



A case study of the use of code-blending by a bimodal bi-/multilingual deaf family

by
Levern Althea Arries

*Thesis presented in fulfilment of the requirements for the degree of
Master of Arts in the Faculty of Arts and Social Sciences at Stellenbosch
University*

Supervisor: Dr KM Huddleston

March 2024



Declaration

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

March 2024

Copyright © 2024 Stellenbosch University

All rights reserved

Dedication

I dedicate this thesis to My Mother with love. I know you would be proud of me even though, you would not be around to see me graduate. You will always serve as my source of motivation, to always put God first, to never give up, to follow my dreams and strive for the better in life. This accomplishment would not have been possible without your unconditional love and support. I will forever be grateful for who you were and I will always carry you in my heart Mom. I am because you were. Daughter of an Angel.

Abstract

When children, either deaf or hearing, are exposed to a spoken language and a signed language, they often become bimodal bilinguals. Bimodal bilinguals are able to produce both speech and sign at the same time, as the two modalities allow for the simultaneous production of two languages. This is known as code-blending. This study examines the language practices of a bimodal bi-/multilingual family, focusing on the phenomena of code-blending and code-switching.

The current thesis examines the dinnertime conversations of a deaf family from Worcester, which includes deaf parents and two hearing twin girls (aged 9). All participants are bimodal multilinguals. The study involves the analysis of the family's code choices (code-blending and code-switching patterns) during approximately one hour of recorded dinnertime interaction. Utterances which showed evidence of code-blending and code-switching were analysed. Coding was done according to the turns each participant produced.

There has been very limited studies on either bimodal bi-/multilingualism, or code-blending in bimodal bi-/multilingual families, especially in the South African context. The present study aims to provide a description on the linguistic choices of the hearing children of deaf adults (CODAs). Examining the bimodal bi-/multilingual family interactions during dinnertime has shown that the children and parents prefer to communicate in their dominant mode, Afrikaans and SASL respectively. When communicating with their parents, the children rather code-blend than code-switch fully into SASL. This result is similar to previous research, as it shows the same preference, in which the children code-blend more than code-switch. Albeit with a small number of participants, the results have given some insight into the patterns of code-blending and code-switching in bimodal bi-/multilingual families.

Opsomming

Wanneer kinders, hetsy doof of horend, aan 'n gesproke taal en 'n gebaretaal blootgestel word, word hulle dikwels bimodale tweetaliges. Bimodale tweetaliges is in staat om beide spraak en gebare op dieselfde tyd te produseer, aangesien die twee modaliteite die gelyktydige produksie van twee tale moontlik maak. Dit staan bekend as kodevermenging. Hierdie studie ondersoek die taalpraktyke van 'n bimodale twee-/meertalige gesin, met die fokus op die verskynsels van kodevermenging en kodewisseling.

Die huidige tesis ondersoek die aandetegesprekke van 'n dowe gesin van Worcester, wat dowe ouers en twee horende tweelingmeisies (9 jaar oud) insluit. Alle deelnemers is bimodale veeltaliges. Die studie behels die ontleding van die gesin se kodekeuses (kodevermenging en kodewisselingspatrone) gedurende ongeveer een uur van opgeneemde aandetetydinteraksie. Uiting wat bewyse van kodevermenging en kodewisseling getoon het, is ontleed. Kodering is gedoen volgens die beurte wat elke deelnemer geneem het.

Daar is baie beperkte studies oor óf bimodale twee-/veeltaligheid, óf kodevermenging in bimodale twee-/meertalige gesinne, veral in die Suid-Afrikaanse konteks. Die huidige studie het ten doel om 'n beskrywing te verskaf oor die linguistiese keuses van die horende kinders van dowe volwassenes (sogenaamde CODA's). Die ondersoek van die bimodale twee-/meertalige gesinsinteraksies tydens etenstyd het getoon dat die kinders en ouers verkies om in hul dominante modus, onderskeidelik Afrikaans en SASL, te kommunikeer. Wanneer daar met hul ouers gekommunikeer word, gebruik die kinders eerder kodevermenging as om volledig na SASL oor te skakel. Hierdie resultaat is soortgelyk aan vorige navorsing, aangesien dit dieselfde voorkeur toon, waarin die kinders meer kodevermeng as kodewissel. Alhoewel dit 'n klein aantal deelnemers insluit, het die resultate 'n mate van insig gegee in die patrone van kodevermenging en kodewisseling in bimodale twee-/veeltalige gesinne.

Acknowledgements

Firstly, I want to give Jesus all the honour and praise, for the strength He has given me, to complete this thesis. Secondly, I would like to express my special thanks of gratitude to the following people, as I could not have completed my thesis without their support and guidance. Thanking my supervisor Dr Kate Huddleston, for never giving up on me, for always being patient with me, going the extra mile to explain the work in-depth. Your ideas, constant feedback and comments aided in my writing skills improving, understanding the concepts better and assisted in the completion of the thesis. Your timely scholarly advice, enthusiasm, dedication and her encouraging words when I was under-pressure “Don’t stress, just do your best” enabled me to complete this thesis. I learned so much academically from you, you are truly an extraordinary person/academic. Thank you for constantly motivating me, especