC	http://www.germanschoolupstate.org/cms/?Contact_Us
1997	ABC German School	Washington WA	www.abcgermanschool.com
1999	BAKS+, Deutsche Sprachschule Berkeley	California, CA	http://www.kinderstube.org/plus/contact.html
1999	German-Texan Heritage Society, German classes	Texas, TX	http://germantexans.org/
2003	DSSLI, German Language School Long Island	New York, NY	http://www.dssli.org/joomla/
2004	German School of Tallahassee	Florida, FL	http://tallysurf.com/germanschool/
2004	German Saturday School Knoxville	Tennessee, TN	http://www.germansaturdayschool.org/
2006	DSMD, Deutsche Schule Metro Detroit	Michigan, MI	www.deutscheschulemetrodetroit.com
2007	German School of Monmouth County	New Jersey, NJ	www.germanschoolmc.org
2008	Delaware Saengerbund Deutsche Schule	Delaware, DE	http://www.delawaresaengerbund.org/
2008	German Learning Center of Weston	Florida, FL	http://www.germanlearningcenterweston.com
2008	Deutsche Schule Ann Arbor	Michigan, MI	deutscheschuleannarbor.weebly.com/index.html
2008	OGLS, Ohio German Language School	Ohio, OH	http://ohiogermanlanguageschool.org/
2009	Rochester German School	New York, NY	http://deutscheschulerochester.org/

Compiled List of GHIL Schools in the USA

AK, Otto Geist German Saturday School
AZ, German Saturday School Tucson
CA, Berkeley, BAKS+, Deutsche Sprachschule Berkeley
CA, Brea, German-American School of Brea
CA, Costa Mesa, German-American School of Costa Mesa
CA, East Bay, German School of the East Bay
CA, Fremont, The German School of Fremont
CA, Long Beach, German-American School of Long Beach
CA, Marin, German Language School of Marin
CA, Northridge, German-American School of Northridge
CA, Palo Alto, The German-American School of Palo Alto
CA, San Diego, German-American School of San Diego
CA, San Diego, German Pacific School San Diego
CA, San Francisco, GSSF, German School of San Francisco
CA, San Jose, sbds - South Bay Deutscher Schulverein
CA, San Ramon Valley, San Ramon Valley German School
CA, Santa Monica, German-American School of Santa Monica
CA, Silicon Valley, German Saturday School at GISSV
CA, South Bay, Rancho Palos Verdes, German-American School of South Bay
CA, Temple City, German-American School of Temple City
CA, Thousand Oaks, German-American School of Thousand Oaks
CA, Viejo, German-American School of Mission Viejo
CA, Vista, German-American School of Vista
CO, Deutsches Schulhaus Denver
CT, German School of Connecticut
CT, Hartford, German School of CT Hartford
CT, Stamford, German School of CT Stamford
DE, Delaware Saengerbund Deutsche Schule
FL, Lauderdale, German School Fort Lauderdale
FL, Tallahassee, German School of Tallahassee
FL, Weston, German Learning Center of Weston
GA, The German School of Atlanta, Inc.
HI, Hawaii Kinder
IL, Arlington Heights, DANK Chicago Northern Suburbs
IL, Chicago North, DSS DANK Chicago North
IL, Chicago, DANK Haus German American Cultural Center
IL, Des Plaines, German Weekend School of the Danube-Swabians
IL, Naperville, German Language School of Naperville
IN, Indianapolis German School
KS, German School of Northeast Kansas
KY, Covington, Tri-State German-American School
KY, Lexington, CKGS, Central Kentucky German School
MA, German Saturday School Boston/ Deutsche Sonnabendschule Boston
MD, Baltimore, German Language School of Zion
MD, Washington D.C., GLC, German Language Courses
MI, Ann Arbor, Deutsche Schule Ann Arbor
MI, Ann Arbor, Sanne's German Works
MI, Birmingham, Deutsche Sprachschule Bloomfield

MI, Grand Rapids, German Language School of West Michigan
 MI, Troy, DSMD, Deutsche Schule Metro Detroit
 MN, GAI Germanic-American Institute
 MO, German School Association, Greater St Louis
 NC, Deutsche Schule Charlotte
 NE, German American Society of Omaha
 NV, Las Vegas German School
 NH, NHGA, German Language School
 NJ, Holmdel, German School of Monmouth County
 NJ, Morristown, GLSMC, German Language School of Morris County
 NJ, Winifield, Deutsche Sprachschule Inc.
 NJ, Warren, Deutsche Sprachschule of Central New Jersey Inc.
 NJ, Yardville, German School-Trenton Donauschwaben Association
 NY, Long Island, German-American School, Garden City
 NY, Long Island, German-American School, Franklin Square
 NY, Manhattan, Deutsches Haus at New York University (64)
 NY, Manhattan, German Language School NY at the United Nations International School
 NY, Manhattan, German Language Learning Club, Yorkville
 NY, Manhattan, German-American School Manhattan
 NY, Newburgh, The German School of the Hudson Valley
 NY, Queens, German-American School, Ridgewood
 NY, Rochester, Deutsche Schule Rochester/ Rochester German School
 NY, Stony Brook, DSSLI, Deutsche Sprachschule Long Island
 NY, White Plains, The German Language School White Plains, at DSNY
 OH, Cleveland, German Language School Cleveland
 OH, Columbus, OGLS, Ohio German Language School
 OR, German American Society Portland
 OR, Sophie Scholl Schule
 PA, Devon, Die DonauSchule
 PA, Huntingdon Valley, The Immanuel German School/Deutsche Sprachschule Philadelphia
 PA, Philadelphia, Phillykinder, The German Society of Pennsylvania
 SC, Mauldin, Greenville, German School Upstate South Carolina
 SC, Spartanburg, German School Upstate South Carolina
 TN, Cleveland, MK Plus-German Language School/Deutsche Sprachschule
 TN, Knoxville, German Saturday School Knoxville
 TX, Austin and San Antonio, German-Texan Heritage Society, German classes
 TX, Houston, Deutsche Samstagsschule Houston
 TX, Las Colinas, The German School of Dallas
 TX, Plano, The German School of Dallas
 WA, Bellevue, ABC German School
 WA, Bellevue, EGLS, Eastside German Language School
 WA, Lakewood, Tacoma German Language School
 WA, Seattle, German Language School Seattle

German migration

Table 56

German-Speaking Migration to the U.S. 1820–1939

Decade	Immigrants from		
	Germany	Austria	Switzerland
1820–1829	5,753	-	3,148
1830–1839	124,726	-	4,430
1840–1849	385,434	-	4,819
1850–1859	976,072	-	24,423
1860–1869	723,734	2,700	21,124
1870–1879	751,769	54,529	25,212
1880–1889	1,445,181	204,805	81,151
1890–1899	579,072	268,218	37,020
1900–1909	328,722	532,416	32,541
1910–1919	174,227	589,174	22,839
1920–1829	386,634	31,392	31,772
1930–1939	117,736	6,678	5,990

Source: U.S. Department of Homeland Security (2013)

Table 57

Comparing German-Speaking Migration to the U.S. and Australia between 1940s and 2018

Decade	U.S. immigration from			Decade	Australia immigration from		
	Germany	Austria	Switzerland		Germany	Austria	Switzerland
1940–1949	119,403	8,496	9,904	1945–1950	95,217	9,631	1,269
1950–1959	576,905	81,354	17,577	1950–1960	111,400	29,562	3,770
1960–1969	209,616	17,571	19,193	1960–1970	41,046	8,347	5,676
1970–1979	77,142	14,239	8,536	1970–1980	16,630	3,092	5,267
1980–1989	85,752	15,374	8,316	1980–1990	18,256	2,371	4,548
1990–1999	92,207	18,234	11,768	1990–2000	9,162	1,309	2,918
2000–2009	122,373	21,151	12,173	2000–2010	15,832	1,528	3,088
2010–2018	47,164	11,304	5,819	2010–2013*	5,597	392	857

Source: U.S. Department of Homeland Security (2013, 2016, 2020), and the Australian Department of Immigration and Border Protection (2014; 2001).

Note*: Immigration statistics for Australia from 2014–2018 are not available.

Note: Immigration numbers for Australia were sourced according to the Australian financial year which starts in July and ends in June the following year

Appendix B: Information for GHL schools and letter of introduction

Information for GHL school principals and GHL school committees

Letter of Introduction from supervisor to school committee/school principal

Information sheet for school committee/school principal

Pilot Study I



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CRICOS Provider No. 00114A

Letter of Introduction

Dear Members of School Committee, The School for the German Language in Adelaide,

Ulrike Glinzner is a PhD candidate at the School of Education at Flinders University and the principal of the School for the German Language Inc. in Adelaide. She is undertaking research leading to the production of a doctoral thesis on the subject of caregivers' views on parental involvement in children's German language learning and the factors that influence parental involvement. The title of the dissertation is "A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model."

Ulrike would be most grateful if the preliminary part of her study could be conducted with parents from the School for the German Language. This would be done by inviting parents and caregivers to answer questions that cover certain aspects of the topic. No more than 20 minutes would be required to answer these questions.

Since Ulrike intends to use the data provided in this preliminary study for the main study and for preparing the thesis, she is seeking your permission to administer the preliminary study at the School for the German Language.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. Parents are, of course, entirely free to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or to david.curtis@flinders.edu.au

Thank you, in anticipation, for your attention and assistance.

Yours sincerely



Ms Ulrike Glinzner
PhD candidate
Principal investigator

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CRICOS Provider No. 00114A

SCHOOL COUNCIL INFORMATION SHEET

Title: 'A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model'

Investigator:

Ms Ulrike Glinzner
School of Education
Flinders University
Ph: 0437 626 723

Description of the study:

During my work at the School for The German Language (7 years), I have developed an interest in how parents' involvement in their children's German language acquisition can be supported.

This preliminary study is part of a main project entitled 'A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model'.

The preliminary study is an important step in this project and will investigate caregivers' views on what factors might facilitate parental involvement in their children's German community language learning in the home. This project is supported by the School of Education, Flinders University, the Goethe Institute Australia, The Central Agency for Schools Abroad (Zentralstelle für das Auslandsschulwesen), and The Ethnic Schools Board.

Purpose of the study:

This project aims to raise awareness of the factors that influence parents' involvement in their children's German community language learning. The thesis will be a useful resource for providing an illustration of how ongoing research might further address parents' and caregivers' needs so as to provide continuing support for those wishing to raise their children bilingually. Further, this thesis also aims to provide advice to the school

What will the school committee be asked to do?

The school committee will be asked to support this study by inviting parents and caregivers to participate via distribution of the attached letter to be published in the school newsletter.

As the principal investigator, I would like to refrain from making direct contact with parents so that there is no breach of privacy regarding contact information and so that there is no perception of coercion of participants on my part. Thus, I would be grateful if you, as a school, could nominate a contact person who would be willing to distribute hard copies of the survey package to class teachers for their students.

Hard copies of the survey packages would be provided by me and handed over to the contact person. The contact person at your school would be bound by the same level of confidentiality as the principal investigator. Please find attached to this letter, the Letter of Introduction, the Information Sheet for Parents and Caregivers as well as a copy of the questions that participating parents would be asked to answer.

What will parents and caregivers be asked to do?

All parents and caregivers within a family will be asked to participate.

If parents and caregivers are willing to provide information they are invited to answer questions in a questionnaire. The answers should be provided regarding the only child or the oldest of their children who attends a German Saturday school. The questions will cover certain aspects of the topic. No more than 20 minutes would be required to answer the questions. Participation is voluntary.

What benefit will parents and caregivers gain from being involved in this study?

The sharing of parents' and caregivers' views will inform the main study project. Data collected in this study will improve the planning and delivery of future education programs for parents. We are very keen to deliver a service and resources which are as useful as possible to people. A summary of results will be available to you and the parents at the end of the study.

Will parents and caregivers be identifiable by being involved in this study?

We do not need parents' and caregivers' names and, as such, parents and caregivers will remain anonymous. Their comments in the questionnaire cannot be linked directly to them. Paper copies of their comments will be stored in a locked cabinet in the secure Research Room at the School of Education for at least five years from the date of publication.

Are there any risks or discomforts if parents and caregivers are involved?

Due to the quantitative nature of the study, parents and caregivers cannot be identified through their contributions.

The investigator anticipates few risks from their involvement in this study. Any concerns regarding anticipated risks or discomfort, should be raised with the investigator.

How do parents and caregivers agree to participate?

Participation is voluntary. If parents and caregivers agree to participate they are invited to answer the questions in the questionnaire.

How will parents and caregivers receive feedback?

At the end of the study, a summary of results will be sent to your German language school. The school committee will be asked to make the report available to all parents at your school.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 5933). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Pilot Study II



David D Curtis
Associate Professor, Educational
Research
School of Education

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CRICOS Provider No. 00114A

Letter of Introduction

Dear Principal,

This letter is to introduce Ulrike Glinzner who is a PhD candidate at the School of Education at Flinders University and the principal of the School for the German Language Inc. in Adelaide. She will produce her student card, which carries a photograph, as proof of identity.

Ulrike is undertaking research leading to the production of a doctoral thesis on the subject of caregivers' views on parental involvement in children's German language learning and the link between certain factors and parental involvement in the home. The title of the dissertation is "A framework to guide investigations into parents' home involvement in children's German community language learning: Testing a theoretical model."

She is now conducting the second and main part of her study. In order to obtain reliable results, Ulrike is looking for responses to a questionnaire from all parents and caregivers whose children attend a German Saturday school in Australia.

Ulrike would be most grateful if the survey could be administered at your school. This would be done by inviting parents and caregivers to answer questions in an online questionnaire that covers certain aspects of the topic. No more than 20 minutes would be required to answer questions in the questionnaire.

Since Ulrike intends to use the data provided for preparing the thesis, she is seeking your permission to conduct the study at your German Saturday school.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. Parents are, of course, entirely free to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or to david.curtis@flinders.edu.au

Thank you, in anticipation, for your attention and assistance.

Yours sincerely



Ms Ulrike Glinzner
PhD candidate
Principal investigator

School of Education
Faculty of Education, Humanities and Law

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CRICOS Provider No. 00114A

SCHOOL COUNCIL INFORMATION SHEET

Title: 'A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model'

Investigator:

Ms Ulrike Glinzner
School of Education
Flinders University
Ph: 0437 626 723

Description of the study:

During my work at the School for The German Language (7 years), I have developed an interest in how parents' involvement in their children's German language acquisition can be supported.

This study is part of the project entitled 'A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model'.

The study will investigate caregivers' views on parental involvement in children's German language learning and the link between certain factors and parental involvement in the home. This project is supported by the School of Education, Flinders University, the Goethe Institute Australia, The Central Agency for Schools Abroad (Zentralstelle für das Auslandsschulwesen) and The Ethnic Schools Board.

Purpose of the study:

This project aims to raise awareness of the factors that influence parents' involvement in their children's German community language learning. The thesis will be a useful resource for providing an illustration of how ongoing research might further address parents' and caregivers' needs so as to provide continuing support for those wishing to raise their children bilingually. Further, this thesis also aims to provide advice to the school council of each participating German Saturday school on how to raise parental involvement in their children's German language learning.

What will the school committee be asked to do?

The school committee will be asked to support this study by inviting parents and caregivers to participate via distribution of the attached letter to be published in the school newsletter.

As the principal investigator, I would like to refrain from making direct contact with parents so that there is no breach of privacy regarding contact information and so that there is no perception of coercion of participants on my part. Thus, I would be grateful if you, as a school, could nominate a contact person who would be willing to distribute hard copies of the survey package to class teachers for their students.

Hard copies of the survey packages would be provided by me and handed over to the contact person. The contact person at your school would be bound by the same level of confidentiality as the principal investigator. Please find attached to this letter, the Letter of Introduction, the Information Sheet for Parents and Caregivers as well as a copy of the questions that participating parents would be asked to answer.

What will parents and caregivers be asked to do?

All parents and caregivers within a family will be asked to participate.

If parents and caregivers are willing to provide information they are invited to answer questions in a questionnaire. The answers should be provided regarding the only child or the oldest of their children who attends a German Saturday school. The questions will cover certain aspects of the topic. No more than 20 minutes would be required to answer the questions. Participation is voluntary.

What benefit will parents and caregivers gain from being involved in this study?

The sharing of parents' and caregivers' views will inform and improve the planning and delivery of future education programs for parents. We are very keen to deliver a service and resources which are as useful as possible to parents and caregivers.

Will parents and caregivers be identifiable by being involved in this study?

We do not need parents' and caregivers' names and, as such, parents and caregivers will remain anonymous. Their comments in the questionnaire cannot be linked directly to them. Paper copies of their comments will be stored in a locked cabinet in the secure Research Room at the School of Education for at least five years from the date of publication.

Are there any risks or discomforts if parents and caregivers are involved?

Due to the quantitative nature of the study, parents and caregivers cannot be identified through their contributions.

The investigator anticipates few risks from their involvement in this study. Any concerns regarding anticipated risks or discomfort, should be raised with the investigator.

How do parents and caregivers agree to participate?

Participation is voluntary. If parents and caregivers agree to participate they are invited to answer the questions in the questionnaire.

How will parents and caregivers receive feedback?

At the end of the study, a summary of results will be sent to your German language school. The school committee will be asked to make the report available to all parents at your school.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 5933). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Main Study



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Associate Professor, Educational
Research
School of Education

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Letter of Introduction

Dear Principal,

This letter is to introduce Ulrike Glinzner who is a PhD candidate at the School of Education at Flinders University and the principal of the School for the German Language Inc. in Adelaide, in South Australia.

Ulrike is undertaking research leading to the production of a doctoral thesis on the subject of caregivers' views on parental involvement in children's German language learning and the link between certain factors and parental involvement. The title of the dissertation is "A framework to guide investigations into parents' home involvement in children's German community language learning: Testing a theoretical model."

The preliminary research was conducted in Australia. For the second study, Ulrike is looking for responses to a questionnaire from parents and caregivers whose children attend a German community language school in the USA and Canada.

Ulrike would be most grateful if the survey could be administered at your school. This would be done by inviting parents and caregivers to answer questions in an online questionnaire that covers certain aspects of the topic. No more than 15 minutes would be required to answer questions in the questionnaire.

Since Ulrike intends to use the data provided for preparing the thesis, she is seeking your permission to conduct the study at your German language school.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. Parents are, of course, entirely free to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or to david.curtis@flinders.edu.au

Thank you, in anticipation, for your attention and assistance.

Yours sincerely



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Principal investigator

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What will the school committee be asked to do?

The school committee will be asked to support this study by inviting parents and caregivers to participate via distribution of the attached letter to be published in the school newsletter.

As the principal investigator, I would like to refrain from making direct contact with parents so that there is no breach of privacy regarding contact information and so that there is no perception of coercion of participants on my part. Thus, I would be grateful if you, as a school, could nominate a contact person who would be willing to distribute an electronic survey package via email to parents of your school.

The contact person at your school would be bound by the same level of confidentiality as the principal investigator. Please find attached to this letter, the Letter of Introduction, the Information Sheet for Parents and Caregivers as well as a copy of the questions that participating parents would be asked to answer.

What will parents and caregivers be asked to do?

All parents and caregivers within a family will be asked to participate.

If parents and caregivers are willing to provide information they are invited to answer questions in an online questionnaire. The answers should be provided regarding the only child or the oldest of their children who attends a German Saturday school. The questions will cover certain aspects of the topic. No more than 15 minutes would be required to answer the questions. Participation is voluntary.

What benefit will parents and caregivers gain from being involved in this study?

The sharing of parents' and caregivers' views will inform and improve the planning and delivery of future education programs for parents. We are very keen to deliver a service and resources which are as useful as possible to parents and caregivers.

Will parents and caregivers be identifiable by being involved in this study?

We do not need parents' and caregivers' names and, as such, parents and caregivers will remain anonymous. Their comments in the questionnaire cannot be linked directly to them. Copies of their electronic responses will be stored in a locked cabinet in the secure Research Room at the School of Education for at least five years from the date of publication.

Are there any risks or discomforts if parents and caregivers are involved?

Due to the quantitative nature of the study, parents and caregivers cannot be identified through their contributions.

The investigator anticipates few risks from their involvement in this study. Any concerns regarding anticipated risks or discomfort, should be raised with the investigator.

How do parents and caregivers agree to participate?

Participation is voluntary. If parents and caregivers agree to participate they are invited to answer the questions in the online questionnaire.

How will parents and caregivers receive feedback?

At the end of the study, a summary of results will be sent to your German language school. The school committee will be asked to make the report available to all parents at your school.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (5933). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Letter to recruit participants

Pilot Study I

Dear Parents and Caregivers,

Ms Ulrike Glinzner, our school principal, is currently studying for a doctoral degree. Ulrike's research is conducted under supervision and has been approved by Flinders University

Following her work as a teacher at the School for the German Language and building on her previous Master's study (MEd, Educational Research, Evaluation and Assessment), Ulrike would like to investigate caregiver's views on parental involvement in children's German community language learning.

As preliminary research for her doctoral thesis entitled "A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model" Ulrike would like to conduct a survey with parents and caregivers at the School for the German Language in Adelaide.

The results of this survey will be a useful resource to address parents' and caregivers' needs and to provide continuing support for those wishing to raise their children with more than one language.

The preliminary research is crucial as it will form the basis for the main research which will be conducted nationally with in collaboration with other German language schools in Australia and with other German community schools in the USA and Canada. Ultimately, Ulrike's research will benefit all parents, teachers and students in German communities in Australia.

Participation in the anonymous survey is voluntary.

However, in order to obtain significant results, it would be helpful if as many parents and caregivers as possible would participate in the survey. It takes no more than twenty minutes to complete the survey questionnaire.

A survey package including a Letter of Introduction, an Information Sheet and the Questionnaire will be handed out to your oldest child attending the School for the German Language in the following weeks. The survey package includes a blank envelope for your responses which you are kindly asked to place in a labelled box that will be located near the school entrance. Please return your responses as soon as possible and latest by the 21st of September 2013.

A summary of the survey results will be available from the school office once the preliminary research is completed.

If you have further questions about the survey please contact Ulrike by phone (0437 626 723), e-mail (ulrike.glinzner@flinders.edu.au) or in person at The School for the German Language. Ulrike will be available during the school term every Saturday after 12 noon at Adelaide High School.

Irrespective of how much you are involved in your child's German language learning your participation in this survey is highly appreciated.

Thank you for your support.

Yours sincerely,

The School Committee

School for the German Language Inc.

Pilot Study II

Dear Parents and Caregivers,

Following my work as a teacher at the School for the German Language in Adelaide (7 years) and building on my previous Master's study (MEd, Educational Research, Evaluation and Assessment), I have developed an interest in how parents' involvement in their children's German language learning can be supported.

The preliminary research for my doctoral thesis entitled "A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model", was conducted in Adelaide. The second study includes all German community schools in Australia, both mothers and fathers, German speakers and non-German speakers.

The results of this survey will be a useful resource to address parents' and caregivers' needs and to provide continuing support for those wishing to raise their children with more than one language.

This part of my research is crucial as it will form the basis for my research with other German language schools in the USA and Canada. Ultimately, my research will benefit all parents, teachers and students in German community schools.

However, in order to obtain significant results, it would be helpful if as many parents and caregivers as possible would participate in the survey. It takes no more than 20 minutes to complete the survey questionnaire.

A survey package including a Letter of Introduction, an Information Sheet and the Questionnaire will be handed out in the following weeks to your oldest child attending a German community language school. The survey package includes a reply paid envelope for your responses, which you are kindly asked to post as soon as possible and latest by the 15th of November 2013.

Irrespective of how much you are involved in your child's German language learning your participation in this survey is highly appreciated. Participation in the anonymous survey is voluntary. A summary of results of the main study will be provided by me upon completion.

If you have further questions about the survey please contact me by phone (0437 626 723) or e-mail (ulrike.glinzner@flinders.edu.au).

I would be very grateful if you would participate in this study. Thank you for your support.

Yours sincerely,

Ulrike Glinzner

PhD Candidate, School of Education, Flinders University

Main Study

Dear Parents and Caregivers,

Following my work as a teacher at the School for the German Language in Adelaide (7 years) and building on my previous Master of Education study, I have developed an interest in how parents' involvement in their children's German language learning can be supported.

The preliminary research for my doctoral thesis was conducted in Australia. The second study includes German community schools in the USA and Canada.

As part of this research, I have developed a survey instrument designed to address parents' and caregivers' needs and to provide continuing support for those wishing to raise their children with more than one language.

In order to obtain significant results, it would be helpful if as many parents and caregivers as possible would participate in the survey. It takes no more than 15 minutes to complete the online survey questionnaire.

Attached to this email you will find a Letter of Introduction from my supervisor, a Participant Information Sheet and a link to an online survey.

Irrespective of how much you are involved in your child's German language learning your participation in this survey is highly appreciated. Participation in the anonymous survey is voluntary. A summary of results of the study will be provided upon completion to your German language school. Your school will be asked to make the report available to all parents at your school.

If you have further questions about the survey please contact me by e-mail (ulrike.glinzner@flinders.edu.au).

I would be very grateful if you would participate in this study. Thank you for your support.

Yours sincerely,

Ulrike Glinzner

PhD Candidate

School of Education

Flinders University, Adelaide Australia

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (5933). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics

Information for parents

Letter of Introduction from supervisor to parents

Information sheet for parents

Pilot Study I



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Letter of Introduction

Dear Parents and Caregivers of students of The School for the German Language in Adelaide,

Ulrike Glinzner is a PhD candidate student at the School of Education at Flinders University and the principal of the School for the German Language Inc. in Adelaide. She is undertaking research leading to the production of a doctoral thesis on the subject of caregivers' views on parental involvement in children's German language learning and the link between certain factors and parental involvement. The title of the dissertation is "A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model."

Ulrike would be most grateful if you would volunteer to assist in the preliminary study. This would be done by answering questions in a questionnaire which cover certain aspects of this topic. No more than 20 minutes would be required.

Since Ulrike intends to use the data provided in the questionnaire she is seeking your consent, which you give by filling out the questionnaire, on condition that your name or identity is not revealed. The data will be used in preparing the main study.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. You are, of course, entirely free to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or to david.curtis@flinders.edu.au

Irrespective of how much you are involved in the child's German language learning your participation in this study is significant and highly appreciated.

Thank you, in anticipation, for your attention and assistance.

Yours sincerely



Ms Ulrike Glinzner
PhD candidate
Principal investigator

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Faculty of Education, Humanities and Law

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CRICOS Provider No. 00114A

PARTICIPANT INFORMATION SHEET

Title: 'A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model'

Investigator:

Ms Ulrike Glinzner
School of Education
Flinders University
Ph: 0437 626 723

Description of the study:

During my work at the School for The German Language (7 years), I have developed an interest in how parents' involvement in their children's German language acquisition can be supported.

This preliminary study is part of the main project entitled 'A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model'.

The preliminary study is an important step in this project and will investigate caregiver's views on what facilitates parental involvement in their children's German community language learning in the home. This project is supported by the School of Education, Flinders University, the Goethe Institute Australia, The Central Agency for Schools Abroad (Zentralstelle für das Auslandsschulwesen), and The Ethnic Schools Board.

Purpose of the study:

This project aims to raise awareness of the factors that influence parents' involvement in their children's German community language learning. The thesis will be a useful resource for providing an illustration of how ongoing research might further address parents' and caregivers' needs so as to provide continuing support for those wishing to raise their children with more than one language.

What will I be asked to do?

You and your spouse or partner (if applicable) are invited to answer questions in a questionnaire which covers certain aspects of this topic. The answers should be provided regarding the only child or the oldest of your children who attends a German Saturday school. No more than 20 minutes would be required to answer the questions. Participation is voluntary.

What benefit will I gain from being involved in this study?

The sharing of your views will inform the main study project. Data collected in this study will improve the planning and delivery of future education programs for parents. We are very keen to deliver a service and resources which are as useful as possible to parents and caregivers. A summary of results will be available to you at your German language school at the end of the study.

Will I be identifiable by being involved in this study?

We do not need your name and you will be anonymous. Your comments in the questionnaire cannot be linked directly to you. Paper copies of your comments will be stored in a locked cabinet in the secure Research Room at the School of Education for at least five years from the date of publication.

Are there any risks or discomforts if I am involved?

Due to the quantitative nature of the study, you cannot be identified through your contributions.

The investigator anticipates few risks from your involvement in this study. Any concerns regarding anticipated risks or discomfort, should be raised with the investigator.

How do I agree to participate?

Participation is voluntary. If you agree to participate please answer the questions in the questionnaire.

How will I receive feedback?

At the end of the study, a summary of results will be sent to your German language school. The school will be asked to make the report available to all parents at your school.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 5933). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Pilot Study II



David D Curtis
Associate Professor, Educational
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Letter of Introduction

Dear Parents and Caregivers,

This letter is to introduce Ulrike Glinzner who is a PhD candidate at the School of Education at Flinders University and the principal of the School for the German Language Inc. in Adelaide.

Ulrike is undertaking research leading to the production of a doctoral thesis on the subject of caregivers' views on parental involvement in children's German language learning and the link between certain factors and parental involvement. The title of the dissertation is "A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model."

She is now conducting the second and main part of her study. In order to obtain reliable results, Ulrike is looking for responses to this questionnaire from all parents and caregivers whose children attend a German Saturday school in Australia.

Ulrike would be most grateful if you would volunteer to assist in this project by answering questions in a questionnaire that covers certain aspects of the topic. No more than 20 minutes would be required to answer questions in the questionnaire.

Since Ulrike intends to use the data provided in the questionnaire she will seek your consent, which you give by filling out the questionnaire, on condition that your name or identity is not revealed. The data will be used in preparing the main study.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. You are, of course, entirely free to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or to david.curtis@flinders.edu.au

Irrespective of how much you are involved in the child's German language learning your participation in this study is significant and highly appreciated.

Thank you, in anticipation, for your attention and assistance.

Yours sincerely



Ms Ulrike Glinzner
PhD candidate
Principal investigator

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PARTICIPANT INFORMATION SHEET

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Investigator:

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What benefit will I gain from being involved in this study?

The sharing of your views will inform and improve the planning and delivery of future education programs for parents. We are very keen to deliver a service and resources which are as useful as possible to parents and caregivers. A summary of results will be available to you at your German language school at the end of the study.

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Are there any risks or discomforts if I am involved?

Due to the quantitative nature of the study, you cannot be identified through your contributions.

The investigator anticipates few risks from your involvement in this study. Any concerns regarding anticipated risks or discomfort, should be raised with the investigator.

How do I agree to participate?

Participation is voluntary. If you agree to participate please answer the questions in the questionnaire.

How will I receive feedback?

At the end of the study, a summary of results will be sent to your German language school. The school will be asked to make the report available to all parents at your school.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

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Letter of Introduction

Dear Parents and Caregivers,

This letter is to introduce Ulrike Glinzner who is a PhD candidate at the School of Education at Flinders University and the principal of the School for the German Language Inc. in Adelaide, South Australia.

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Ulrike would be most grateful if you would volunteer to assist in this project by answering questions in an online questionnaire that covers certain aspects of the topic. No more than 15 minutes would be required to answer questions in the questionnaire.

Since Ulrike intends to use the data provided in the questionnaire she will seek your consent, which you give by filling out the online questionnaire, on condition that your name or identity is not revealed. The data will be used in preparing the main study.

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Irrespective of how much you are involved in the child's German language learning your participation in this study is significant and highly appreciated.

Thank you, in anticipation, for your attention and assistance.

Yours sincerely



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Ph: 0437 626 723

Description of the study:

During my work at the School for The German Language (7 years), I have developed an interest in how parents' involvement in their children's German language learning can be supported.

This study is part of the project entitled 'A framework to guide investigations into parents' home involvement in children's German community language learning: Testing a theoretical model'.

The study will investigate caregivers' views on parental involvement in children's German language learning and the link between certain factors and parental involvement. This project is supported by the School of Education, Flinders University, the Goethe Institute Australia and The Central Agency for Schools Abroad (Zentralstelle für das Auslandsschulwesen).

Purpose of the study:

This project aims to raise awareness of the factors that influence parents' involvement in their children's German community language learning. The thesis will be a useful resource for providing an illustration of how ongoing research might further address parents' and caregivers' needs so as to provide continuing support for those wishing to raise their children with more than one language.

What will I be asked to do?

You and your spouse or partner (if applicable) are invited to answer questions in an online questionnaire which covers certain aspects of this topic. The answers should be provided regarding the only child or the oldest of your children who is five years old or older and who attends a German language school. No more than 15 minutes would be required to answer questions in the questionnaire. Participation is voluntary.

What benefit will I gain from being involved in this study?

The sharing of your views will inform and improve the planning and delivery of future education programs for parents. We are very keen to deliver a service and resources which are as useful as possible to parents and caregivers. A summary of results will be available to you at your German language school at the end of the study.

Will I be identifiable by being involved in this study?

We do not need your name and you will be anonymous. Your comments in the questionnaire cannot be linked directly to you. Copies of their electronic responses will be stored in a locked cabinet in the secure Research Room at the School of Education for at least five years from the date of publication.

Are there any risks or discomforts if I am involved?

Due to the quantitative nature of the study, you cannot be identified through your contributions.

The investigator anticipates few risks from your involvement in this study. Any concerns regarding anticipated risks or discomfort, should be raised with the investigator.

How do I agree to participate?

Participation is voluntary. If you agree to participate please answer the questions in an online questionnaire.

How will I receive feedback?

At the end of the study, a summary of results will be sent to your German language school. The school will be asked to make the report available to all parents at your school.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (5933). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Appendix C: Questionnaires

Pilot Study I, PHIQ-GHL I



Parent Questionnaire

“Parental Involvement in Children’s German Community Language Learning”

What is this questionnaire about?

This survey will be a useful resource to address parents’ and caregivers’ needs to provide continuing support for those wishing to raise their children bilingually. For this reason questions will be asked about your views and beliefs, and German language matters in your child’s home environment. A summary of results will be available at your German language school at the end of the study.

When I’m asked about <my child>, whom should I think about?

By “your child” we mean a child in your care. If you have more than one child attending a German language school, please respond to the questions in this questionnaire in relation to the oldest child attending a German language school.

Even though this questionnaire consists of several pages it is anticipated that it will only take you 20 minutes to complete it. Your responses are extremely valuable and we greatly appreciate your time.

Please note

- Your child attending a German school is viewed as a German language learner regardless of whether your child is a German native speaker or a beginner.
- Many questions concern the German language and culture that you relate to. This includes any dialects of German and Swiss German. “German” language is used at all times in order to simplify the questions.
- We ask you to respond to all the questions you feel comfortable answering. There are no right or wrong answers and we assure you that your responses to this survey will be kept confidential.

SECTION A – QUESTIONS ABOUT YOUR CHILD

A-1 Your child's gender.

Male

Female

A-2 Your child's age.

Please specify here:

A-3 Where was your child born?

Please specify here: (If "Australia", please go to A-5)

A-4 How old was your child when you moved to Australia? (if applicable)

Please specify here:

A-5 What is your relationship to this child?

Mother

Father

Carer

Other (please specify)

A-6 Are there any other children in your home with whom your child can speak German?

No Yes Please specify below:

How many children:

How old are these children:

A-7 Your child's Year level in mainstream school.

Please specify here:

A-8 Your child's Year level at the German language school.

Please specify here:

A-9 Your child's German language school.

Name of the school:

State: ...

A-10 How long has your child been attending the German language school?

Please specify here: years

A-11 Does your child attend German classes at his/her mainstream school?

Yes

No

A-12 How old was your child when he/she started learning German?

0-3 years old

4-6 years old

7-9 years old

10-12 years old

13 years or older

A-13 Your child's language proficiency in German.

	none	beginner	intermediate	advanced	native speaker level
Speaking	<input type="checkbox"/>				
Reading	<input type="checkbox"/>				
Writing	<input type="checkbox"/>				
Listening comprehension	<input type="checkbox"/>				

SECTION B – YOUR VIEWS AND BELIEFS

B-1 How important are the following reasons for your child's German language learning?					
Please rate <u>the importance</u> of the following statements to you.		Not important	Somewhat important	Important	Very important
1.	It will allow my child to meet and converse with more and varied people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	It will allow my child to learn more about German history, traditions, and customs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	It will enable my child to study overseas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I think it will someday be useful for my child in getting a good job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	It will enable my child to maintain his/her German skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	It will allow my child to get a broader education.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	It will allow my child to read the literature of a foreign language in the original language rather than a translation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	My child may use it for his/her future career.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	It will expose my child to another culture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	It will enable my child to live in a Germanic country one day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	It will allow my child to enjoy another language and culture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-1 How important are the following reasons for your child's German language learning?					
Please rate <u>the importance</u> of the following statements to you.		Not important	Somewhat important	Important	Very important
12.	It will allow my child to keep a connection with the wider family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	It will enable my child to communicate with relatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	It will enable my child to relate to German speaking relatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	It will allow my child to identify with the German/Swiss/Austrian culture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	It will allow my child to learn more about his/her background.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	It will allow my child to have a strong sense of belonging with German speakers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-2 Your views on language learning.					
Please rate the extent to which you <u>disagree or agree</u> with the following statements.		Strongly disagree	Disagree	Agree	Strongly agree
18.	Learning German is as important as learning English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	Children learn English easily in mainstream school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	Speaking German constantly, negatively affects children's ability to master English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	It's important to speak mostly in English with children from infancy in order to improve their knowledge of English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	Growing up with two languages in the home is confusing for a child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Supporting English in the home is more important than supporting German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-3 Skills for helping your child learn German.Please rate the extent to which you disagree or agree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
24. My use of German has a direct influence on what my child will learn to say in German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I can teach my child German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Others have more influence on my child's German language learning than I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I make no difference in my child's German language learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I make a significant difference in my child's German language learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. I don't know how to help my child learn German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. I can influence my child's German language learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-4 Your child's German language learning.Please rate the extent to which you disagree or agree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
31. My child engages willingly in German studies (e.g. homework or other).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. My child avoids doing activities in German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. My child participates in German activities with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. My child asks me things related to his/her German studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. My child wants to learn German with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. My child is reluctant to speak German with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. My child expresses a lack of understanding when I address him/her in German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. My child is confident about his/her German skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-5 Beliefs about your role in your child's learning.

Please rate the extent to which you disagree or agree with the following statements.

I believe it is my responsibility to		Strongly disagree	Disagree	Agree	Strongly agree
39.	develop my child's German language skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40.	speak German to my child at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	practice German with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42.	revise my child's German schoolwork with him/her.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43.	teach my child German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44.	correct my child's German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45.	engage in German activities with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46.	provide resources in German for my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47.	encourage my child to learn German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48.	assist my child with learning German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-6 Your child's German teacher.

Please rate the extent to which you disagree or agree with the following statements.

My child's German teacher ...		Strongly disagree	Disagree	Agree	Strongly agree
49.	gives advice about how to assist my child with German at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50.	keeps me informed about my child's progress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51.	contacted me (e.g. e-mail, written note).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52.	asks me to help my child with German at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	forwards schoolwork if my child cannot attend on any one day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	assigns homework that involves parents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION C - YOUR INVOLVEMENT ACTIVITIES

C-1 What you do to help your child's German language learning.						
Please indicate <u>how often</u> you do the following activities with your child.						
		Never	A few times a year	Once or twice a month	Once or twice a week	Daily or almost every day
55.	Being close by when my child does his/her German studies.	<input type="checkbox"/>				
56.	Remind my child to do his/her German studies (e.g. schoolwork, reading).	<input type="checkbox"/>				
57.	Monitor my child's progress in German.	<input type="checkbox"/>				
58.	Schedule time for my child's German studies (e.g. schoolwork, reading).	<input type="checkbox"/>				
59.	Have rules in place for the amount of use of German and English media (e.g., TV, books, computer)	<input type="checkbox"/>				
60.	See that my child has a place for his/her resources in German (e.g., school things, books, games).	<input type="checkbox"/>				
61.	Organise catch ups for my child with other German speakers (i.e., locally or via the internet).	<input type="checkbox"/>				
62.	Take my child to community events where he/she meets German speakers	<input type="checkbox"/>				
63.	Check if my child uses/reads German books.	<input type="checkbox"/>				
64.	Put on German media for my child (e.g. music, movies, computer software).	<input type="checkbox"/>				
65.	Praise my child for his/her German studies.	<input type="checkbox"/>				
66.	Praise my child for his/her German studies in front of others.	<input type="checkbox"/>				
67.	Reward my child for his/her German studies.	<input type="checkbox"/>				
68.	Encourage my child's German language learning.	<input type="checkbox"/>				
69.	Ask my child to engage in activities in German.	<input type="checkbox"/>				
70.	Talk to my child about planning trips to a Germanic country.	<input type="checkbox"/>				

C-2 German resources you provide for your child.						
Please indicate <u>the amount</u> of resources you provide for your child.		None	One	Two or three	Four to ten	More than ten
71.	Books (e.g., stories, novels etc.)	<input type="checkbox"/>				
72.	Learning material (do not count books from German school)	<input type="checkbox"/>				
73.	Music	<input type="checkbox"/>				
74.	DVDs	<input type="checkbox"/>				
75.	Computer games	<input type="checkbox"/>				
76.	Computer learning software	<input type="checkbox"/>				
77.	Family games	<input type="checkbox"/>				
78.	Subscription to a German journal/magazine	<input type="checkbox"/>				
79.	Other (please specify).....	<input type="checkbox"/>				

C-3 What you do to help your child's German language learning.						
Please indicate <u>how often</u> you do the following activities.		Never	Sometimes	Half of the time	Mainly	Always
80.	Speak German to my child.	<input type="checkbox"/>				
81.	Speak English to my child.	<input type="checkbox"/>				
82.	Speak another language to my child (please specify).....	<input type="checkbox"/>				
83.	Ask my child questions in German.	<input type="checkbox"/>				
84.	Ask my child to respond in German.	<input type="checkbox"/>				

C-4 What you do to help your child's German language learning.

Please indicate how often you do the following activities.

	Never	A few times a year	Once or twice a month	Once or twice a week	Daily or almost every day
85. Model German sentences.	<input type="checkbox"/>				
86. Play games in German.	<input type="checkbox"/>				
87. Repeat German sentences for my child.	<input type="checkbox"/>				
88. Translate my child's sentences to German.	<input type="checkbox"/>				
89. Correct my child's German.	<input type="checkbox"/>				
90. Explain the meaning of words.	<input type="checkbox"/>				
91. Explain grammatical concepts.	<input type="checkbox"/>				
92. Demonstrate the correct use of certain words and phrases.	<input type="checkbox"/>				
93. Help my child with his/her German studies (e.g. schoolwork, reading).	<input type="checkbox"/>				
94. Check my child's understanding (e.g. schoolwork, reading).	<input type="checkbox"/>				
95. Revise with my child what he/she learnt at German school.	<input type="checkbox"/>				
96. Translate for my child information from German to English.	<input type="checkbox"/>				
97. Help my child with German homework.	<input type="checkbox"/>				
98. Oversee my child's German studies.	<input type="checkbox"/>				
99. Re-read/repeat instructions in German.	<input type="checkbox"/>				

SECTION D – YOUR LIFE CONTEXT

D-1 Your time.					
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.		Strongly disagree	Disagree	Agree	Strongly agree
100.	I have enough time to assist my child with German studies (e.g. homework).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101.	I have enough time to revise German school work with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102.	I have enough time to supervise my child's German studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103.	I have enough time to communicate with my child's German teacher.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
104.	I have enough time to practice German with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105.	I have enough time to engage in German activities with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D-2 Your skills and knowledge to support your child's German language learning.					
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.		Strongly disagree	Disagree	Agree	Strongly agree
106.	I know how to support my child's German language learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107.	I know enough German to help my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108.	I know enough about German grammar to help my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
109.	I know how to explain things to my child about this/her German studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110.	I know how to get German resources for my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION E –BACKGROUND INFORMATION

E-1 Your gender.

Male Female

E-2 What language do you mostly speak with your partner/spouse?

German English Other Please specify here:

E-3 Your country of birth.

Please specify here:

E-4 Your partner/spouse’s country of birth (if applicable).

Please specify here:

E-5 Your mother’s country of birth.

Please specify here:

E-6 Your father’s country of birth.

Please specify here:

E-7 How many years have you lived in Australia?

Please specify here:

E-8 Education - Please indicate your level of Education.

	Yes	No
Year 11 completed	<input type="checkbox"/>	<input type="checkbox"/>
Year 12 completed	<input type="checkbox"/>	<input type="checkbox"/>
Vocational qualifications (e.g., trade certificate or diploma)	<input type="checkbox"/>	<input type="checkbox"/>
Undergraduate degree (e.g., Bachelor degree)	<input type="checkbox"/>	<input type="checkbox"/>
Postgraduate degree (e.g., Masters, PhD)	<input type="checkbox"/>	<input type="checkbox"/>

Is there anything you would like to add? (Please turn the page for additional space.)

Thank you very much for completing this questionnaire!

Pilot Study II, PHIQ-GHL II



Parent Questionnaire "Parental Involvement in Children's German Community Language Learning"

What is this questionnaire about?

This survey will be a useful resource to address parents' and caregivers' needs to provide continuing support for those wishing to raise their children bilingually. For this reason questions will be asked about your views and beliefs, and German language matters in your child's home environment. A summary of results will be available at your German language school at the end of the study.

When I'm asked about <my child>, whom should I think about?

By "your child" we mean a child in your care. If you have more than one child attending a German language school, please respond to the questions in this questionnaire in relation to the oldest child attending a German language school.

Even though this questionnaire consists of several pages it is anticipated that it will only take you 20 minutes to complete it. Your responses are extremely valuable and we greatly appreciate your time.

Please note

Both, mothers and fathers, German speakers and non-German speakers are invited to fill out a questionnaire.

Your child attending a German school is viewed as a German language learner regardless of whether your child is a German native speaker or a beginner.

Many questions concern the German language and culture that you relate to. This includes any dialects of German, Austrian and Swiss German. "German" language is used at all times in order to simplify the questions.

SECTION A – BACKGROUND INFORMATION

A-1 Questions about your child.

1. Male Female
2. Age: _____
3. Country of birth _____ (If “Australia” please go to 5)
4. Age when moving to Australia: _____
5. Year level at mainstream school: _____
6. Attending German classes at mainstream school: Yes No

How old was your child when he/she started learning German?

7.
 - 0-3 years old
 - 4-6 years old
 - 7-9 years old
 - 10-12 years old
 - 13 years or older

Your child’s language proficiency in German.

8.	none	beginner	intermediate	advanced	native speaker level
Speaking	<input type="checkbox"/>				
Reading	<input type="checkbox"/>				
Writing	<input type="checkbox"/>				
Listening comprehension	<input type="checkbox"/>				

What is your relationship to this child?

9.
 - Mother
 - Father
 - Carer
 - Other (please specify)

SECTION B – YOUR VIEWS AND BELIEFS

B-1 Your views on language learning.		Strongly disagree	Disagree	Agree	Strongly agree
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.					
1.	Learning German is as important as learning English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Children learn English easily in mainstream school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Speaking German constantly, negatively affects children's ability to master English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	It's important to speak mostly in English with children from infancy in order to improve their knowledge of English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Growing up with two languages in the home is confusing for a child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Supporting English in the home is more important than supporting German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-2 Skills for helping your child learn German.		Strongly disagree	Disagree	Agree	Strongly agree
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.					
7.	My use of German has a direct influence on what my child will learn to say in German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	I can teach my child German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Others have more influence on my child's German language learning than I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	I make a significant difference in my child's German language learning, knowledge of English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	I can influence my child's German language learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-3 Your child's German teacher.		Strongly disagree	Disagree	Agree	Strongly agree
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.					
My child's German teacher ...					
12.	gives advice about how to assist my child with German at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	keeps me informed about my child's progress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	contacted me (e.g. e-mail, written note).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	asks me to help my child with German at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	forwards schoolwork if my child cannot attend on any one day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	assigns homework that involves parents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-4 Your child's German language learning.		Strongly disagree	Disagree	Agree	Strongly agree
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.					
My child ...					
18.	engages willingly in German studies (e.g. homework or other).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	avoids doing activities in German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	participates in German activities with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	asks me things related to his/her German studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	wants to learn German with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	is reluctant to speak German with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	expresses a lack of understanding when I address him/her in German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	is confident about his/her German skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B-5 Beliefs about your role in your child's learning.		Strongly disagree	Disagree	Agree	Strongly agree
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.					
I believe it is my responsibility to ...					
26.	develop my child's German language skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	provide resources in German for my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	encourage my child to learn German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	assist my child with learning German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30.	engage in German activities with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you don't speak any German, please go to **Section C**

B-6 Beliefs about your role in your child's learning.		Strongly disagree	Disagree	Agree	Strongly agree
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements.					
I believe it is my responsibility to ...					
31.	revise German schoolwork with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32.	teach my child German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33.	correct my child's German.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34.	speak German to my child at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	practice German with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION C - YOUR INVOLVEMENT ACTIVITIES

C-1 What you do to help your child's German language learning.						
Please indicate <u>how often</u> you do the following activities with your child.		Never	A few times a year	Once or twice a month	Once or twice a week	Daily or almost every day
36.	Being close by when my child does his/her German studies.	<input type="checkbox"/>				
37.	Remind my child to do his/her German studies (e.g. schoolwork, reading).	<input type="checkbox"/>				
38.	Monitor my child's progress in German.	<input type="checkbox"/>				
39.	Schedule time for my child's German studies (e.g. schoolwork, reading).	<input type="checkbox"/>				
40.	Have rules in place for the amount of use of German and English media (e.g., TV, books, computer)	<input type="checkbox"/>				
41.	See that my child has a place for his/her resources in German (e.g., school things, books, games).	<input type="checkbox"/>				
42.	Organise catch ups for my child with other German speakers (i.e., locally or via the internet).	<input type="checkbox"/>				
43.	Take my child to community events where he/she meets German speakers	<input type="checkbox"/>				
44.	Check if my child uses/reads German books.	<input type="checkbox"/>				
45.	Put on German media for my child (e.g. music, movies, computer software).	<input type="checkbox"/>				
46.	Praise my child for his/her German studies.	<input type="checkbox"/>				
47.	Praise my child for his/her German studies in front of others.	<input type="checkbox"/>				
48.	Reward my child for his/her German studies.	<input type="checkbox"/>				
49.	Encourage my child's German language learning.	<input type="checkbox"/>				
50.	Ask my child to engage in activities in German.	<input type="checkbox"/>				
51.	Talk to my child about trips to a Germanic country.	<input type="checkbox"/>				

C-2 German resources you provide for you child.						
Please indicate <u>the amount</u> of resources you provide for your child.		None	One	Two to three	Four to ten	More than ten
52.	Books (e.g., stories, novels etc.)	<input type="checkbox"/>				
53.	Learning material (do not count books from German school)	<input type="checkbox"/>				
54.	Music	<input type="checkbox"/>				
55.	DVDs	<input type="checkbox"/>				
56.	Computer games	<input type="checkbox"/>				
57.	Computer learning software	<input type="checkbox"/>				
58.	Family games	<input type="checkbox"/>				
59.	German journal/magazine	<input type="checkbox"/>				
60.	Other (please specify).....	<input type="checkbox"/>				

If you don't speak any German, please go to **Section D**

C-3 What you do to help your child's German language learning.						
Please indicate <u>how often</u> you do the following activities.		Never	Sometimes	Half of the time	Mainly	Always
61.	Speak German to my child.	<input type="checkbox"/>				
62.	Speak English to my child.	<input type="checkbox"/>				
63.	Speak another language to my child (please specify).....	<input type="checkbox"/>				
64.	Ask my child questions in German.	<input type="checkbox"/>				
65.	Ask my child to respond in German.	<input type="checkbox"/>				

C-1 What you do to help your child's German language learning.

Please indicate how often you do the following activities with your child.

	Never	A few times a year	Once or twice a month	Once or twice a week	Daily or almost every day
66. Model German sentences.	<input type="checkbox"/>				
67. Play games in German.	<input type="checkbox"/>				
68. Repeat German sentences for my child.	<input type="checkbox"/>				
69. Translate my child's sentences to German.	<input type="checkbox"/>				
70. Correct my child's German.	<input type="checkbox"/>				
71. Explain the meaning of words.	<input type="checkbox"/>				
72. Explain grammatical concepts.	<input type="checkbox"/>				
73. Demonstrate the correct use of certain words and phrases.	<input type="checkbox"/>				
74. Help my child with his/her German studies (e.g. schoolwork, reading).	<input type="checkbox"/>				
75. Check my child's understanding (e.g. schoolwork, reading).	<input type="checkbox"/>				
76. Revise with my child what he/she learnt at German school.	<input type="checkbox"/>				
77. Translate for my child information from German to English.	<input type="checkbox"/>				
78. Help my child with German homework.	<input type="checkbox"/>				
79. Oversee my child's German studies.	<input type="checkbox"/>				
80. Re-read/repeat instructions in German.	<input type="checkbox"/>				

SECTION D – YOUR LIFE CONTEXT

D-1 Your time.					
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements		Strongly disagree	Disagree	Agree	Strongly agree
I have enough time to ...					
81.	assist my child with German studies (e.g. homework).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82.	revise German school work with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83.	supervise my child's German studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84.	communicate with my child's German teacher.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85.	practice German with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86.	engage in German activities with my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D-2 Your skills and knowledge to support your child's German language learning.					
Please rate the extent to which you <u>disagree</u> or <u>agree</u> with the following statements		Strongly disagree	Disagree	Agree	Strongly agree
I know ...					
87.	how to support my child's German language learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
88.	enough German to help my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
89.	enough about German grammar to help my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90.	how to explain things to my child about his/her German studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91.	how to get German resources for my child.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is there anything you would like to add?

Thank you very much for completing this questionnaire!

Main Study, PHIQ-GHL III

Parent Questionnaire

“Parental Involvement in Children’s German Community Language Learning”

What is this questionnaire about? This survey will be a useful resource to address parents’ and caregivers’ needs to provide continuing support for those wishing to raise their children with more than one language. For this reason, questions will be asked about your views and beliefs, and German language matters in your child’s home environment. A summary of results will be available at your German language school at the end of the study.

When I’m asked about “my child”, who should I think about? By “your child” we mean a child in your care who is five years old or older and is attending a German language school. If you have more than one child attending a German language school, please respond to the questions in this questionnaire in relation to the oldest child attending a German language school.

Even though this questionnaire consists of several pages it is anticipated that it will only take you 10 minutes to complete it. Your responses are extremely valuable and we greatly appreciate your time.

Please note

Both parents, German speakers and non-German speakers are invited to fill out a questionnaire.

Your child attending a German school is viewed as a German language learner regardless of whether your child is a German native speaker or a beginner.

Many questions concern the German language and culture that you relate to. This includes any dialects of German, Austrian and Swiss German. “German” language is used at all times in order to simplify the questions.

Please try to answer all items as best as you can, even if you are not absolutely certain. There are no right or wrong answers.

Section A Questions About Your Child

Please respond to the questions in this questionnaire in relation to your oldest child attending a German language school.

A1 What is your child's gender?

- Male
- Female

A2 What is your child's age?

- 5 years - 19 years

A3 Where was your child born?

- USA
- Canada
- Great Britain
- Australia
- Germany
- Austria
- Switzerland (Germanic part)
- Other

A3.1 Where was your child born? Please specify: (If 'other' is selected for A3)

A3.2 How old was your child when moving to the USA? (If 'USA' is not selected for A3)

- Response options ranged from 'under 1 year old' to '18 years old'

A4 What is the name of your child's German language school? Please note, in the drop box below you will find German Language Schools ordered by state. In case your German Language School is not on the list, please select "other".

- Response options included 91 'German language schools'

A4.1 What is the name of your child's German language school? Please specify: (If 'other' is selected for A4)

A5 What is your child's year level at regular school?

- Response options ranged from 'Kindergarten' to '12th Grade'

A6 Is your child attending German classes at his/her regular school?

- Yes
 No

A7 Please indicate your child's language proficiency in German.

	None	Beginner	Intermediate	Advanced	Native speaker level
Speaking	<input type="radio"/>				
Reading	<input type="radio"/>				
Writing	<input type="radio"/>				
Listening comprehension	<input type="radio"/>				

A8 How old was your child when he/she started learning German? (Please indicate your child's age before German school, if applicable.)

- 0-3 years old
 4-6 years old
 7-9 years old
 10-12 years old
 13 years or older

Section B Questions About You and Your Family Context

B1 What is your relationship to this child?

- Father
- Male caregiver
- Mother
- Female caregiver
- Other

B1.1 What is your relationship to this child? Please specify: (If 'other' is selected for B1)

B2 Where were you born?

- USA
- Canada
- Great Britain
- Australia
- Germany
- Austria
- Switzerland (Germanic part)
- Other

B2.1 Where were you born? Please specify: (If 'other' is selected for B2)

B2.2 How many years have you lived in the USA? Please specify: (If 'USA' is not selected for B2)

B3 Do you have German/Austrian/Swiss-German ancestry?

- Yes
- No

B4 Does your partner/spouse (if applicable) have German/Austrian/Swiss-German ancestry?

- Yes
- No
- N/A

B5 What language do you mostly speak with your partner/spouse (if applicable)?

- German
- English
- Both, English and German
- Other
- N/A

B5.1 What language do you mostly speak with your partner/spouse? Please specify: (If 'other' is selected for B5)

B6 In your family, who speaks German to your child? (Multiple answers possible)

- I do
- My spouse/partner
- Sibling/s
- Grandparent/s
- Au pair/nanny
- Other
- In my family nobody speaks German to my child

B6.1 In your family, who speaks German to your child? Please specify: (If 'other' is selected for B6)

B7 Please indicate your language proficiency in German.

	None	Beginner	Intermediate	Advanced	Native speaker level
Speaking	<input type="radio"/>				
Reading	<input type="radio"/>				
Writing	<input type="radio"/>				
Listening comprehension	<input type="radio"/>				

B8 Education - Please indicate your highest completed level of Education.

- Grade 11
- Grade 12 - High school diploma
- Some College - no degree
- College degree (e.g. A. A. occupation/academic) or overseas Vocational qualifications (e.g., trade certificate or diploma)
- Bachelor's degree
- Master's degree
- Professional degree
- Doctoral degree (e.g. PhD)

B9 Have you ever lived in Germany/Austria/Switzerland (German part) with your family?

- Yes
- No

B9.1 How long have you lived in Germany/Austria/Switzerland (German part) with your family?
Please specify: (If 'yes' is selected for B9)

B10 Is there anything you would like to add about your family context? (Open-ended questions,
end of the demographic section)

Section C Your Views and Beliefs

C1 How important are the following reasons for your child's German language learning? Please rate the importance of the following statements to you.

	Not important	Somewhat important	Important	Very important
1. It will allow my child to learn more about German history, traditions, and customs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. It will allow my child to have a strong sense of belonging with German speakers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. It will allow my child to identify with the German/Swiss/Austrian culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C2 Skills for helping your child learn German. Please indicate the extent to which you disagree or agree with the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. My use of German has a direct influence on what my child will learn to say in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Others have more influence on my child's German language learning than I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I make a significant difference in my child's German language learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I can influence my child's German language learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C3 Your child's German teacher. Please indicate the extent to which you disagree or agree with the following statements.

My child's German teacher...

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. gives advice about how to assist my child with German at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. keeps me informed about my child's progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. asks me to help my child with German at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. forwards schoolwork if my child cannot attend on any one day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C4 Your child's German language learning. Please indicate the extent to which you disagree or agree with the following statements.

My child ...

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. engages willingly in German studies (e.g. homework or other).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. participates in German activities with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. is reluctant to speak German with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. is confident about his/her German skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C5 Beliefs about your role in your child's German language learning. Please indicate the extent to which you disagree or agree with the following statements.

I believe it is my responsibility to...

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. provide resources in German for my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. assist my child with learning German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. engage in German activities with my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. revise German schoolwork with my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. teach my child German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. practice German with my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section D Your Life Context

D1 Your available time. Please indicate the extent to which you disagree or agree with the following statements.

I have enough time...

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. to assist my child with German studies (e.g. homework or other).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. to revise German school work with my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. to supervise my child's German studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. to practice German with my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. to engage in German activities with my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D2 Your skills and knowledge to support your child's German language learning. Please indicate the extent to which you disagree or agree with the following statements.

I know...

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. how to support my child's German language learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. enough German to help my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. enough about German grammar to help my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. how to explain things to my child about his/her German studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. how to get German resources for my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section E Your Involvement Activities

E1 What do you do to help your child's German language learning? Please indicate the how often you do the following activities with your child.

	Never	A few times a year	Once or twice a month	Once or twice a week	Daily or almost every day
1. Schedule time for my child's German studies (e.g. schoolwork, reading).	<input type="radio"/>				
2. Check if my child uses/reads German books.	<input type="radio"/>				
3. Put on German media for my child (e.g. music, movies, software on electronic devices).	<input type="radio"/>				
4. Praise my child for his/her German studies.	<input type="radio"/>				
5. Ask my child to engage in activities in German.	<input type="radio"/>				
6. Encourage my child's German language learning.	<input type="radio"/>				
7. Correct my child's German.	<input type="radio"/>				
8. Explain the meaning of words.	<input type="radio"/>				
9. Demonstrate the correct use of certain words and phrases.	<input type="radio"/>				
10. Explain grammatical concepts.	<input type="radio"/>				
11. Repeat German sentences for my child.	<input type="radio"/>				
12. Revise with my child what he/she learned at German school.	<input type="radio"/>				
13. Oversee my child's German studies.	<input type="radio"/>				
14. Help my child with his/her German studies (e.g. schoolwork, reading).	<input type="radio"/>				
15. Check my child's understanding (e.g. schoolwork, reading).	<input type="radio"/>				

E3 What language do you speak with your child? Please indicate the how often you speak German and English with your child.

	Never	Sometimes	Mainly	Always
1. I speak German to my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I speak English to my child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I ask my child questions in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I ask my child to respond in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

E3.1 What language do you speak with your child? Please specify: (If 'never' is selected for E3)

E4 Thank you very much for taking part in this survey and completing this questionnaire! Is there anything else you would like to add? (Open-ended questions, end of questionnaire)

Appendix D: Ethics approval

FINAL APPROVAL NOTICE

Project No.: 5933

Project Title: A framework to guide investigations into parents' home and school involvement in children's German community language learning: Testing a theoretical model

Principal Researcher: Ms Ulrike Glinzner

Email: glin0002@flinders.edu.au

Address: [Redacted]

Approval Date:	29 August 2013	Ethics Approval Expiry Date:	1 January 2015
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The above proposed project has been **approved** on the basis of the information contained in the application, its attachments and the information subsequently provided.

Appendix E: Permission letters

Response from the central agency for German schools abroad

Mon, Jul 15, 2013, 8:00 PM

Last-Wyka, Cornelia (ZfA 1) <Cornelia.Last-Wyka@bva.bund.de>

Sehr geehrte Frau Gltizner,

es tut mir leid, dass ich erst heute dazu komme, Ihnen zu antworten, aber das Schuljahrsende ist wie immer sehr arbeitsreich gewesen.

Das ist sehr nett, dass Sie daran gedacht haben, die Zentralstelle von Ihrem Vorhaben zu informieren.

Ein förmliches Einverständnis seitens der Zentralstelle ist allerdings nicht nötig und nicht möglich, da die Datenhoheit allein bei den Schulen liegt. Sie sollten sich daher mit Ihrem Anliegen direkt an die Schulen wenden. Vielleicht kann ein vorheriger Kontakt mit den jeweils zuständigen Fachberatern sinnvoll sein. Da ich nun nicht weiß, welche Schule in welcher Region Sie anschreiben wollen, gebe ich Ihnen hier die Kontaktdaten von allen, die zurzeit dort sind: atlanta@auslandsschulwesen.de; chicago@auslandsschulwesen.de; washington@auslandsschulwesen.de; toronto@auslandsschulwesen.de; Wieland.Petermann@gov.ab.ca (Edmonton); sanfrancisco@auslandsschulwesen.de

Ich wünsche Ihnen viel Erfolg bei Ihrer Recherche! Gern würde ich - so das möglich ist - natürlich dann irgendwann einmal einen Blick auf die Ergebnisse werfen können.

Mit bestem Gruß
Cornelia Last-Wyka

Translation

Dear Ms Glinzner,

I am sorry that I am only today responding to you, but the end of the school year end, as always, has been very busy.

That's very nice that you have thought to inform the central office of your project.

However, a formal agreement on the part of the central body is not necessary and not possible because the data sovereignty lies with the schools. You should therefore contact directly the schools. Maybe it is useful to contact the regional German language advisors.

Since I do not know which schools you invite to participate, I provide you with all their contact details: atlanta@auslandsschulwesen.de ; chicago@auslandsschulwesen.de ; washington@auslandsschulwesen.de ; toronto@auslandsschulwesen.de ;

Wieland.Petermann@gov.ab.ca (Edmonton); sanfrancisco@auslandsschulwesen.de

I wish you every success in your research! I gladly would like - if possible - someday take a look at the results.

Best regards,

Cornelia Last Wyka

Response from the ethnic schools board

Barrachina, Jeannette (DECD) Jeannette.Barrachina@sa.gov.au [via sa.gov.au](mailto:Jeannette.Barrachina@sa.gov.au)

6/13/13

Hello Ulrike

My sincere apologies for the delay in answering this question. Staffing has been a major issue for us this year.

On the matter of your ethics approval for research involving the School for the German Language, Adelaide, the Ethnic Schools Board has no objection as long as the School itself gives its permission.

It is the intention of the Ethnic Schools Board to have a formal research ethics policy in the future. It is to be modelled on the DECD policy but somewhat shorter. Just at present we will not have this policy ready for you to complete in time to carry out your research. However we expect that the ethics approval required by your university would cover the major points that we would include in a formal policy...e.g. the anonymity of students and teachers and families and the right of those involved in the research to withdraw from the project at any point should they feel uncomfortable with the questions or the process.

The Ethnic Schools Board would be interested to read your findings. We wish you well with your research.

Regards

Jeannette Barrachina

Appendix F: Variable description and coding scheme

Pilot Study I

Table 58

Variable Description and Coding Scheme for Pilot Study I

Variable Name	Description	Coding Scheme
	Missing response	99
	N/A	89
	Invalid response	97
PID	Parent ID: Participant identification	No special code
CsexA01 (Section A – Child background)	Child gender	1 = Male 2 = Female
CageA02	Child age in years	No special code
CbornA03	Child country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
CauA04	Child age moving to Australia	No special code
PCrelA05	Parent relationship to child	1 = Father 2 = Mother 3 = Carer 4 = Other
CsibA06	Number of siblings speaking German	No special code
Csib1A06a	Age of oldest sibling	No special code
Csib2A06b	Age of 2 nd oldest sibling	No special code
Csib3A06c	Age of 3 rd oldest sibling	No special code
Csib4A06d	Age of 4 th oldest sibling	No special code
CgradRA07	Grade/Year level at regular school	0 = Preschool/Reception Class 1 = Year 1 ... 12 = Year 12
CgradGSA08	Grade/Year level at GHL school	0 = Preschool/Reception Class 1 = Year 1 ... 12 = Year 12
CgsA09	Name of child's GHL school	No special code
CygsA10	Years attending GHL school	0 = Less than one year 1 = One year ...
CGRA11	German lessons at regular school	1 = Yes 2 = No

CGageA12	Child age when starting German	0 = 0 - 3 years old 1 = 4 - 6 years old 2 = 7 - 9 years old 3 = 10 - 12 years old 4 = 13 years and older
CGspA13a	Child German proficiency Speaking	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGreaA13b	Student German proficiency Reading	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGwriA13c	Child German proficiency Writing	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGlisA13d	Child German proficiency Listening	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
PsexE01 (Section E – Parent background)	Parent gender	1 = Male 2 = Female
PlgE02	Parent home language with partner/spouse	1 = German 2 = English 3 = Other 4 = German and English
PbornE03	Parent country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
SbornE04	Spouse/partner place of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
PomaE05	Mother place of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other

PopaE06	Father place of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
PauE07	Parent years lived in Australia	No special code
PeduE08	Parent highest completed level of education	1 = Year 11 completed 2 = Year 12 completed 3 = Vocational qualifications 4 = Undergraduate degree 5 = Postgraduate degree
P_EndQ	Parent comment to end-of-questionnaire open question	No special code
B1GoQ01-17 (Section B1– Goal orientations)	Goal orientations	1 = Not important 2 = Somewhat important 3 = Important 4 = Very important
B2LBQ18-23	Language beliefs	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B3SEQ24-30	Self-efficacy	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B4CIQ31-38	Perceived child invitations	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B5RBQ39-48	Role belief	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B6TIQ49-54	Perceived teacher invitations	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
C1OQ55-70 and C4Q85-99	Parental involvement activities	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day
C2InvQ71-79a	Resources in the home	0 = None 1 = One 2 = Two or three 3 = Four to ten 4 = More than ten
C2InvQ79b	Parent comment: other German resources in the home	No special code

C3InvQ80-84	Parental involvement activities: Speaking the German HL	1 = Never 2 = Sometimes 3 = Half of the time 4 = Mainly 5 = Always
C3InvQ82b	Parent comment: other language	1 = French 2 = Croatian 3 = Dutch
D1TimQ100-105 (Section D1– Time)	Available time	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
D2SKQ106	Knowledge and skills	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree

Pilot Study II

Table 59

Variable Description and Coding Scheme for Pilot Study II

Variable Name	Description	Coding Scheme
	Missing response	99
	N/A	89
	Invalid response	97
PID	Parent ID: Participant identification	No special code
CsexA01 (Section A – Child background)	Child gender	1 = Male 2 = Female
CageA02	Child age in years	No special code
CbornA03	Child country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
CauA04	Child age arriving in Australia	No special code
CgradRA05	Grade/Year level at regular school	0 = Preschool/Reception Class 1 = Year 1 ... 12 = Year 12
CGRA06	German lessons at regular school	1 = Yes 2 = No
CGageA07	Child age when starting German	0 = 0 - 3 years old 1 = 4 - 6 years old 2 = 7 - 9 years old 3 = 10 - 12 years old 4 = 13 years and older
CGspA08a	Child German proficiency Speaking	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGreaA08b	Student German proficiency Reading	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGwriA08c	Child German proficiency Writing	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level

CGlisA08d	Child German proficiency Listening	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
PCrelA09	Parent relationship to child	1 = Father 2 = Mother 3 = Carer 4 = Other
PGhomeA10a	Father speaks German	1 = Yes 2 = No
PGhomeA10b	Mother speaks German	1 = Yes 2 = No
PGhomeA10c	Carer speaks German	1 = Yes 2 = No
PGhomeA10d	Nanny speaks German	1 = Yes 2 = No
PGhomeA10e	Sibling speaks German	1 = Yes 2 = No
Sibhome10a	Age of oldest sibling	No special code
Sibhome10b	Age of 2 nd oldest sibling	No special code
Sibhome10c	Age of 3 rd oldest sibling	No special code
PSlgA11	Parent home language with partner/spouse	1 = German 2 = English 3 = Other
PbornA12	Parent country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
PomaA13	Mother's country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
PopaA14	Father's country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
SbornA15	Spouse country of birth	0 = Australia 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Other English country 5 = Other
PauA16	Parent years lived in Australia	No special code

PeduA17	Parent highest completed level of education	1 = Year 11 completed 2 = Year 12 completed 3 = Vocational qualifications 4 = Undergraduate degree 5 = Postgraduate degree
P_EndQ	Parent comment to end-of-questionnaire open question	No special code
B1LBQ01-06	Language beliefs	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B2SEQ07-11	Self-efficacy	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B3TIQ12-17	Perceived teacher invitations	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B4CIQ18-25	Perceived child invitations	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B5RBQ26-30	Role belief I	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
B6RBQ31-35	Role belief II	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
C1Q36-51	Parental involvement activities: Regulating GHL input Motivating GHL learning	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day
C2Q52-60a	Resources in the home	0 = None 1 = One 2 = Two or three 3 = Four to ten 4 = More than ten
C2Q60b	Parent comment: other German resources in the home	No special code
C3Q61-65	Parental involvement activities: Speaking the German HL	1 = Never 2 = Sometimes 3 = Half the time 4 = Mainly 5 = Always

C4Q66-80	Parental involvement activities: Teaching the GHJ Assisting with GHJ studies	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day
D1TimQ81-86 (Section D1– Time)	Available time	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
D2SKQ87-91	Knowledge and skills	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree

Main Study

Table 60

Variable Description and Coding Scheme for the Main Study

Variable Name	Description	Coding Scheme
	Missing response	99
	N/A	89
	Invalid response	97
PID	Parent ID: Participant identification	No special code
CsexA01 (Section A – Child background)	Child gender	1 = Male 2 = Female
CageA02	Child age in years	No special code
CbornA03	Child country of birth	0 = USA 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Canada 5 = Great Britain 6 = Other
CbornA03.1	Please specify: Where was your child born?	No special code
CauA03.2	How old was your child when moving to the USA?	No special code
CgsA04	Name of child's GHL school	List of GHL schools in the USA
CgsA04.1	Please specify: What is the name of your child's German language school?	No special code
CgradRA05	Grade/Year level at German school	0 = Kindergarten 1 = 1 st Grade ... 12 = 12 th Grade
CGRA06	German lessons at regular school	1 = Yes 2 = No
CGspA07.1	Child German proficiency Speaking	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGreaA07.2	Student German proficiency Reading	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level

CGwriA07.3	Child German proficiency Writing	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGlisA07.4	Child German proficiency Listening	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
CGageA08	Child age when starting German	0 = 0 - 3 years old 1 = 4 - 6 years old 2 = 7 - 9 years old 3 = 10 - 12 years old 4 = 13 years and older
PCrelB01	Parent relationship to child	1 = Father 2 = Mother 3 = Male caregiver 4 = Female caregiver 5 = Other
PCrelB01.1	Please specify: What is your relationship to this child?	No special code
Psex	Parent gender	1 = Male 2 = Female
PbornB02	Parent country of birth	0 = USA 1 = Germany 2 = Austria 3 = Switzerland (Germanic part) 4 = Canada 5 = Great Britain 6 = Other
PbornB02.1	Please specify: Where were you born?	No special code
PUSB02.2	Please specify: How many years have you lived in the USA?	No special code
PancB03	Do you have German/Austrian/Swiss- German ancestry?	1 = Yes 2 = No
SancB04	Does your partner/spouse have German/Austrian/Swiss-German ancestry?	1 = Yes 2 = No
PSlgB05	Parent home language with partner/spouse	1 = German 2 = English 3 = Both, English and German 4 = Other
PSlgB05.1	Please specify: What language do you mostly speak with your partner/spouse?	No special code
PGhomeB06.1	In your family, who speaks German to your child?-I do	1 = Yes 2 = No

SGhomeB06.2	In your family, who speaks German to your child?-My spouse/partner	1 = Yes 2 = No
SibGhomeB06.3	In your family, who speaks German to your child?-Sibling/s	1 = Yes 2 = No
GranGhomeB06.4	In your family, who speaks German to your child?-Grandparent/s	1 = Yes 2 = No
ApGhomeB06.5	In your family, who speaks German to your child?-Au pair/ nanny	1 = Yes 2 = No
GhomeB06.6	In your family, who speaks German to your child?-Other	1 = Yes 2 = No
NoGhomeB06.7	In your family, who speaks German to your child?-Nobody	1 = Yes 2 = No
PGspB07.1	Parent's language proficiency in German: Speaking	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
PGreaB07.2	Parent's language proficiency in German: Reading	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
PGwriB07.3	Parent's language proficiency in German: Writing	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
PGlisB07.4	Parent's language proficiency in German: Listening comprehension	1 = None 2 = Beginner 3 = Intermediate 4 = Advanced 5 = Native German speaker level
PG_grouping	Sample grouping: Parent German proficiency native vs non native speaker level	1 = Native speaker level 2 = Non-native speaker level
PeduQ08	Parent highest completed level of education	1 = Grade 11 completed 2 = Grade 12 – High school diploma 3 = Some college – no degree 4 = College degree (e.g., A.A. occupational/academic) or overseas vocational qualification 5 = Bachelor's degree 6 = Master's degree 7 = Professional degree 8 = Doctoral degree (e.g., PhD)
PGlandB09	Have you ever lived in Germany/Austria/Switzerland (Germanic part) with your family?	1 = Yes 2 = No

PGlandB09.1	Please specify: How long have you lived in Germany/Austria/Switzerland (Germanic part) with your family?	No special code
P_EndQB	Is there anything you would like to add about your family context?	No special code
C1GoQ1-3 (Section C)	Integrative goal orientation II (Group belongingness)	1 = Not important 2 = Somewhat important 3 = Important 4 = Very important
C2SEQ1-4	Self-efficacy	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
C3TIQ1-4	Perceived teacher invitations	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
C4CIQ1-4	Perceived child invitations	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
C5RBQ1-6	Role belief	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
D1TimQ1-5 (Section D)	Available time	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
D2SKQ1-5	Knowledge and skills	1 = Strongly disagree 2 = Disagree 3 = Agree 4 = Strongly agree
E01RegQ1-3	Parental involvement activities: Regulating GHL input	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day
E05MotQ4-6	Parental involvement activities: Motivating GHL learning	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day
E07TeaQ7-11	Parental involvement activities: Teaching the GHL	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day

E12AQ12-15	Parental involvement activities: Assisting with GHL studies	1 = Never 2 = A few times a year 3 = Once or twice a month 4 = Once or twice a week 5 = Daily or almost every day
E3SpQ1-4	Parental involvement activities: Speaking the GHL	1 = Never 2 = Sometimes 3 = Mainly 4 = Always
E03.1	Please specify: What language do you speak with your child? (if never is selected for speaking German)	No special code
P_EndQE	Is there anything else you would like to add?	No special code

Appendix G: Codes for missing values

Table 61

Condition for Assigning Missing Values for Pilot Study I, Pilot Study II, and Main Study

Missing Value	Condition for Missing Value
97	For invalid responses: Multiple response categories marked: <input type="checkbox"/> <input type="checkbox"/> X X No response category marked: <input type="checkbox"/> <input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
98	If a condition was assigned to a section and the condition was not fulfilled: If you <u>don't</u> speak any German, please go to Section C (Pilot II) If parents commented "N/A".
99	All other missing data

Appendix H: Sample

Sample Pilot Study I

Table 62

Parents' Demographic Information, Pilot Study I

	Participants N=49	
	N	Percentage
Parent Gender		
Female	30	61.2
Male	19	38.8
Missing	0	0.0
Parent country of birth		
Australia	18	36.7
Other English-speaking countries	1	2.0
Germany	20	40.8
Austria	1	2.0
Switzerland	4	8.2
Other	5	10.2
Missing	0	0.0
Ancestry: Responding parents' fathers' and mothers' country of birth		
English	16	38.8
German	23	4.1
English/German	1	32.7
English/Other HL	2	0.0
German/Other HL	2	6.1
Other HL	4	16.3
Missing	1	2.0
Spouse country of birth		
Australia	19	38.8
Other English-speaking countries	2	4.1
Germany	16	32.7
Austria	0	0.0
Switzerland	3	6.1
Other	8	16.3
Missing	1	2.0
Home language with spouse		
German	12	24.5
English	33	67.3
Other	3	6.1
Missing: N/A	1	2.0
Highest education level		
Year 11 completed	1	2.0
Vocational qualifications	15	30.6
Undergraduate degree	10	20.4
Postgraduate degree	23	46.9
Missing	0	0.0

Table 63

Children's Demographic Information, Pilot Study I

	Participants N=49	
	N	Percentage
Child age		
4-6 Years old	9	18.4
7-11 Years old	18	36.7
12-14 Years old	10	20.4
15-17 Years old	8	16.3
18 Years old and over	3	6.1
Missing	1	2.0
Child Age starting learning German		
0-3 Years old	30	61.2
4-6 Years old	13	26.5
7-9 Years old	3	6.1
10-12 Years old	0	0.0
13 Years old and older	1	2.0
Missing	2	4.1
Child German skills Speaking		
Beginner	8	16.3
Intermediate	15	30.6
Advanced	12	24.5
Native speaker level	12	24.5
Missing	2	4.1
Child country of birth		
Australia	37	75.5
Germany	5	10.2
Austria	0	0.0
Switzerland	1	2.0
Other	5	10.2
Missing	1	2.0
Child Grade regular school		
Pre-Kindergarten to Grade 1	10	20.4
Grade 2 to Grade 3	11	22.4
Grade 4 to Grade 6	8	16.3
Grade 7 to Grade 9	7	14.3
Grade 10 to Grade 12	12	24.5
Missing	1	2.0
Child Grade German school		
Pre-Kindergarten to Grade 1	11	22.4
Grade 2 to Grade 3	5	10.2
Grade 4 to Grade 6	13	26.5
Grade 7 to Grade 9	7	14.3
Grade 10 to Grade 12	11	22.4
Missing	2	4.1
German at regular school		
Yes	6	12.2
No	42	85.7
Missing	1	2.0

Sample Pilot Study II

Table 64

German Speakers' Demographic Information, Pilot Study II

	Participants N=173	
	N	Percentage
Relationship to child		
Father	56	32.6
Mother	116	67.4
Missing	0	0.0
Parent country of birth		
Australia	55	32.0
Other English-speaking countries	6	3.5
Germany	86	50.0
Austria	6	3.5
Switzerland	3	1.7
Other	16	9.3
Missing	0	0.0
Ancestry: Responding parents' fathers' and mothers' country of birth		
English	32	18.6
German	94	54.7
English/German	14	8.1
English/Other HL	2	1.2
German/Other HL	11	6.4
Other HL	19	11.0
Missing	0	0.0
Spouse country of birth		
Australia	82	47.7
Other English-speaking countries	11	6.4
Germany	36	20.9
Austria	4	2.3
Switzerland	1	0.6
Other	32	18.6
N/A	4	2.3
Missing	2	1.2
Home language with spouse		
German	27	15.7
English	131	76.2
German and English	1	0.6
Other	9	5.2
N/A	4	2.3
Missing	0	0.0
Highest education level		
Grade 11 completed	1	0.6
Grade 12 completed	1	0.6
Vocational qualifications	27	15.7
Undergraduate degree	62	36.0
Postgraduate degree	80	46.5
Missing	1	0.6

Table 65

Demographic Information of Children of German Speakers, Pilot Study II

	Participants N=173	
	N	Percentage
Child gender		
Male	77	44.8
Female	95	55.2
Missing	0	0.0
Child age		
3-6 Years old	56	32.6
7-11 Years old	82	47.7
12-14 Years old	25	14.5
15-17 Years old	6	3.5
18 Years and over	0	0.0
Missing	3	1.7
Child age starting learning German		
0-3 Years old	124	72.1
4-6 Years old	35	20.3
7-9 Years old	9	5.2
10-12 Years old	3	1.7
13 Years old and older	1	0.6
Missing	0	0.0
Child German skills for speaking		
None	4	2.3
Beginner	57	33.1
Intermediate	46	26.7
Advanced	26	15.1
Native speaker level	38	22.1
Missing	1	0.6
Child country of birth		
Australia	141	82.0
Other English-speaking countries	3	1.7
Germany	15	8.7
Austria	4	2.3
Switzerland	0	0.0
Other	7	4.1
Missing	2	1.2
Child Grade regular school		
Pre-Kindergarten to Grade 1	67	39.0
Grade 2 to Grade 3	37	21.5
Grade 4 to Grade 6	38	22.1
Grade 7 to Grade 9	22	12.8
Grade 10 to Grade 12	4	2.3
Missing	4	2.3
German at regular school		
Yes	20	11.6
No	150	87.2
N/A	1	0.6
Missing	1	0.6

Table 66

Non-German Speakers' Demographic Information, Pilot Study II

	Participants N=31	
	N	Percentage
Relationship to child		
Father	12	38.7
Mother	19	61.3
Missing	0	0.0
Parent country of birth		
Australia	18	58.1
Other English-speaking countries	6	19.4
Germany	0	0.0
Austria	0	0.0
Switzerland	0	0.0
Other	7	22.6
Missing	0	0.0
Ancestry: Responding parents' fathers' and mothers' country of birth		
English	19	61.3
German	0	0.0
English/German	3	9.7
English/Other HL	1	3.2
German/Other HL	0	0.0
Other HL	8	25.8
Missing	0	0.0
Spouse country of birth		
Australia	14	45.2
Other English-speaking countries	1	3.2
Germany	8	25.8
Austria	0	0.0
Switzerland	1	3.2
Other	6	19.4
N/A	0	0.0
Missing	1	3.2
Home language with spouse		
German	0	0.0
English	26	83.9
German and English	0	0.0
Other	0	16.1
N/A	0	0.0
Missing	0	0.0
Highest education level		
Grade 11 completed	0	0.0
Grade 12 completed	0	0.0
Vocational qualifications	5	16.1
Undergraduate degree	13	41.9
Postgraduate degree	13	41.9
Missing	0	0.0

Table 67

Demographic Information of Children of Non-German Speakers, Pilot Study II

	Participants N=31	
	N	Percentage
Child gender		
Male	13	41.9
Female	18	58.1
Missing	0	0.0
Child age		
3-6 Years old	8	25.8
7-11 Years old	13	41.9
12-14 Years old	6	19.4
15-17 Years old	4	12.9
18 Years and over	0	0.0
Missing	0	0.0
Child age starting learning German		
0-3 Years old	8	25.8
4-6 Years old	13	41.9
7-9 Years old	7	22.6
10-12 Years old	1	3.2
13 Years old and older	3	6.5
Missing	0	0.0
Child German skills for speaking		
None	2	6.5
Beginner	16	51.6
Intermediate	9	29.0
Advanced	2	6.5
Native speaker level	1	3.2
Missing	1	3.2
Child country of birth		
Australia	21	67.7
Other English-speaking countries	2	6.5
Germany	1	3.2
Austria	0	0.0
Switzerland	1	3.2
Other	6	19.4
Missing	0	0.0
Child Grade regular school		
Pre-Kindergarten to Grade 1	11	35.5
Grade 2 to Grade 3	6	19.4
Grade 4 to Grade 6	4	12.9
Grade 7 to Grade 9	6	19.4
Grade 10 to Grade 12	4	12.9
Missing	0	0.0
German at regular school		
Yes	4	12.9
No	27	87.1
Missing	0	0.0

Sample Main Study

Table 68

Summary of GHL Experts' Demographic Information, Main Study

	Participants N=185	
	N	Percentage
Parent relationship to child		
Father	50	27.0
Mother	131	70.8
Other	4	2.2
Missing	0	0.0
Parent country of birth		
USA	20	10.8
Canada	2	1.1
Great Britain	0	0.0
Germany	133	71.9
Austria	9	4.9
Switzerland	9	4.9
Other	12	6.5
Missing	0	0.0
Parent (born in German-speaking country) number of years living in the US		
Up to five years	26	14.1
6 – 10 years	29	15.7
11 – 20 years	65	35.1
More than 20 years	28	15.1
Missing	1	0.5
Parent GHL/Austrian/Swiss-GHL ancestry		
Yes	183	98.9
No	2	1.1
Missing	0	0.0
Spouse GHL/Austrian/Swiss-GHL ancestry		
Yes	71	38.4
No	112	60.5
N/A	2	1.1
Missing	0	0.0
Who speaks GHL with the child?		
Parent	121	65.4
Spouse	3	1.6
Parent and spouse	53	28.6
Only others	4	2.2
No one	4	2.2
Missing	0	0.0
Home language with spouse		
GHL	51	27.6
English	96	51.9
GHL and English	27	14.6
Other	9	4.9
N/A	2	1.1
Missing	0	0.0

Parent GHIL proficiency: Speaking		
None	0	0.0
Beginner	0	0.0
Intermediate	0	0.0
Advanced	0	0.0
Native speaker level	185	100.0
Missing	0	0.0
Parent GHIL proficiency: Reading		
None	0	0.0
Beginner	0	0.0
Intermediate	1	.5
Advanced	5	2.7
Native speaker level	179	96.8
Missing	0	0.0
Parent GHIL proficiency: Writing		
None	0	0.0
Beginner	0	0.0
Intermediate	4	2.2
Advanced	6	3.2
Native speaker level	175	94.6
Missing	0	0.0
Parent GHIL proficiency: Listening		
None	0	0.0
Beginner	0	0.0
Intermediate	0	0.0
Advanced	1	0.5
Native speaker level	184	99.5
Missing	0	0.0
Highest education level		
Grade 11 completed	1	0.5
Grade 12 – High school diploma	4	2.2
Some college- no degree	7	3.8
College degree or overseas vocational qualifications	23	12.4
Bachelor's degree	27	14.6
Master's degree	76	41.1
Professional degree	17	9.2
Doctoral degree	30	16.2
Missing	0	0.0
Lived in Germany/Austria/Switzerland (GHIL part) with family? – in qual part		
Yes	91	49.2
No	94	50.8
Missing	0	0.0

Table 69

Summary of GHL Non-Experts' Demographic Information, Main Study

	Participants N=128	
	N	Percentage
Parent relationship to child		
Father	31	24.2
Mother	95	74.2
Other	2	1.6
Missing	0	0.0
Parent country of birth		
USA	93	72.7
Canada	3	2.3
Great Britain	2	1.6
Germany	1	0.8
Austria	0	0.0
Switzerland	0	0.0
Other	29	22.7
Missing	0	0.0
Parent GHL/Austrian/Swiss-GHL ancestry		
Yes	74	57.8
No	54	42.2
Missing	0	0.0
Spouse GHL/Austrian/Swiss-GHL ancestry		
Yes	72	56.3
No	54	42.2
N/A	2	1.6
Missing	0	0.0
Who speaks GHL with the child?		
Parent	43	33.6
Spouse	20	15.6
Parent and spouse	16	12.5
Only others	10	7.8
No one	39	30.5
Missing	0	0.0
Home language with spouse		
GHL	1	0.8
English	101	78.9
GHL and English	6	4.7
Other	19	14.8
N/A	1	0.8
Missing	0	0.0
Parent GHL proficiency: Speaking		
None	19	14.8
Beginner	34	26.6
Intermediate	37	28.9
Advanced	38	29.7
Native speaker level	0	0.0
Missing	0	0.0

Parent GHL proficiency: Reading		
None	0	0.0
Beginner	22	17.2
Intermediate	30	23.4
Advanced	40	31.3
Native speaker level	36	28.1
Missing	0	0.0
Parent GHL proficiency: Writing		
None	28	21.9
Beginner	29	22.7
Intermediate	49	38.3
Advanced	22	17.2
Native speaker level	0	0.0
Missing	0	0.0
Parent GHL proficiency: Listening		
None	20	15.6
Beginner	25	19.5
Intermediate	33	25.8
Advanced	49	38.3
Native speaker level	1	0.8
Missing	0	0.0
Highest education level		
Grade 11 completed	0	0.0
Grade 12 – High school diploma	0	0.0
Some college- no degree	2	1.6
College degree or overseas vocational qualifications	8	6.3
Bachelor's degree	34	26.6
Master's degree	59	46.1
Professional degree	4	3.1
Doctoral degree	21	16.4
Missing	0	0.0
Lived in Germany/Austria/Switzerland (GHL part) with family?		
Yes	35	27.7
No	93	72.3
Missing	0	0.0

Table 70

Summary of Demographic Information of Children of GHLE Experts, Main Study

	Participants N=185	
	N	Percentage
Child gender		
Male	82	44.3
Female	103	55.7
Missing	0	0.0
Child age		
5-6 Years old	46	24.9
7-11 Years old	82	44.3
12-14 Years old	32	17.3
15-17 Years old	23	12.4
18 Years old and older	2	1.0
Missing	0	0.0
Child Age starting learning GHLE		
0-3 Years old	146	78.9
4-6 Years old	27	14.6
7-9 Years old	8	4.3
10-12 Years old	4	2.2
13 Years old and older	0	0.0
Missing	0	0.0
Child GHLE skills Speaking		
None	0	0.0
Beginner	28	15.1
Intermediate	45	24.3
Advanced	35	18.9
Native speaker level	77	41.6
Missing	0	0.0
Child GHLE skills Reading		
None	21	11.4
Beginner	41	22.2
Intermediate	45	24.3
Advanced	42	22.7
Native speaker level	36	19.5
Missing	0	0.0
Child GHLE skills Writing		
None	23	12.4
Beginner	53	28.6
Intermediate	53	28.6
Advanced	32	17.3
Native speaker level	24	13.0
Missing	0	0.0
Child GHLE skills Listening		
None	0	0.0
Beginner	14	7.6
Intermediate	32	17.3
Advanced	57	30.8
Native speaker level	82	44.3
Missing	0	0.0

Child country of birth		
USA	122	65.9
Canada	3	1.6
Great Britain	2	1.1
Germany	39	21.1
Austria	2	1.1
Switzerland	4	2.2
Other	13	7.0
Missing	0	0.0
Child Age moving to the USA		
0-4 Years old	42	22.6
5-6 Years old	6	3.2
7-11 Years old	14	7.5
12 Years old and older	1	0.5
N/A	122	65.9
Missing	0	0.0
Child Grade regular school		
Kindergarten – Grade 1	54	29.2
Grade 2 to Grade 3	39	21.0
Grade 4 to Grade 6	38	20.5
Grade 7 to Grade 9	35	19.0
Grade 10 to Grade 12	19	10.2
Missing	0	0.0
GHL at regular school		
Yes	17	9.2
No	168	90.8
Missing	0	0.0

Table 71

Summary of Demographic Information of children of GHL Non-Experts, Main Study

	Participants N=128	
	N	Percentage
Child gender		
Male	64	50.0
Female	64	50.0
Missing	0	0.0
Child age		
5-6 Years old	21	16.4
7-11 Years old	73	57.0
12-14 Years old	19	14.8
15-17 Years old	15	11.7
18 Years old and older	0	0.0
Missing	0	0.0
Child Age starting learning GHL		
0-3 Years old	53	40.8
4-6 Years old	47	36.2
7-9 Years old	17	13.1
10-12 Years old	9	6.9
13 Years old and older	4	3.1
Missing	0	0.0
Child GHL skills Speaking		
None	3	2.3
Beginner	70	54.7
Intermediate	29	22.7
Advanced	15	11.7
Native speaker level	11	8.6
Missing	0	0.0
Child GHL skills Reading		
None	18	14.1
Beginner	58	45.3
Intermediate	30	23.4
Advanced	17	13.3
Native speaker level	5	3.9
Missing	0	0.0
Child GHL skills Writing		
None	19	14.8
Beginner	63	49.2
Intermediate	31	24.2
Advanced	12	9.4
Native speaker level	3	2.3
Missing	0	0.0
Child GHL skills Listening		
None	2	1.6
Beginner	61	47.7
Intermediate	35	27.3
Advanced	16	12.5
Native speaker level	14	10.9
Missing	0	0.0

Child Age starting learning GHL		
0-3 Years old	52	40.6
4-6 Years old	46	35.9
7-9 Years old	17	13.3
10-12 Years old	9	7.0
13 Years old and older	4	3.1
Missing	0	0.0
Child country of birth		
USA	109	85.2
Canada	1	0.8
Great Britain	2	1.6
Germany	6	4.7
Austria	0	0.0
Switzerland	1	0.8
Other	9	7.0
Missing	0	0.0
Child Age moving to the USA		
0-4 Years old	8	6.2
5-6 Years old	6	4.7
7-11 Years old	10	7.8
12 Years old and older	1	0.8
N/A	109	85.2
Missing	0	0.0
Child Grade regular school		
Kindergarten – Grade 1	34	26.6
Grade 2 to Grade 3	27	21.1
Grade 4 to Grade 6	37	29.0
Grade 7 to Grade 9	19	14.9
Grade 10 to Grade 12	11	8.6
Missing	0	0.0
GHL at regular school		
Yes	10	7.8
No	118	92.2
Missing	0	0.0

GHL speaking, writing, reading and listening skills of children of GHL experts and GHL non-experts across grade levels

Table 72

GHL Speaking, Writing, Reading and Listening Skills of Children of GHL Experts and GHL

Non-Experts for Kindergarten – Grade 1, and Grade 2 – Grade 6

GHL skill	GHL skill level	Kindergarten – Grade 1		Grade 2 – Grade 6	
		GHL Experts Percentage N=54	GHL Non-Experts Percentage N=34	GHL Experts Percentage N=77	GHL Non-Experts Percentage N=64
Speaking	None	0.0	2.9	0.0	3.1
	Beginner	27.8	79.3	14.3	48.4
	Intermediate	20.4	5.9	27.2	28.1
	Advanced	5.6	5.9	20.8	10.9
	Native speaker level	46.2	5.9	37.7	9.5
Writing	None	42.6	41.2	0.0	6.3
	Beginner	29.6	58.8	33.8	50.0
	Intermediate	5.6	0.0	39.0	28.1
	Advanced	7.4	0.0	13.0	10.9
	Native speaker level	14.8	0.0	14.2	4.7
Reading	None	38.9	38.2	0.0	6.2
	Beginner	29.6	55.9	24.7	45.3
	Intermediate	3.7	5.9	32.4	25.0
	Advanced	13.0	0.0	22.1	15.7
	Native speaker level	14.8	0.0	20.8	7.8
Listening	None	0.0	2.9	0.0	1.6
	Beginner	9.3	64.8	10.4	43.8
	Intermediate	16.7	14.7	19.5	31.2
	Advanced	25.9	8.8	29.9	10.9
	Native speaker level	48.1	8.8	40.2	12.5

Table 73

GHL Speaking, Writing, Reading and Listening Skills of Children of GHL Experts and GHL Non-Experts for Grade 7– Grade 9 and Grade 10– Grade 12

GHL skill	GHL skill level	Grade 7 – Grade 9		Grade 10 – Grade 12	
		GHL Experts	GHL Non-Experts	GHL Experts	GHL Non-Experts
		Percentage N=35	Percentage N=19	Percentage N=19	Percentage N=11
Speaking	None	0.0	0.0	0.0	0.0
	Beginner	2.9	42.1	5.2	36.4
	Intermediate	28.5	26.3	15.8	36.4
	Advanced	28.6	21.1	31.6	18.1
	Native speaker level	40.0	10.5	47.4	9.1
Writing	None	0.0	5.3	0.0	0.0
	Beginner	22.9	42.1	15.8	27.3
	Intermediate	42.9	31.7	26.3	63.6
	Advanced	25.7	21.2	47.4	9.1
	Native speaker level	8.5	0.0	10.5	0.0
Reading	None	0.0	5.3	0.0	0.0
	Beginner	14.3	36.8	5.3	27.3
	Intermediate	34.3	31.6	31.6	54.5
	Advanced	31.4	26.3	36.8	18.2
	Native speaker level	20.0	0.0	26.3	0.0
Listening	None	0.0	0.0	0.0	0.0
	Beginner	0.0	42.1	5.3	27.3
	Intermediate	17.2	26.3	10.5	45.5
	Advanced	37.1	21.1	36.8	18.1
	Native speaker level	45.7	10.5	47.4	9.1

Appendix I: Assessment of scale validity

Pilot Study I

Table 74

Factor loadings, Eigenvalue and Variance Explained for Instrumental Goal Orientation

Factor	Items	Loadings	Eigenvalue	% Variance explained
Instrumental Goal Orientation	I think it will someday be useful for my child in getting a good job.	.886	2.937	58.739
	My child may use it for his/her future career.	.733		
	It will enable my child to study overseas.	.695		
	It will allow my child to read the literature of a foreign language in the original language rather than a translation.	.609		
	It will allow my child to meet and converse with more and varied people.	.548		

Table 75

Factor Loadings, Eigenvalue and Variance Explained for Integrative Goal Orientation I

(Family)

Factor	Items	Loadings	Eigenvalue	% Variance explained
Integrative Goal Orientation I (Family)	It will enable my child to relate to German speaking relatives.	.958	2.831	94.373
	It will allow my child to learn more about his/her background.	.957		
	It will allow my child to keep a connection with the wider family.	.955		

Table 76

*Factor Loadings, Eigenvalue and Variance Explained for Integrative Goal Orientation II**(Group Belongingness)*

Factor	Items	Loadings	Eigenvalue	% Variance explained
Integrative Goal Orientation II (Group belongingness)	It will allow my child to have a strong sense of belonging with German speakers.	.999	2.271	75.693
	It will allow my child to identify with the German/Swiss/Austrian culture.	.791		
	It will allow my child to learn more about German history, traditions, and customs.	.616		

Table 77

Factor Loadings, Eigenvalue and Variance Explained for Language Beliefs

Factor	Items	Loadings	Eigenvalue	% Variance explained
Language Beliefs	Growing up with two languages in the home is confusing for a child.	.781	3.078	51.298
	Supporting English in the home is more important than supporting German.	.773		
	It's important to speak mostly in English with children from infancy in order to improve their knowledge of English.	.704		
	Learning German is as important as learning English.	-.617		
	Speaking German constantly, negatively affects children's ability to master English.	.567		
	Children learn English easily in mainstream school.	-.391		

Table 78

Factor Loadings, Eigenvalue and Variance Explained for Self-Efficacy

Factor	Items	Loadings	Eigenvalue	% Variance explained
Self-Efficacy	I can teach my child German.	.926	3.637	72.736
	I can influence my child's German language learning.	.857		
	My use of German has a direct influence on what my child will learn to say in German.	.843		
	I make a significant difference in my child's German language learning.	.743		
	Others have more influence on my child's German language learning than I do.	-.685		

Table 79

Factor Loadings, Eigenvalue and Variance Explained for Perceived Invitations from the Teacher

Factor	Items	Loadings	Eigenvalue	% Variance explained
Perceived Teacher Invitations	My child's German teacher forwards schoolwork if my child cannot attend on any one day.	.645	2.394	39.904
	My child's German teacher contacted me (e.g., e-mail, written note).	.625		
	My child's German teacher asks me to help my child with German at home.	.597		
	My child's German teacher gives advice about how to assist my child with German at home.	.516		
	My child's German teacher keeps me informed about my child's progress.	.480		
	My child's German teacher assigns homework that involves parents.	.374		

Table 80

Factor Loadings, Eigenvalue and Variance Explained for Role Belief I

Factor	Items	Loadings	Eigenvalue	% Variance explained
Role belief I	I believe it is my responsibility encourage my child to learn German.	.867	3.630	72.606
	I believe it is my responsibility to assist my child with German.	.865		
	I believe it is my responsibility provide resources in German for my child.	.855		
	I believe it is my responsibility develop my child's German language skills.	.821		
	I believe it is my responsibility to engage in German activities with my child.	.641		

Table 81

Factor Loadings, Eigenvalue and Variance Explained for Role Belief II

Factor	Items	Loadings	Eigenvalue	% Variance explained
Role belief II	I believe it is my responsibility teach my child German.	.888	3.337	66.733
	I believe it is my responsibility revise my child's German schoolwork with him/her.	.854		
	I believe it is my responsibility correct my child's German.	.819		
	I believe it is my responsibility practice German with my child.	.787		
	I believe it is my responsibility speak German to my child at home.	.441		

Table 82

Factor Loadings, Eigenvalue and Variance Explained for Available Time

Factor	Items	Loadings	Eigenvalue	% Variance explained
Available time	I have enough time to communicate with my child's German teacher.	.828	3.787	63.111
	I have enough time to supervise my child's German studies.	.820		
	I have enough time to revise German school work with my child.	.795		
	I have enough time to assist my child with German studies (e.g., homework).	.756		
	I have enough time to practice German with my child.	.697		
	I have enough time to engage in German activities with my child.	.570		

Table 83

Factor Loadings, Eigenvalue and Variance Explained for Skills and Knowledge

Factor	Items	Loadings	Eigenvalue	% Variance explained
Skills and Knowledge	I know enough about German grammar to help my child.	.943	3.811	76.224
	I know how to explain things to my child about this/her German studies.	.895		
	I know enough German to help my child.	.881		
	I know how to support my child's German language learning.	.761		
	I know how to get German resources for my child.	.707		

Pilot Study II

Dependent variables

Table 84

Factor Loadings, Eigenvalue and Variance Explained for Speaking the GHL for German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Speaking the GHL	Ask my child questions in German.	.997	3.916	97.898
	Speak German to my child.	.997		
	Ask my child to respond in German.	.996		
	Speak English to my child.	-.945		

Table 85

Factor Loadings, Eigenvalue and Variance Explained for Teaching the GHL for German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Teaching the GHL	Repeat German sentences for my child.	.993	4.675	93.490
	Explain the meaning of words.	.992		
	Demonstrate the correct use of certain words and phrases.	.972		
	Correct my child's German.	.943		
	Explain grammatical concepts.	.892		

Table 86

Factor Loadings, Eigenvalue and Variance Explained for Assisting with GHL Studies for German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Assisting with GHL studies	Check my child's understanding (e.g., schoolwork, reading).	.972	3.668	91.694
	Help my child with his/her German studies (e.g., schoolwork, reading).	.938		
	Revise with my child what he/she learnt at German school.	.932		
	Oversee my child's German studies.	.929		

Table 87

Factor Loadings, Eigenvalue and Variance Explained for Regulating GHL Input for German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Regulating GHL input	Check if my child uses/reads German books.	.838	2.038	67.942
	Put on German media for my child.	.717		
	Schedule time for my child's German studies.	.613		

Table 88

Factor Loadings, Eigenvalue and Variance Explained for Regulating GHL Input for Non-German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Regulating GHL input	Put on German media for my child.	.818	2.132	71.062
	Check if my child uses/reads German books.	.758		
	Schedule time for my child's German studies.	.682		

Table 89

Factor Loadings, Eigenvalue and Variance Explained for Motivating GHL Learning for German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Motivating GHL learning	Encourage my child's German language learning.	.818	1.986	66.189
	Ask my child to engage in activities in German.	.672		
	Praise my child for his/her German studies.	.621		

Table 90

Factor Loadings, Eigenvalue and Variance Explained for Motivating GHL learning for Non-German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Motivating GHL learning	Praise my child for his/her German studies.	.840	2.148	71.613
	Ask my child to engage in activities in German.	.758		
	Encourage my child's German language learning.	.678		

Table 91

Factor Loadings, Eigenvalue and Variance Explained for Providing GHL Resources in the Home for German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
GHL resources in the home	GHL resources in the home: DVDs	.878	3.747	62.445
	GHL resources in the home: Books	.805		
	GHL resources in the home: Music	.801		
	GHL resources in the home: Family games	.684		
	GHL resources in the home: Learning material	.654		
	GHL resources in the home: Journals/magazines	.610		

Table 92

Factor Loadings, Eigenvalue and Variance Explained for Providing GHL Resources in the Home for Non-German-Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
GHL resources in the home	GHL resources in the home: Music	.826	3.905	65.086
	GHL resources in the home: Family games	.799		
	GHL resources in the home: Books	.793		
	GHL resources in the home: DVDs	.782		
	GHL resources in the home: Learning material	.750		
	GHL resources in the home: Journals/magazines	.616		

Independent variables

Table 93

Factor Loadings, Eigenvalue and Variance Explained for Language Beliefs for German

Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Language Beliefs	Language Belief: Growing up with two languages in the home is confusing for a child.	.706	2.545	50.899
	Language Belief: Speaking German constantly, negatively affects children's ability to master English.	.773		
	Language Belief: Supporting English in the home is more important than supporting German.	.704		
	Language Belief: It's important to speak mostly English with children from infancy in order to improve their knowledge of English.	-.617		
	Language Belief: learning German is as important as learning English.	.567		

Table 94

Factor Loadings, Eigenvalue and Variance Explained for Self-Efficacy for German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Self-Efficacy	I make a significant difference in my child's German language learning.	.945	2.478	61.962
	I can influence my child's German language learning.	.689		
	My use of German has a direct influence on what my child will learn to say in German.	.610		
	Others have more influence on my child's German language learning than I do.	-.567		

Table 95

Factor Loadings, Eigenvalue and Variance Explained for Self-Efficacy for Non-German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Self-Efficacy	My use of German has a direct influence on what my child will learn to say in German.	.813	2.134	53.357
	I make a significant difference in my child's German language learning.	.692		
	I can influence my child's German language learning.	.521		
	Others have more influence on my child's German language learning than I do.	-.435		

Table 96

Factor Loadings, Eigenvalue and Variance Explained for Perceived Invitations from the Teacher for German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Perceived Teacher invitations	My child's German teacher gives advice about how to assist my child with German at home.	.818	2.616	65.408
	My child's German teacher asks me to help my child with German at home.	.726		
	My child's German teacher keeps me informed about my child's progress.	.702		
	My child's German teacher forwards schoolwork if my child cannot attend on any one day.	.691		

Table 97

Factor Loadings, Eigenvalue and Variance Explained for Perceived Invitations from the Teacher for Non-German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Perceived Teacher Invitations	My child's German teacher gives advice about how to assist my child with German at home.	.823	2.906	72.661
	My child's German teacher keeps me informed about my child's progress.	.807		
	My child's German teacher asks me to help my child with German at home.	.781		
	My child's German teacher forwards schoolwork if my child cannot attend on any one day.	.778		

Table 98

Factor Loadings, Eigenvalue and Variance Explained for Perceived Invitations from the Child for German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Perceived Child Invitations	My child is confident about his/her German skills.	.799	2.510	62.757
	My child is reluctant to speak German with me.	-.749		
	My child participates in German activities with me.	.747		
	My child engages willingly in German studies.	.541		

Table 99

Factor Loadings, Eigenvalue and Variance Explained for Perceived Invitations from the Child for Non-German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Perceived Child Invitations	My child participates in German activities with me.	.691	1.886	47.162
	My child is reluctant to speak German with me.	-.684		
	My child engages willingly in German studies.	.429		
	My child is confident about his/her German skills.	.367		

Note. communality of one item exceeded 1.000 and factor analysis could not be conducted with non-German speakers.

Table 100

Factor Loadings, Eigenvalue and Variance Explained for Role Belief I for German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Role belief I	I believe it is my responsibility to engage in German activities with my child.	.889	2.520	84.017
	I believe it is my responsibility to assist my child with German.	.881		
	I believe it is my responsibility provide resources in German for my child.	.846		

Table 101

Factor Loadings, Eigenvalue and Variance Explained for Role Belief I for Non-German

Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Role belief I	I believe it is my responsibility to assist my child with German.	.961	2.541	84.698
	I believe it is my responsibility provide resources in German for my child.	.893		
	I believe it is my responsibility to engage in German activities with my child.	.782		

Table 102

Factor Loadings, Eigenvalue and Variance Explained for Role Belief II for German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Role belief II	I believe it is my responsibility teach my child German.	.999	2.635	87.849
	I believe it is my responsibility practice German with my child.	.999		
	I believe it is my responsibility revise my child's German schoolwork with him/her.	.721		

Table 103

*Factor Loadings, Eigenvalue and Variance Explained for Available Time for German**Speakers*

Factor	Items	Loadings	Eigenvalue	% Variance explained
Available time	I have enough time to revise German school work with my child.	.871	3.462	69.238
	I have enough time to supervise my child's German studies.	.856		
	I have enough time to assist my child with German studies (e.g., homework).	.826		
	I have enough time to practice German with my child.	.686		
	I have enough time to engage in German activities with my child.	.678		

Table 104

*Factor Loadings, Eigenvalue and Variance Explained for Available Time for Non-German**Speakers*

Factor	Items	Loadings	Eigenvalue	% Variance explained
Available time	I have enough time to revise German school work with my child.	.982	3.815	76.300
	I have enough time to assist my child with German studies (e.g., homework).	.959		
	I have enough time to engage in German activities with my child.	.790		
	I have enough time to supervise my child's German studies.	.777		
	I have enough time to practice German with my child.	.678		

Table 105

Factor Loadings, Eigenvalue and Variance Explained for Skills and Knowledge for German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Skills and Knowledge	I know how to explain things to my child about this/her German studies.	.916	3.518	70.355
	I know enough German to help my child.	.887		
	I know enough about German grammar to help my child.	.883		
	I know how to get German resources for my child.	.644		
	I know how to support my child's German language learning.	.624		

Table 106

Factor Loadings, Eigenvalue and Variance Explained for Skills and Knowledge for Non-German Speakers

Factor	Items	Loadings	Eigenvalue	% Variance explained
Skills and Knowledge	I know enough German to help my child.	.874	2.638	52.750
	I know enough about German grammar to help my child.	.806		
	I know how to explain things to my child about this/her German studies.	.667		
	I know how to support my child's German language learning.	.480		
	I know how to get German resources for my child.	.458		

Table 107

Reliability Coefficients of Scales of Independent and Dependent Variables for German Speakers

Construct	# of items	Alpha	Valid cases
Language beliefs	5	.747	164
Self-efficacy	4	.787	157
Teacher invitation	4	.822	152
Child invitation	4	.796	160
Role belief 1	3	.905	172
Role belief 2	3	.911	162
Time	5	.888	157
Skills and knowledge	5	.893	165
Motivating HL learning	3	.742	169
Regulating HL input	3	.763	155
Assisting HL studies	4	.969	166
HL resources in the home	7	.875	166
Teaching the HL	5	.981	169
Speaking the HL	4	.918	155

Table 108

Reliability Coefficients of Scales of Motivators and Forms of Parental home involvement in Children's German HL Learning for Non-German Speakers

Construct	# of items	Alpha	Valid cases
Language beliefs	6	.657	28
Self-efficacy	4	.704	28
Teacher invitation	4	.874	30
Child invitation	4	.617	24
Role belief 1	3	.902	30
Role belief 2	-	-	-
Time	5	.919	29
Skills and knowledge	5	.752	30
Motivating HL learning	3	.782	31
Regulating HL input	3	.793	28
Assisting HL studies	-	-	-
HL resources in the home	7	.889	28
Teaching the HL	-	-	-
Speaking the HL	-	-	-

Main Study

Structural validity for final dependent and independent factors for GHL experts' and GHL non-experts' final PHI speaking model

Table 109

Results for CFA Models for Final Dependent Factors in GHL Experts' and GHL Non-Experts' Final PHI Speaking Model

	Speaking	Teaching	Motivating	Group
DF	2 0*	5 5	2 2	GHL Experts GHL Non-Experts
Chi-square χ^2	7.424 0.0	9.916 6.451	3.372 3.112	GHL Experts GHL Non-Experts
P-value	.024 -----	.078 .265	.185 .078	GHL Experts GHL Non-Experts
CMIN/DF	3.712 -----	1.983 1.290	1.686 .3.112	GHL Experts GHL Non-Experts
GFI	.979 1.000	.978 .980	.991 .988	GHL Experts GHL Non-Experts
AGFI	.897 -----	.934 .941	.955 .880	GHL Experts GHL Non-Experts
RMR	.013 .000	.031 .022	.026 .021	GHL Experts GHL Non-Experts
RMSEA 90 C.I.	.121 0.037- 0.220 0.074	.073 0.000- 0.140 0.235	.061 0.000-0.171 0.323	GHL Experts
Probability	-----	.048 0.000- 0.139 0.434	.129 0.000-0.302 0.125	GHL Non-Experts
NFI	.987 1.000	.980 .990	.988 .980	GHL Experts GHL Non-Experts
CFI	.990 1.000	.990 .998	.995 .986	GHL Experts GHL Non-Experts
TLI	.971 -----	.979 .995	.985 .915	GHL Experts GHL Non-Experts
PNFI	.329 -----	.490 .495	.329 .163	GHL Experts GHL Non-Experts
PGFI	.196 -----	.326 .327	.198 .099	GHL Experts GHL Non-Experts

Note. *The model is untestable.

Table 110

Results for CFA Models for Final Independent Factors in GHL Experts' and GHL Non-Experts' Final PHI Speaking Model

	Role belief	Self- efficacy	Teacher invitation	Group
DF	2	0*	2	GHL Experts
	2	2	2	GHL Non-Experts
Chi-square χ^2	3.782	0.0	13.626	GHL Experts
	4.109	.582	3.619	GHL Non-Experts
P-value	.151	-----	.001	GHL Experts
	.128	.747	.164	GHL Non-Experts
CMIN/DF	1.891	.000	6.813	GHL Experts
	2.054	.291	1.810	GHL Non-Experts
GFI	.989	1.000	.967	GHL Experts
	.984	.998	.986	GHL Non-Experts
AGFI	.947	-----	.833	GHL Experts
	.918	.989	.930	GHL Non-Experts
RMR	.005	.000	.029	GHL Experts
	.015	.012	.015	GHL Non-Experts
RMSEA 90 C.I.	.070	-----	.178	GHL Experts
	0.000- 0.177 0.279		0.097-0.272 0.007	
Probability	.091	.000	.080	GHL Non-Experts
	0.000- 0.218 0.212	0.000- 0.121 0.808	0.000-0.210 0.256	
NFI	.989	1.000	.934	GHL Experts
	.980	.995	.985	GHL Non-Experts
CFI	.995	1.000	.942	GHL Experts
	.990	1.000	.993	GHL Non-Experts
TLI	.984	-----	.825	GHL Experts
	.969	1.039	.980	GHL Non-Experts
PNFI	.330	.000	.311	GHL Experts
	.327	.332	.328	GHL Non-Experts
PGFI	.198	-----	.193	GHL Experts
	.197	.200	.197	GHL Non-Experts

Table 111

Final Factor Loadings, Eigenvalue and Variance Explained for Assisting with GHIL Studies for GHIL Non-Experts

Factor	Items	Loadings	Eigenvalue	% Variance explained
Assisting with GHIL studies	Help my child with his/her GHIL studies.	.930	2.443	81.431
	Check my child's understanding.	.903		
	Oversee my child's GHIL studies.	.720		

Table 112

Final Factor Loadings, Eigenvalue and Variance Explained for Assisting with GHIL Studies for GHIL Experts

Factor	Items	Loadings	Eigenvalue	% Variance explained
Assisting with GHIL studies	Check my child's understanding.	.912	2.672	87.552
	Help my child with his/her GHIL studies.	.911		
	Oversee my child's GHIL studies.	.882		

Table 113

Final Factor Loadings, Eigenvalue and Variance Explained for Perceived Teacher Invitation for GHIL Experts

Factor	Items	Loadings	Eigenvalue	% Variance explained
Perceived Teacher Invitation	Gives advice about how to assist my child with GHIL at home.	.893	2.076	69.209
	Keeps me informed about my child's progress.	.663		
	Asks me to help my child with GHIL at home.	.654		

Table 114

*Final Factor Loadings, Eigenvalue and Variance Explained for Self-Efficacy for GHL**Experts*

Factor	Items	Loadings	Eigenvalue	% Variance explained
Self-efficacy	I make a significant difference in my child's GHL language learning.	.834	2.015	67.176
	I can influence my child's GHL language learning.	.733		
	My use of GHL has a direct influence on what my child will learn to say in GHL.	.578		

Table 115

*Final Factor Loadings, Eigenvalue and Variance Explained for Speaking the GHL for GHL**Non-Experts*

Factor	Items	Loadings	Eigenvalue	% Variance explained
Speaking the GHL	I ask my child questions in GHL.	.987	2.270	75.661
	I speak GHL to my child.	.740		
	I ask my child to respond in GHL.	.676		

Assessment of normality of construct means

Table 116

Assessment of Normality of Construct Means for the Full Sample

Variables	Skewness	Kurtosis
Speaking	.195	-.438
Teaching	-.895	-.074
Assisting	-.820	-.095
Motivating	-.418	-.169
Self-efficacy	-.349	.076
Role belief	-.861	-.010
Integrative goal orientation II	-.687	-.453
Child invitations	-.042	1.009
Teacher invitations	-.300	.090
Skills and Knowledge	-1.160	.615
Available time	-.104	.147

Table 117

Assessment of Normality of Construct Means of Final Scales of Independent Variables for

GHL Experts' Final PHI Speaking Model

Scale	Mean(SD)	Skewness	Kurtosis
Role belief	3.7(0.4)	-1.094	0.145
Self-efficacy	3.7(0.4)	-0.812	-0.590
Integrative goal orientation II	3.4(0.7)	-0.916	0.066
Perceived child invitations	2.9(0.7)	-0.023	-0.766
Perceived teacher invitations	2.9(0.6)	-0.182	-0.055
Available time	3.1(0.7)	-0.178	-0.248
Skills and knowledge	3.7(0.4)	-1.363	0.731

Table 118

Assessment of Normality of Construct Means of Final Scales of Independent Variables for

GHL Non-Experts' Final PHI Speaking Model

Scale	Mean(SD)	Skewness	Kurtosis
Role belief	3.3(0.6)	-0.401	-0.360
Self-efficacy	2.7(0.6)	-0.352	-0.198
Integrative goal orientation II	2.9(0.9)	-0.277	-0.920
Perceived child invitations	2.8(0.6)	-0.381	-0.360
Perceived teacher invitations	2.7(0.7)	-0.143	-0.119
Available time	2.9(0.5)	-0.210	1.196
Skills and knowledge	2.6(0.9)	-0.403	-0.653

Appendix J: Modifications and removed items

Pilot Study I

Table 119

Modifications to The Questionnaire (PHIQ-GHL II) for Pilot Study II

PHIQ-GHL I, pilot study I	Modifications in PHIQ-GHL II, pilot study II	Reason
Child demographic information (Section A, Questions 1-4, 7, 11)	Changes to layout: Section A-1, Questions 1-6	Shorten length of questionnaire
Are there any other children in your home with whom your child can speak German? (Section A, Question 5)	Replaced by question about German speakers in the home (Section A2, Question 10)	Gain additional information about linguistic family context
Your child's German language school (Section A, Question 9)	Removed. Questionnaires were marked on last page to identify GHL schools	Shorten length of questionnaire
How long has your child been attending the German language school? (Section A, Question 10)	Removed.	Shorten length of questionnaire
Parent gender (Section E, Question 1)	Removed.	Collected similar information to What is your relationship to this child? (Section A, Question 5)
Parent background in Section E at end of questionnaire	Moved to beginning of questionnaire after child background information	Motivate and prepare parents for the following questions.
Two sections were prefaced, e.g., Section B5 'I believe it is my responsibility'	Preface for perceived child invitations, available time and skills and knowledge	Increase readability and reduce burden for respondents

Table 120

Removed Items Based on EFA, Pilot Study I

Removed item	Reason for removal
Goal10: Live in Germanic country Goal11: Maintain German skills Goal6: Broader education	To reduce number of items in the scale. Secondary factor loading >.5 Secondary factor loading >.6
Goal13: Communicate with relatives	To reduce number of items in the scale.
Goal5: Enjoy German language and culture Goal9: Exposed to another culture	To reduce number of items in the scale.
Self-efficacy6: I don't know how to help my child learn German. Self-efficacy4: I make no difference in my child's German language learning.	To reduce number of items in the scale.

Pilot Study II

Table 121

Modifications to The Questionnaire (PHIQ-GHL III) for the Main Study

PHIQ-GHL II, pilot study II	Modifications in PHIQ-GHL III, main study	Reason
Child and parent demographic information to be filled in	Drop box for responses (e.g., Question A3, A3.1-A3.2)	Online survey layout
Child age to be filled in (Section A1, Question 2)	Drop box for child age: 5 years – 18 years	Some items in questionnaire not applicable for children under 5 years of age
PHIQ-GHL II did not ask about the name of child's German language school	Name of GHL school (Question A4)	Identify participating GHL schools in the USA
mainstream school (Section A, Question 5 + 6)	regular school (Questions A5, A6)	Adjust to US terminology
Parent relationship to child. Response options with space to add note (Section A1, Question 9)	Specifying male carer and female carer (Question B1)	Online survey layout: drop box instead of hand-written information
Family background: Parent's father's and mother's country of birth (Section A2, Question 13, 14), Spouse country of birth (Question 15)	Replaced by parents' ancestry (Question B3) and spouse' ancestry (Question B4)	Collect additional information about the family context
Family context: German speakers in your home (Section A2, Question 10)	Replaced by: Who speaks German to your child? (Question B6)	Collect additional information about the linguistic family context
Child's German language proficiency collected	Child's and parents' German language proficiency collected (Questions A7, B7)	Include measure to statistically test if there are two groups of parents in GHL schools
Not collected in PHIQ-GHL II	Family immersion experience in German-speaking country (Question B9)	Collect additional information about the family context
Not collected in PHIQ-GHL II	Open-ended question about family context (Question B10)	Provide further opportunity to clarify family context
Language Beliefs (Section B, Question B1)	Removed	Shorten length of questionnaire Communality of one item exceeded 1 (Non-German speakers), low alpha score for Non-German speakers
Provide GHL resources in the home	Removed	Shorten length of questionnaire

Table 122

Removed Items Based on EFA, Pilot Study II

Removed item	Reason for removal
Language ideology3: Speaking German constantly, negatively affects children's ability to master English. Language ideology1: Learning German as important as learning English. Language ideology2: Children learn English easily in mainstream school.	Secondary factor loading $>.4$ for German speakers Low loading on primary factor $<.4$ for non-German speakers. Communality above 1 for non-German speakers. No factor loading for German speakers.
Self-efficacy2: I can teach my child German.	Low primary loading for non-German speakers $<.32$
Teacher Invite3: My child's German teacher contacted me. Teacher Invite6: My child's German teacher assigns homework that involves parents.	Low primary loading $<.5$ for non-German speakers. Large number of missing values. Lowest loading for German speakers.
Child7: My child expresses a lack of understanding when I address him/her in German. Child2: My child avoids doing activities in German.	Secondary factor loading $>.7$ for non-German speakers and $>.32$ for German speakers Secondary factor loading $>.6$ for non-German speakers
Child5: My child wants to learn German with me. Child4: My child asks me to help him/her with German.	Secondary factor loading $>.32$ for German speakers Secondary factor loading $>.32$ for German speakers
Role1: It is my responsibility to develop my child's German language skills. Role3: It is my responsibility to encourage my child learning German.	Lowest factor loadings for non-German speakers.
Role8: It is my responsibility to correct my child's German. Role9: It is my responsibility to speak German to my child at home.	To reduce number of items in the scale. Communality exceeded 1 and could not be included in the factor analysis.
Time4: I have enough time to communicate with my child's German teacher.	To reduce the scale. Lowest loading for German speakers $<.6$
Regulating German HL input: Take my child to community events where he/she meets German speakers. Regulating German HL input: Organise catch ups for my child with other German speakers	Secondary factor loading $>.5$ for non-German speakers and $>.32$ for German speakers Secondary factor loading $>.6$ for non-German speakers and German speakers
Regulating German HL input: Have rules in place for the amount of use of German and English media Regulating German HL input: Being close by when my child does his/her German studies. Regulating German HL input: See that my child has a place for his/her resources in German	To reduce number of items in the scale. Lowest factor loadings for non-German speakers.
Motivating German HL learning: Reward my child for his/her German studies. Motivating German HL learning: Praise my child for his/her German studies in front of German speakers	Factor loadings differed most between non-German speakers and German speakers.

Regulating German HL input: Remind my child to do his/her German studies

Motivating German HL learning: Play games

Placed in Teaching/Assisting section and could not be assessed with non-German speakers. For German speakers this item had no factor loading.

Assisting German HL studies: Monitor my child's progress in German.

For German speakers this item had no factor loading.

Assisting German HL studies: Help my child with German homework

To reduce number of items in the scale. Large number of missing values.

Assisting German HL studies: Re-read/repeat instructions in German

To reduce number of items in the scale.

Teaching the German HL: Translate child's sentences to German

Teaching the German HL: Translate for my child information from German to English.

To reduce items in scale

HL resources in the home: Other – amount

For German speakers this item had no factor loading.

HL resources in the home: Computer games

Secondary factor loading >.4

HL resources in the home: Computer learning software.

Secondary factor loading >.6

Main Study

Table 123

Removed Items Based on EFA, Main Study

Removed items	Reasons for removing items
Regulating2: Check if my child uses/reads German books.	Secondary factor loading $>.32$
Regulating1: Schedule time for my child's German studies (e.g., schoolwork, reading).	Removal increased Cronbach's alpha
Assisting1: Revise with my child what he/she learned at German school.	Removal increased Cronbach's alpha
Available Time4: Practice German with my child.	Secondary factor loading $>.32$
Available Time5: Engage in German activities with my child.	Secondary factor loading $>.32$
RoleBelief5: Teach my child German.	Secondary factor loading $>.32$
RoleBelief6: Practice German with my child.	Secondary factor loading $>.32$
ChildInvitation2: Participates in German activities with me.	Low primary loading $<.5$
SkillKnowledge1: How to support my child's German language learning.	Removal increased Cronbach's alpha
SkillKnowledge5: How to get German resources for my child.	Removal increased Cronbach's alpha

Appendix K: Linguistic approaches and discourse strategies

Table 124

*GHL Experts' and GHL Non-Experts' Linguistic Approaches in Groups C (Spouse) and D**(No-One)*

Parental language input patterns for the GHL	Linguistic approach	GHL Experts N=185		GHL Non-Experts N=128	
		Frequency	Percentage	Frequency	Percentage
Group C (spouse)	EML dominant	0	0.0	6	4.7
	Balanced mixed	1	0.5	1	0.8
	Trilingual mixed	0	0.0	2	1.6
	EML only	1	0.5	11	8.6
Group D (no-one)	EML dominant	4	2.2	4	3.1
	Balanced mixed	0	0.0	3	2.3
	Trilingual mixed	1	0.5	10	7.8
	EML only	3	1.6	32	25.0
Sum		10	5.4	69	53.9

Table 125

Discourse Strategies for Most Commonly Used Linguistic Approaches for GHL Experts and GHL Non-Experts in Group A (Parent) and Group B (Parent and Spouse)

Parental language input patterns for the GHL	Linguistic approach	GHL Experts N=185		GHL Non-Experts N=128		Discourse strategy
		Frequency	Percentage	Frequency	Percentage	
Group A (parent)	OPOL	35	18.9	0	0.0	Monolingual
		9	4.9	0	0.0	Dual-lingual
	GHL dominant	15	8.1	0	0.0	Monolingual
	EML	10	5.4	2	1.6	Dual-lingual
	dominant	3	1.6	1	0.8	Monolingual
		31	16.8	23	18.1	Dual-lingual
Group B (parent and spouse)	One-	28	15.1	1	0.8	Monolingual
	language-	2	1.1	0	0.0	Dual-lingual
	first*					
	GHL dominant	10	5.4	1	0.8	Monolingual
	EML dominant	5	2.7	0	0.0	Dual-lingual
		0	0.0	0	0.0	Monolingual
		5	2.7	9	7.1	Dual-lingual

Note. *Includes one parent with parent-couple home language being the EML.

Appendix L: SEM models

Results for the proposed PHI speaking model and fit indices for GHL non-experts

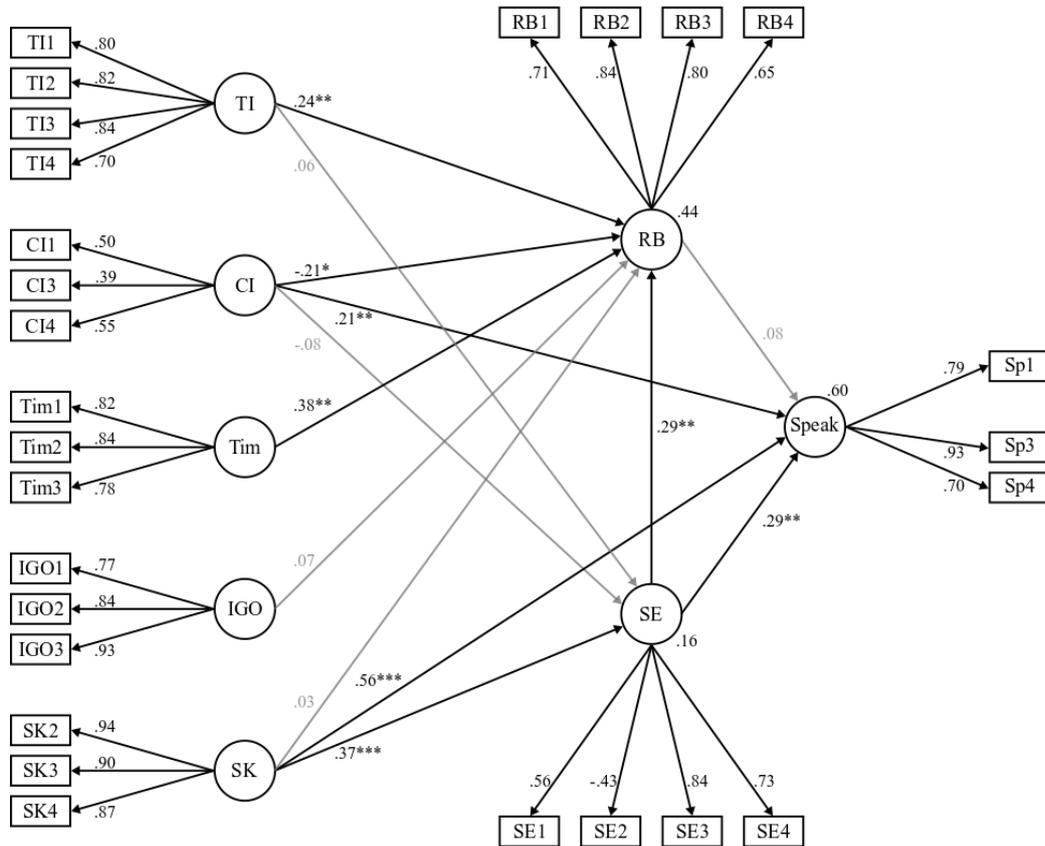


Figure 14. Proposed PHI speaking model with path estimates for GHL non-experts

Table 126

Fit Indices for the Proposed PHI Speaking Model for GHL Non-Experts, N=128

Fit indices	Recommended values	Hypothesised model df = 301
Chi-square χ^2	χ^2 close to df (301)	415.025
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.379
GFI	≥ 0.95	0.818
AGFI	≥ 0.90	0.772
RMR	≤ 0.05	0.044
RMSEA	< 0.05 close fit 0.06 good fit	0.055
90 C.I.	≤ 0.05 —< 0.08	0.041–0.067
PCLOSE	> 0.5	0.273
NFI	close to 0.95 commonly accepted	0.807
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.937
TLI	close to 0.95 commonly accepted	0.926
PNFI	0.5 to 0.9	0.692
PGFI	0.5 to 0.9	0.652

Additional structural models for GHL experts

PHI teaching model for GHL experts

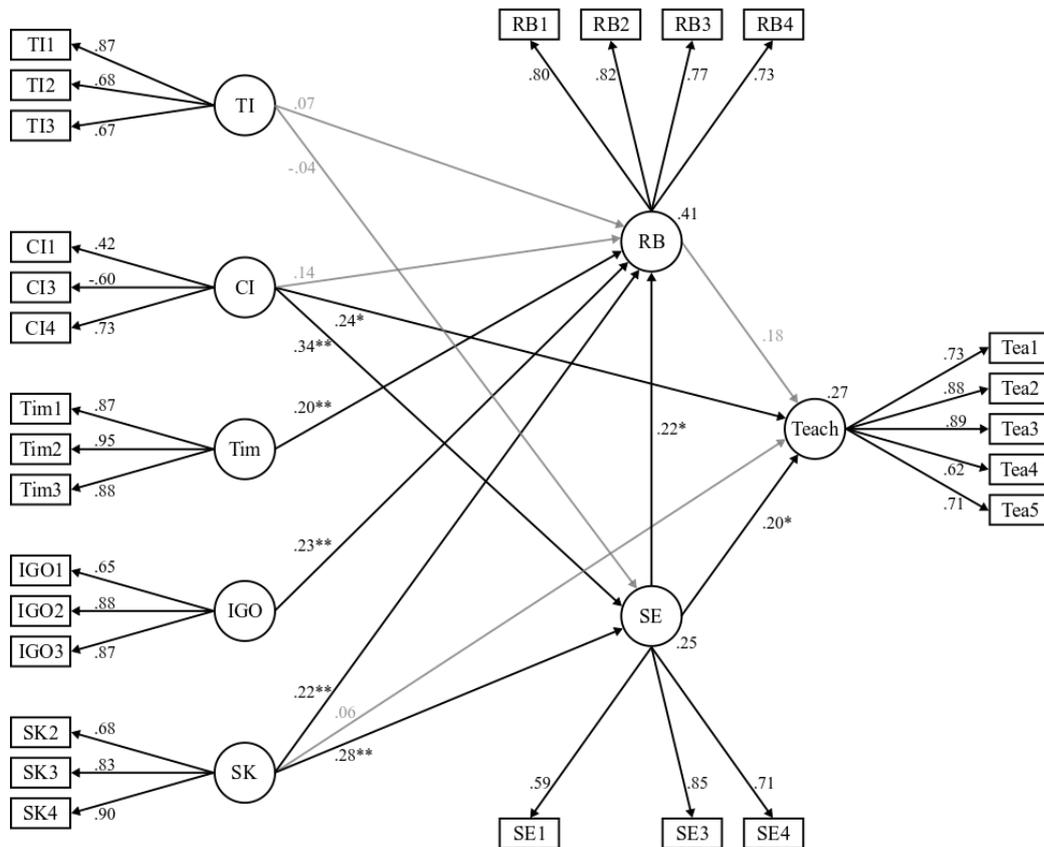


Figure 15. Final PHI teaching model for GHL experts

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Table 127

Fit Indices for the Final PHI Teaching Model for GHL Experts, N=185

Fit indices	Recommended values	Hypothesised model df = 301
Chi-square χ^2	χ^2 close to df (301)	417.459
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.387
GFI	≥ 0.95	0.862
AGFI	≥ 0.90	0.826
RMR	≤ 0.05	0.041
RMSEA	< 0.05 close fit 0.06 good fit	0.046
90 C.I.	≤ 0.05 —< 0.08	0.035–0.056
PCLOSE	> 0.5	0.737
NFI	close to 0.95 commonly accepted	0.845
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.950
TLI	close to 0.95 commonly accepted	0.942
PNFI	0.5 to 0.9	0.725
PGFI	0.5 to 0.9	0.686

PHI assisting model for GHL experts

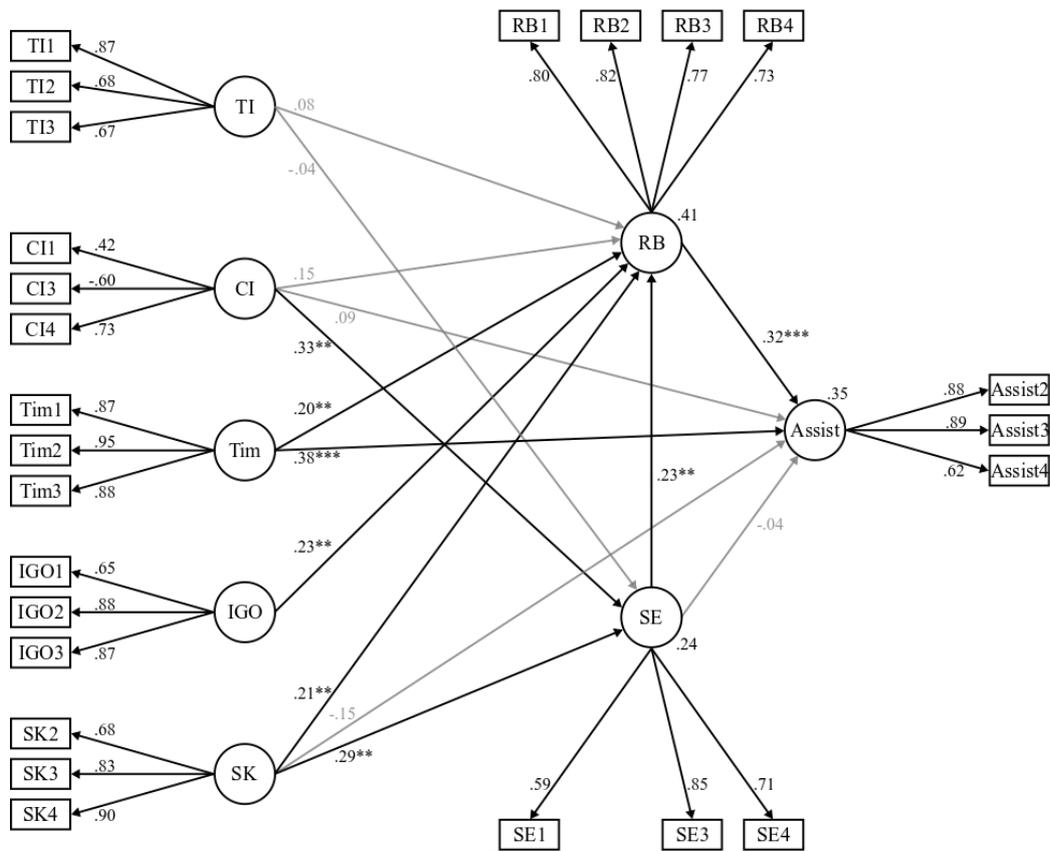


Figure 16. Final PHI assisting model for GHL experts

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Table 128

Fit Indices for the Final PHI Assisting Model for GHL Experts, N=185

Fit indices	Recommended values	Hypothesised model df = 251
Chi-square χ^2	χ^2 close to df (251)	370.623
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.477
GFI	≥ 0.95	0.867
AGFI	≥ 0.90	0.828
RMR	≤ 0.05	0.035
RMSEA	< 0.05 close fit 0.06 good fit	0.051
90 C.I.	≤ 0.05 —< 0.08	0.040–0.062
PCLOSE	> 0.5	0.436
NFI	close to 0.95 commonly accepted	0.860
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.949
TLI	close to 0.95 commonly accepted	0.939
PNFI	0.5 to 0.9	0.719
PGFI	0.5 to 0.9	0.670

PHI motivating model for GHL experts

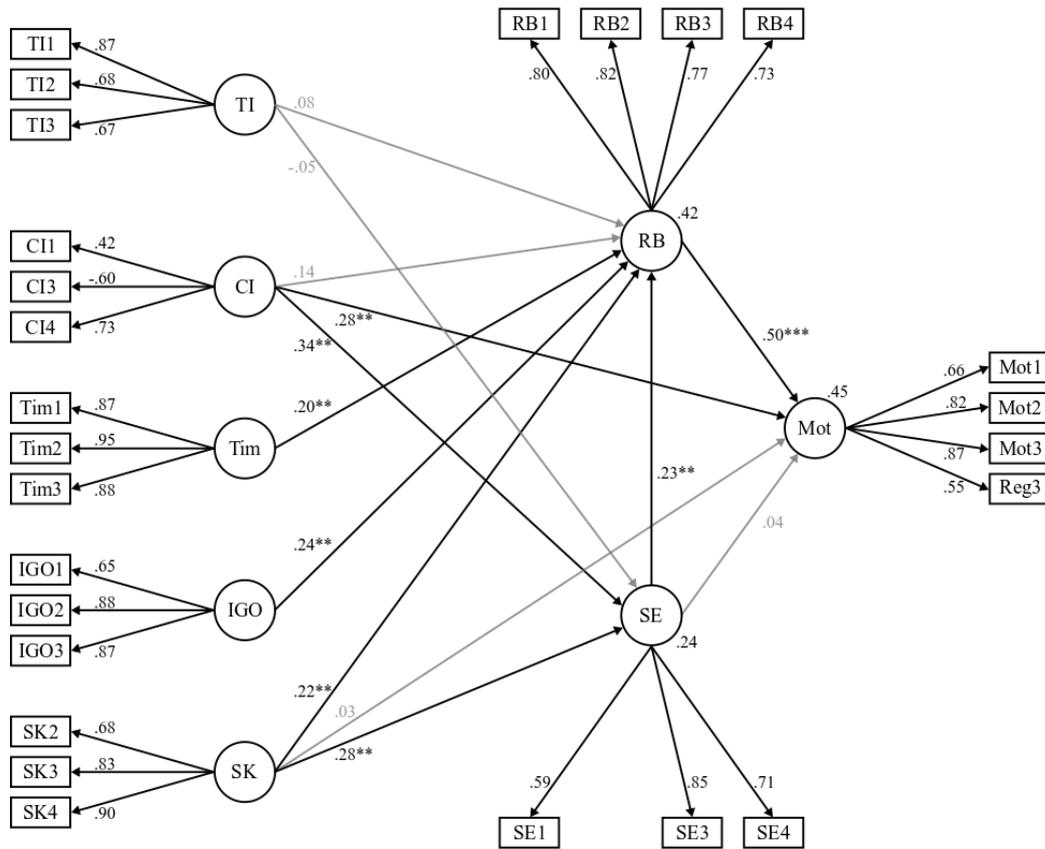


Figure 17. Final PHI motivating model for GHL experts

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Table 129

Fit Indices for the Final PHI Motivating Model for GHL Experts, N = 185

Fit indices	Recommended values	Hypothesised model df = 276
Chi-square χ^2	χ^2 close to df (276)	417.459
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.350
GFI	≥ 0.95	0.869
AGFI	≥ 0.90	0.833
RMR	≤ 0.05	0.035
RMSEA	< 0.05 close fit 0.06 good fit	0.044
90 C.I.	≤ 0.05 —< 0.08	0.031–0.055
PCLOSE	> 0.5	0.824
NFI	close to 0.95 commonly accepted	0.850
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.955
TLI	close to 0.95 commonly accepted	0.947
PNFI	0.5 to 0.9	0.722
PGFI	0.5 to 0.9	0.683

Additional structural models for GHL non-experts

PHI teaching model for GHL non-experts

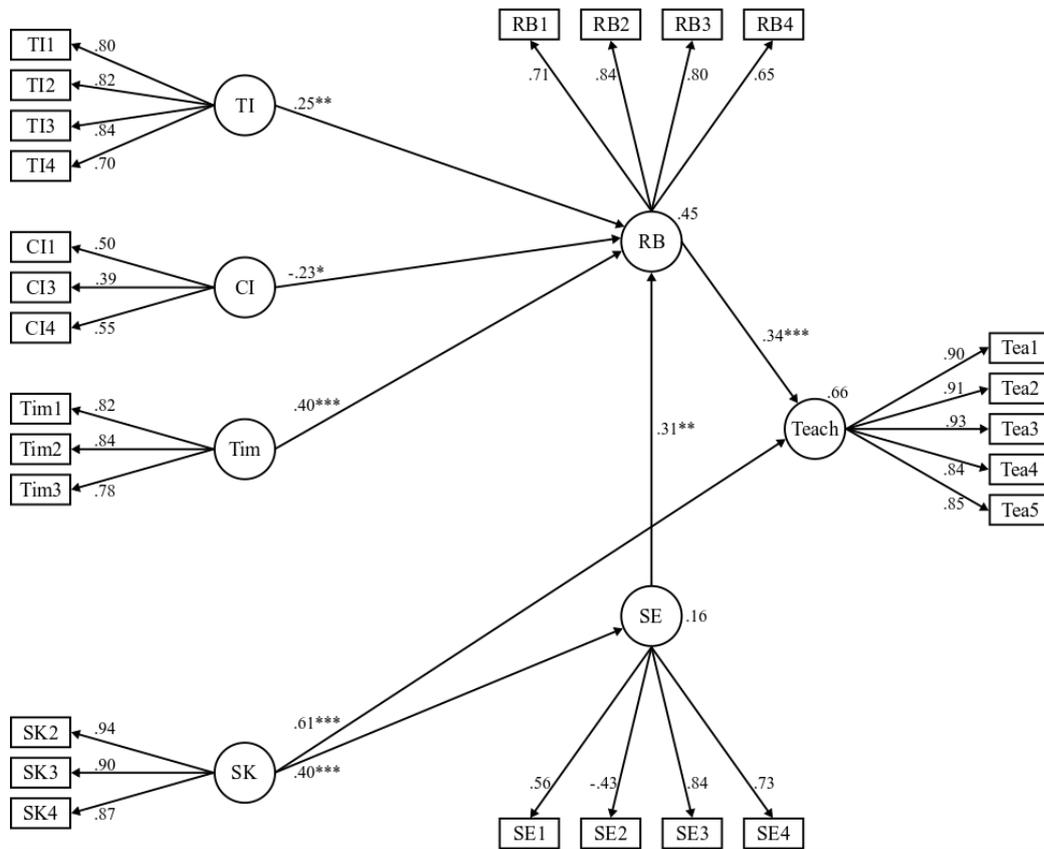


Figure 18. Final PHI teaching model for GHL non-experts

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Table 130

Fit Indices for the Final PHI Teaching Model for GHJ Non-Experts, N=128

Fit indices	Recommended values	Hypothesised model df = 286
Chi-square χ^2	χ^2 close to df (286)	417.459
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.376
GFI	≥ 0.95	0.817
AGFI	≥ 0.90	0.775
RMR	≤ 0.05	0.062
RMSEA	< 0.05 close fit 0.06 good fit	0.054
90 C.I.	≤ 0.05 —< 0.08	0.040–0.067
PCLOSE	> 0.5	0.287
NFI	close to 0.95 commonly accepted	0.834
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.947
TLI	close to 0.95 commonly accepted	0.940
PNFI	0.5 to 0.9	0.734
PGFI	0.5 to 0.9	0.666

PHI assisting model for GHL non-experts

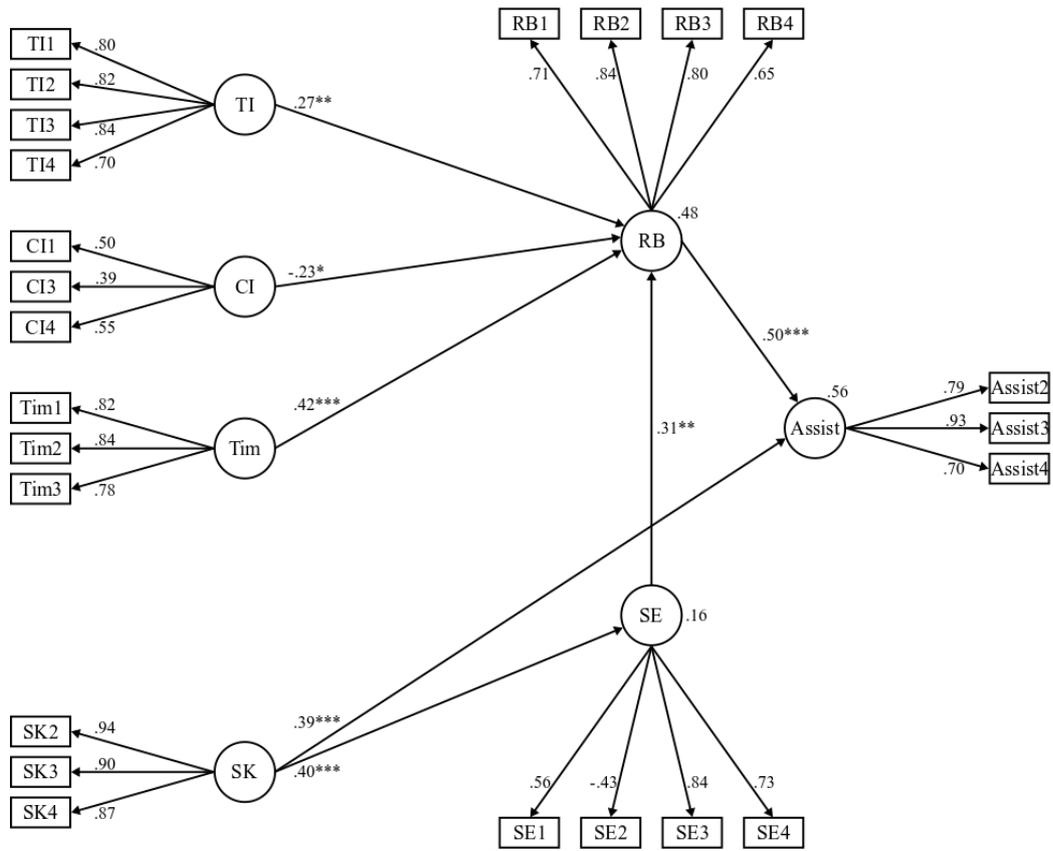


Figure 19. Final PHI assisting model for GHL non-experts

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Table 131

Fit Indices for the Final PHI Assisting Model for GHL Non-Experts, N = 128

Fit indices	Recommended values	Hypothesised model df = 239
Chi-square χ^2	χ^2 close to df (239)	346.800
P-value of the Chi-square statistic	≥ 0.05	0.000
CMIN/DF	≤ 2 or 3	1.451
GFI	≥ 0.95	0.819
AGFI	≥ 0.90	0.773
RMR	≤ 0.05	0.059
RMSEA	< 0.05 close fit 0.06 good fit	0.060
90 C.I.	≤ 0.05 —< 0.08	0.045–0.073
PCLOSE	> 0.5	0.128
NFI	close to 0.95 commonly accepted	0.819
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.934
TLI	close to 0.95 commonly accepted	0.924
PNFI	0.5 to 0.9	0.709
PGFI	0.5 to 0.9	0.653

PHI motivating model for GHL non-experts

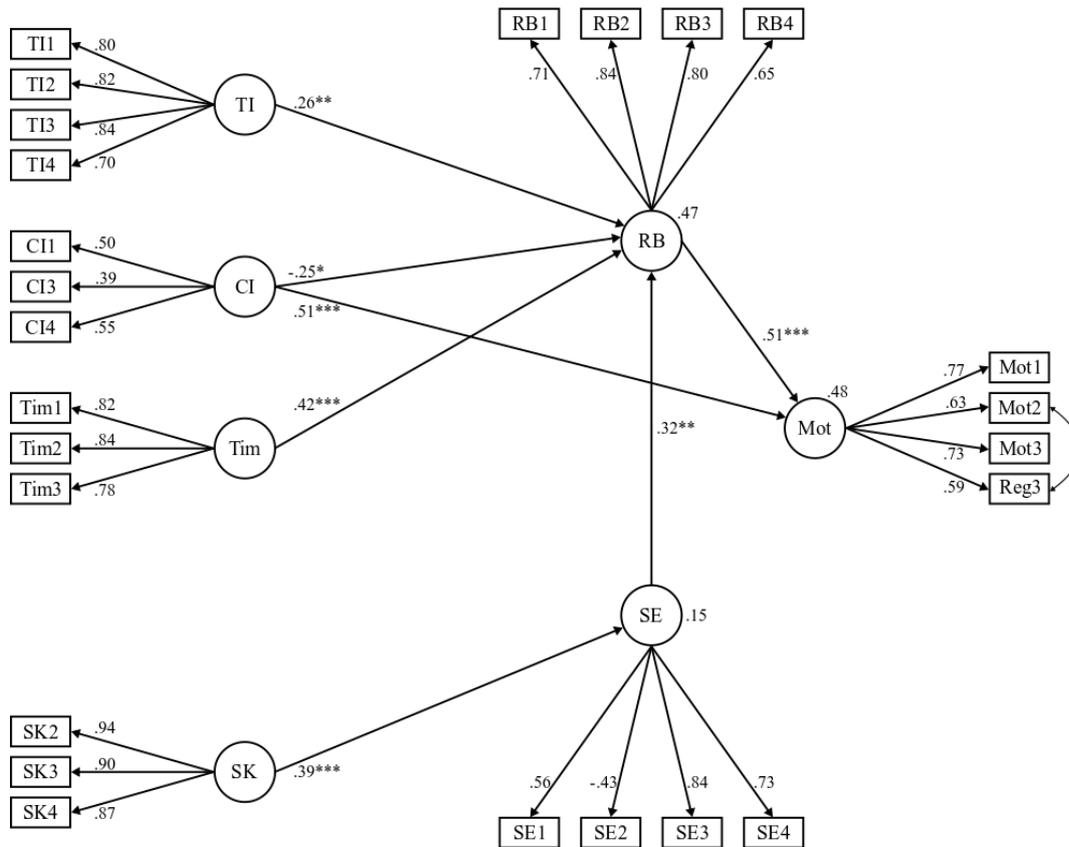


Figure 20. Final PHI motivating model for GHL non-experts

***Supported at p-value < 0.001, **Supported at p-value < 0.01, *Supported at p-value < 0.05.

Table 132

Fit Indices for the Final PHI Motivating Model for GHL Non-Experts, N = 128

Fit indices	Recommended values	Hypothesised model df = 261
Chi-square χ^2	χ^2 close to df (261)	329.781
P-value of the Chi-square statistic	≥ 0.05	0.002
CMIN/DF	≤ 2 or 3	1.264
GFI	≥ 0.95	0.832
AGFI	≥ 0.90	0.791
RMR	≤ 0.05	0.051
RMSEA	< 0.05 close fit 0.06 good fit	0.046
90 C.I.	≤ 0.05 –< 0.08	0.028–0.060
PCLOSE	> 0.5	0.678
NFI	close to 0.95 commonly accepted	0.814
CFI	≥ 0.92 to 0.94 close to 0.95 commonly accepted	0.953
TLI	close to 0.95 commonly accepted	0.946
PNFI	0.5 to 0.9	0.708
PGFI	0.5 to 0.9	0.668

Appendix M: Qualitative analysis

Pilot Study I

Table 133

Qualitative Analysis: Examples of Added Annotations, Pilot Study I

Section in questionnaire		Examples of added annotations
Section A: Child's background	Child GHL skills	Advanced - due to 1 year back in Oz, some vocab missing Native - accent, watches movies, can retell events Not in school level yet
Section E: Parent background	Years lived in German-speaking country	Entire life except 6 years in Switzerland 9 years overseas
Section C: Home involvement activities	Speaking the GHL Teaching the GHL Motivating GHL learning Resources	Does not apply (N/A) If I can Depends on the words Don't speak German No need to :) Reward each Monday back in school I don't think that's necessary Show him where they are so he gets them
Section B4: Perceived child invitations	N/A	Some days yes, some no
Section D: Available time	N/A	I don't have enough time - I make time
Feedback concerning questionnaire	Layout Request for clarification	Would prefer an unsure category too Do you mean make sure the vocab is retained or to check it is correct?

Note. N/A corresponds to no comments in this category.

Table 134

Qualitative Analysis: Examples Responses to the Open Question at the End of the Questionnaire, Pilot Study I

Themes	Examples of responses to the open-ended question
Parents' level of GHL skills	<p>Unfortunately we don't speak the language so that makes it difficult</p> <p>My native language is English, however I have learnt German and have chosen to speak German at home with my children and husband to support the children speaking German</p> <p>As a not-native German speaker with a few years German education, I feel I can assist my child sometimes, in some ways, but not in some others.</p> <p>Lived in Germany for 4 years - my German is conversational only, as I had little formal German education in Germany whilst there and my German proficiency has decreased since returning from Germany</p> <p>Lived in Germany for 5 years hence I can speak it</p>
Parent education level	<p>I'm studying applied linguistics, therefore I'm very aware of what I need to provide my son with.</p> <p>Hold MA in German linguistics specialising in language acquisition</p>
Instrumental goal orientation	<p>We are trying to give the best education to our son and this includes learning new languages and also practicing sport... We been considering to stop trying he learns German ... We don't want to give up. We are very, very keen that our son maintains his German.</p>
Parental home involvement	<p>For the first two years of this child's life, we lived in Germany and I spoke English to him. On our return to Australia I initially spoke English with him, but noticed over time that he was losing his German skills. I then decided to speak German with him rather than English.</p> <p>As a non-native speaker, it does take extra effort</p> <p>My involvement is much more passive as I don't speak German much or well.</p>
Beliefs about language learning	<p>Regular trips to Germany home also helped to keep up German skills to a high standard.</p>
Available time	<p>Time is a big factor</p> <p>We are (both - my wife and myself) working all the time so we don't have enough time and energy (also money) to support (as we should) our son in this matter</p>
Feedback to questionnaire	<p>I value your research questions. They have made me think more about factoring in specific "sit down" time with my son.</p>

Pilot Study II

Table 135

Qualitative Analysis: Examples of Added Annotations, Pilot Study II

Section in questionnaire		Examples of added annotations
Section B2: Self-efficacy	N/A	Cannot speak German I don't speak German" I am not a native German
Section B3: Perceived teacher invitations	Homework from GHL school	N/A as attending German preschool N/A as only in Kindergarten No homework Not usually If they would have any There is none Don't have really homework If they have any They do not get homework They don't have any really
Section B4: Perceived child invitations	Child engaging in activities in German with parent	At times Not reading and writing Sometimes I would like to but she doesn't like it as I am not a native speaker I only speak English I am a non-German speaker so, difficult
Section C: Home involvement activities	Speaking the GHL	English to me and German to her father; I am not the German speaker, my husband is. I speak English to the children and my husband speaks German. I am not German but Dutch so my daughter communicates in Dutch with me This is my husband's role I can speak German but my husband's role to speak German and mine as an English native is to speak English

Note. N/A corresponds to no comments in this category.

Table 136

Qualitative Analysis: Examples Responses to the Open Question at the End of the Questionnaire, Pilot Study II.

Themes	Examples of responses to the open-ended question
Parent German skills and home involvement (Non-German speakers)	<p>My limited German significantly restricts my ability to support our children's learning and language ability in German.</p> <p>I am not a fluent native German speaker, so can't help as much as I would like to in some areas but I enjoy learning with my child and improving my German language skills.</p> <p>I am surprised it doesn't ask my proficiency of German. I only learned German at High School.</p> <p>I am a native English speaker with poor basic German.</p> <p>I try to help my child where I can, with my little German knowledge. I support him with all activities and involve myself in the school where I can, to enhance his experience.</p>
GHL use in the home (Non-German speakers)	<p>My wife is German and talks to our daughter. I am Dutch and speak Dutch to her. Best to keep things separate.</p> <p>I constantly ask my husband to speak in German his native language - but he does not.</p> <p>I rely on my husband to teach them German but he finds it difficult. I speak to them in Vietnamese.</p> <p>We were living in Germany for 3 years and just returned (..) My husband is Australian but speaks German, I don't.</p> <p>My son did his first year of school at DSM - full immersion, his only family member that speaks German is his grandfather who he sees once a week at most. Now he attends mainstream school and German Saturday School with native speakers.</p>
GHL use in the home (German speakers)	<p>My partner is not involved in her German learning, I am the one who proceeded with it, due to German family on my side. My poor remainings of German from school allow me to help her with the basics but not enough for her to consolidate it well.</p> <p>My husband is the fluent speaker. My German is intermediate level – so as I learn I teach.</p> <p>My husband is not involved in the children's German studies as he takes them to Greek school and looks after their learning there.</p> <p>We have been to Germany for three months (June-Aug) so we are just beginning with German language.</p> <p>We use the one person one language technique. But my husband is often not around or busy, so I take on some of the role of reading/homework, correcting German, translating etc. But I rarely "communicate" in German.</p> <p>My husband wouldn't be able to answer most questions because he is not involved in anything related to the German language. One parent, one language. He is English speaking.</p>
Perceived child invitations	<p>My son's reluctance to learn German as he can't see/understand the benefits and advantages of learning German in an English speaking world.</p> <p>Now, she doesn't speak it. In fact, when my husband engages her in German she gets upset.</p> <p>My child had 7 visits to Germany so far, she is very confident in her language skills. It is her drive to continue German Saturday School</p> <p>Biggest challenge is to get my child to respond in German.</p> <p>My child has a strong dislike towards German. He finds it very difficult to study.</p>

	<p>I would love to get the children to respond more often in German, rather than just English.</p> <p>I would like to know how to encourage my 3 children to speak German with each other and not English.</p>
Homework	<p>Time to do German homework is secondary to English school homework ...no homework or revision tasks are set by his teacher</p>

Main Study

GHL experts' and GHL non-experts' linguistic family context

Table 137

Examples of GHL Experts' and GHL Non-Experts' Responses Related to First-Generation

GHL-Speaking Immigrants, Main Study

Themes	Comment made by	
	GHL experts	GHL non-experts
First generation GHL-speaking immigrant	My husband and I are born and raised in Germany. We're living since 13 years in the USA and our kids were born here (..) (Group B) My husband is Bulgarian and I'm German (..) (Group A) I grew up in DE, my spouse in US (..) (Group A)	My Husband was born in Germany and is a native speaker but moved permanently to the USA when he was 10 (Group B) My husband is a native German speaker (Group B) My wife is German and I'm American. (Group B)
Spouse U.S. ancestry	My husband is Bulgarian and I'm German (..) (Group A)	N/A
Spouse other HL ancestry	I grew up in DE, my spouse in US (..) (Group A)	N/A

Note. N/A corresponds to no comments in this category.

Table 138

*Examples of GHL Experts' and GHL Non-Experts' Responses Related to Second-Generation**GHL-Speaking Immigrants, Main Study*

Themes	Comment made by	
	GHL experts	GHL non-experts
Second generation GHL immigrant (maternal and paternal side)	My parents are both German immigrants who met in Seattle and brought me up as an only child speaking only German. I went to the GLS in Seattle on Saturdays for 11 years (..) (Group A) Both my parents -- child's maternal grandparents -- grew up in Germany and later emigrated to the US. My first language at home, when young, was German. I attended a German language school when I was young. (Group D)	N/A
Second generation GHL-immigrant (maternal side or paternal side)	N/A	My father and maternal grandfather were German immigrants. I am a dual U.S.-German citizen. (Group D) My father was born and raised in Germany and immigrated to the US at age 19 (in 1950) on his own. My mother's parents immigrated here from Germany in the 1920's. (..) Even though both my parents were native German speakers, they did not raise me (and my sister) speaking German. They were ashamed of their German heritage because of WWII and wanted to blend in. My father completely lost his German accent when speaking English. I learned German later in university. I was inspired to learn German after visiting my relatives in Germany at age 15 for the first time. I could not communicate with my grandmother, aunts and uncles and several of my cousins. (Group A) My husband is the child of a German-born mother and US father (military) who was raised in Germany and went to German schools (Group A) My husband is half-German, and a fluent German speaker. He grew up speaking only German to his mother and sister. (Group C)
GHL-speaking ancestry	N/A	My husband is fairly fluent in German as his father is from Germany. My ancestry is great grandparents from Switzerland. (Group D)

Note. N/A corresponds to no comments in this category.

Table 139

Examples of GHL Experts' and GHL Non-Experts' Response Related to Their Connection to the GHL by Intrinsic Interest, Main Study

Themes	GHL experts	GHL non-experts
Child intrinsic interest in GHL	N/A	We don't have a German background in our family. My son is interested in learning languages so we picked German as his third language. (Group D)
Parent intrinsic interest in GHL	N/A	I am deeply interested in everything German. (..) Developed an interest in German language and lifestyle since my high school days. (Group A)
Grandparents intrinsic interest in GHL	N/A	My father lived in Germany for a few years in the late 1950s - early 1960s. I developed an interest in learning the language because of him and his love of the country and its culture, although he speaks very little German himself. (Group A)

Note. N/A corresponds to no comments in this category.

Table 140

Examples of GHLExperts' and GHLEnon-Experts' Responses Related to Their Connection to the GHLE by Immersion Experiences, Main Study

Themes	GHLExperts	GHLEnon-experts
Immersion experience by responding parent	N/A	<p>I lived in Switzerland (German speaking part) for one year when 17 years old. I was an exchange student. (Group A)</p> <p>I did live in Switzerland as a high school exchange student. (Group A)</p> <p>I participated in an exchange during high school and lived with a German family for 6 months. We are still in contact and visit that family every summer. My brother lives in Germany and is married to a German woman, so my kids have German cousins and we visit them each year also. (Group D)</p> <p>I lived in Germany before getting married; going to the German School was my idea. (Group D)</p>
Immersion experience by spouse	N/A	<p>My husband was a foreign exchange student in Switzerland for a year. He has maintained close ties with his host family. (Group C)</p>
Past family immersion experience	N/A	<p>(..) My child attended a German school in Bern in 2nd grade and was fluent when we moved back to the USA. (Group A)</p> <p>We are Americans who lived in Germany while our child was 2-4.5 years old. She attended a local school and became fluent. She attends German Saturday school to maintain her skills. (Group A)</p> <p>We lived in Germany while my daughter was 3-5 years. She was fluent by the time we left. She lost most of her fluency since then, but we are trying to maintain some skills in German. (Group D)</p> <p>My daughter was 4-5 years old while we lived in Germany, attended German Kindergarten, and at that point reached native-like speaking and listening. We are trying to maintain whatever is possible through attending German school in the US. (Group D)</p>
Future family immersion experience	N/A	<p>We are US Military and are moving to Germany in 6 mo (March 2015). We are all learning German and hope to become proficient while we live there (for approx 3+ yrs). (Group D)</p> <p>We began learning German together when we were considering moving to German-speaking Switzerland. (Group D)</p>

Note. N/A corresponds to no comments in this category.

GHL experts' and GHL non-experts' home involvement

Table 141

Summary of Responses Related to Languages Spoken in the Home to the Children Across Groups A (Parent), B (Parent and Spouse), C (Spouse) and D (No-One), for GHL Experts and GHL Non-Experts, Main Study

Person/s speaking language/s to child	Response made by	
	GHL experts	GHL non-experts
Spouse	Other HL (Group A)	Other HL (Group B)
Spouse/others	N/A	GHL (Group C)
Responding parent/spouse	GHL/other HL (Group A) GHL (Group B) GHL/other HLs/EML (Group B) GHL/other HL (Group C)	Other HL/EML (Group D)
Others	GHL (Group A)	GHL (Group D)

Note. N/A corresponds to no comments in this category.

Table 142

Examples of GHL Experts' and GHL Non-Experts' Responses Related to Languages Spoken in the Home to the Children Across Groups A (Parent), B (Parent and Spouse), C (Spouse) and D (No-One), Main Study

Themes	Subthemes	Response made by	
		GHL experts	GHL non-experts
Spouse	Other HL (Group A) (Group B)	Mother speaks Spanish to our child (..)	N/A Mother is Taiwanese, Child also learn Mandarin.
Spouse/others	GHL (Group C)	N/A	I just want to explain that, in our house, the Dad is the native German speaker and the one who speaks German most often with the kids. The au pair is also a native German speaker, and she does German school homework with my son.
Responding parent/spouse	GHL/ other HL (Group A)	My husband is French. He talks French with the Kids, I talk German to the Kids (..)	N/A
		Mother's communication with child is Chinese/Mandarin.I talk German to child (..)	N/A
	GHL (Group B)	Both parents are German (..) In our house the main language is German (..)	N/A
		My husband is American but fluent in German, which allows us to speak German at home.	N/A
	GHL/ other HLs/ /EML (Group B)	I've lived in France 20 years am fluent in French and teach it to both my children. Father is Jamaican, speaks patois. We speak 4 different languages in our family.	N/A
GHL/other HL (Group C)	Our children are being raised with all 3 languages (German, Brazilian Portuguese and English)(..) Father speaks German with the children. I speak Portuguese with them.	N/A	
	Other HL/ EML (Group D)	N/A	We might be an unusual case because we are a Japanese speaking family and only occasionally use English at home... since GHL was offered as an after school program, we decided to sign up. We speak Spanish and English at home. My son is taking English French at school and learning German on Saturdays
		N/A	

Others	GHL (Group A)	We used to have GHL speaking Au Pairs (..)	N/A
	GHL (Group D)	N/A	I rarely speak German to them due to my poor grammar, but my mother speaks German almost exclusively to them.

Note. N/A corresponds to no comments in this category.

Table 143

*Examples of GHL Experts' and GHL Non-Experts' Response Related to Their Home**Involvement Through Speaking the GHL in Group A (Parent), Main Study*

Themes	Subthemes	Response made by	
		GHL experts	GHL non-experts
OPOL	GHL/EML	I only speak German with m children and parents who still live in the area.	N/A
	GHL/other HL	Dad speaks French (he is from West-Africa), I speak only German to my son and everywhere else people speak English.	
	GHL/Immersion	I grew up in DE, my spouse in US. Kids spend summers in DE with grandparents.	N/A
GHL dominant mixed strategy	GHL/EML	I started out speaking only German with my son, however, through the years, I've slipped more and more into speaking English with him and need to really focus on keeping German alive.	Two native English speakers raising three daughters as native German +English speakers. I speak exclusively German with the kids (from birth), wife speaks primarily English with them.
EML dominant mixed strategy	Trilingual strategy	Until age Sebastia's age7, I spoke almost every day German with him. Now infrequently to my regret and Sebastian's disadvantage. I do not consistently speak German with my children. I used to exclusively speak German with them before the started Elementary School. However, they are now attending a Chinese Immersion School, and I want to make sure that their English skills are whereI would like them to be. I switched to speaking more English than German at this point, to help them build their English vocabulary.	N/A
		Time and place strategy	When I take the kids to visit my family in Germany in the summer (about 1 month) we / they speak German. My children speak German / are spoken to in German about 1 month each summer.
	GHL school	N/A	We are Americans who lived in Germany while our child was 2-4.5 years old. She attended a local school and became fluent. She attends German Saturday school to maintain her skills. We are a native English speaking home but wanted our sons to learn German - both are now fluent

Balanced mixed strategy/	Time and place strategy	My Child is traveling once alone to grandparents for 3-4 weeks, and once year with me for two two weeks. Goal is only speaking German if we are in Germany	N/A
EML only	Time and place strategy	N/A	My husband is Swiss. When visiting family in Switzerland, we speak exclusively German with them.
Other HL dominant mixed strategy	Trilingual strategy	N/A	I speak only Spanish to them since they were born (or at least 90% of the time). I am trying to implement more German, 3 days a week is the goal, now that they are learning it.

Note. N/A corresponds to no comments in this category.

Table 144

*Examples of GHL Experts' and GHL Non-Experts' Response Related to Their Home**Involvement Through Speaking the GHL in Group B (Parent and Spouse), Main Study*

Linguistic approach	Subthemes	Response made by	
		GHL experts	GHL non-experts
One-language-first strategy	GHL	I wanted to add that it is not this easy to raise bilingual children. You have to be involved continuously and remind them over and over again to speak German. Many of our friends who both are German parents have let it "slip" and their children barely sp[e]ak any German. There is also a common misconception that children pick up another language like sponges. It is actually hard work and they still sometimes make grammatical errors, despite having been exposed to German from birth.	N/A
GHL dominant mixed strategy	GHL/EML	My husband is American but fluent in German, which allows us to speak German at home.	N/A
EML dominant mixed strategy	Trilingual strategy	Our son grows up tri-lingual, Chinese/Mandarin (Mother), German (Father) and English (environment). His mother speaks some German and always tries to use simple phrases and words with him. His fluency is in the following declining order: English, Mandarin German. (..) and I am "guilty" of not always having used and not consistently using German when communicating with our son.	N/A
Balanced mixed strategy	GHL/EML	We mix languages quite a bit at home. It's getting harder to keep it up fully as our children go to American school and have mostly American friends. (..) My husband spent a total of 5 years in Germany when we first met. He tries to speak German to our children as much as possible as well.	N/A
	Trilingual strategy	N/A	My wife and I mix both languages (..)By providing GHL classes it also allows us extra help so my wife can focus a little more on their third language which is Russian.

Note. N/A corresponds to no comments in this category.

Table 145

*Examples of GHL Experts' and GHL Non-Experts' Response Related to Their Home**Involvement Through Speaking the GHL in Group C (Spouse), Main Study*

Linguistic approach	Themes	Response made by	
		GHL experts	GHL non-experts
EML dominant mixed strategy	Au-pair and immersion	N/A	The au pair is also a native German speaker, and she does German school homework with my son. I am a native English speaker who is fluent in German, but it has never worked well for me to try to speak German with the kids while we are in the U.S. They don't really accept this from me. I think other German/American families experience this, too, so I wanted to mention it. We visit Germany annually for 2-3 weeks.
Balanced mixed strategy	Trilingual strategy	Our children are being raised with all 3 languages (German, Brazilian Portuguese and English). We try not mix the languages. Father speaks German with the children. I speak Portuguese with them. We've friends here that speak either Portuguese or German with them. Everything else around us is English. We also phone regularly with Brazil and Germany and visit them or they visit us here.	N/A
EML only	GHL school	N/A	My husband is half-German, and a fluent German speaker. He grew up speaking only German to his mother and sister. However, he finds it difficult to speak German to our son. This is the primary reason we enrolled our son in German language classes.

Note. N/A corresponds to no comments in this category.

Table 146

*Examples of GHL Experts' and GHL Non-Experts' Response Related to Their Home**Involvement Through Speaking the GHL in Group D (No-One), Main Study*

Linguistic approach	Themes	Response made by	
		GHL experts	GHL non-experts
Other HL dominant mixed strategy	Trilingual strategy	N/A	We speak Spanish and English at home. My son is taking French at school and learning German on Saturdays.
EML only	GHL schools	N/A	My husband is fairly fluent in German as his father is from Germany. My ancestry is great grandparents from Switzerland. We do not speak German in the home (..) We lived in Germany while my daughter was 3-5 years. She was fluent by the time we left. She lost most of her fluency since then, but we are trying to maintain some skills in German.

Note. N/A corresponds to no comments in this category.

Influences on GHL experts' and GHL non-experts' home involvement

Table 147

Examples of GHL Experts' and GHL Non-Experts' Responses Related to Perceived Child

Invitations, Main Study

Linguistic approach	Themes	Response made by	
		GHL experts	GHL non-experts
Perceived child invitations	Child overt and implicit strategies to enact linguistic preference	Even though German is my native language, and my American husband also understands and speaks German, it is very hard to consistently speak German to our children. They claim they don't understand and tell me to speak English, and rarely answer in German (..) (Group A) I am exclusively speaking in German to our daughter, however, she returns in English for the most part (Group A) Both parents are German. The kids prefer to speak German to us because they do not like our accents when speaking English (..) (Group B)	I am a native English speaker who is fluent in German, but it has never worked well for me to try to speak German with the kids while we are in the U.S. They don't really accept this from me. I think other German/American families experience this, too, so I wanted to mention it (Group C)
	Child intrinsic interest in GHL learning	N/A	My daughter initiated learning German (Group A) My daughter decided she wanted to know how to write German correctly, which was why she decided she wanted to go to German school (Group B) My daughter has no exposure to the German language at home; yet she absorbs her teachings like a sponge, and is very enthusiastic with her schooling (Group D) My son wanted to learn German since he was little (Group D)
	Child willingness to speak HL	child is answering to mother or father in their language.child claims she speaks a soup-language, which means english/German, english/chinese words are most cases present in one sentence (..) (Group A) Daughter addresses mother in Chinese, father in German, if speaking to both, English (..) (Group A)	N/A

Note. N/A corresponds to no comments in this category.

Table 148

Examples of GHL Experts' and GHL Non-Experts' Responses Related to Their Skills and Knowledge and Goal Orientation, Main Study

Linguistic approach	Themes	Response made by	
		GHL experts	GHL non-experts
Skills and knowledge	Lack of knowledge: GHL grammar	Because I grew up speaking and hearing German and didn't really learn formal grammar (that I remember) it can be difficult to help my child based on grammatical rules. I know the correct grammar intuitively, by sound or feel, but struggle to explain it so that he can understand as a beginning learner (Group D)	N/A
	Lack of GHL literacy	N/A	He has already surpassed my skill with his writing and reading. My husband can help more (Group D)
	Lack of GHL knowledge and skills	N/A	I took German in college but I am very rusty. I know just enough to help him but mostly it is with organizing and making sure he has completed his work ..., but we rely on online dictionaries and things for translations and additional help (Group D) As a non-native speaker, it is difficult for me to help my child with his homework and learning of German but I do the best I can. I know mostly nouns or singular words that I've taught myself, but cannot put a sentence together... teachers to speak German with him and help him string words together into sentences, as that is the one thing I cannot do at home (Group D)
Goal orientation	Integrative	I believe it is very important to keep up my German heritage and connection to my relatives and language and to pass it onto my children. I only wish more people felt the same way!!! (Group A)	Because of our daughter's mostly German heritage, we chose to enroll her in a German program. For me it was especially important because I had to learn German on my own as an adult (Group A)
	Instrumental	Key reasons why we want her to learn German also include being able to communicate with (mostly older) German family members and having a professional/career asset. (Group B)	I visited Austria every 3 or so years growing up as a child. ... I never learned the language and now want my child to not miss out. (Group D)

Note. N/A corresponds to no comments in this category.

GHL experts' and GHL non-experts' responses related to other themes

Table 149

Examples of GHL Experts' Responses Related to the Parent-Couple Home Language, Main Study

Themes	GHL experts	GHL non-experts
Parent-couple home language	My husband is French (..) My husband and I talk German together. (Group A) Mother is Chinese, (..) Mother and father can only communicate using English. (Group A)	N/A
Other PHI forms	(..) When my daughter was younger, I read German stories (Grimm Brothers, H.C. Anderson, Hauff, etc., Pumuckl, Lillifee, etc.), watched German movies, and listened to German recordings daily (Group A) When we read to them we always read in our native language. Our 8-year-old reads to us in our native languages (German to dad an Portuguese to mom) as well now (Group C)	My answers were based regarding homework n the resources i find when assisting my child for work (Group D) mostly it is with organizing and making sure he has completed his work (Group D) Only practice of German language is on Saturdays, and children's book twice a week before bed time (Group D)
Perceived teacher invitations	N/A	It would be nice to know what they are learning in class and to know how we can help them learn and practice German (Group D) I think it is hugely important for anyone involved in teaching a language to strongly encourage native speakers to always speak to their children in their native language, no matter where in the world they live (Group D)
Asking for advice	N/A	Will you be able to provide teachers with feedback on how (and what info) to provide to parents about their child's progress/abilities? Will you also be able to provide guidance to parent's on how to become more actively and productively engaged in their child's learning (especially if the parent is not a native speaker)? (Group A)
Government support	I also wish that the German government would support the German American school more and encourage the local schools to offer German as a language (Group A)	N/A

Note. N/A corresponds to no comments in this category.

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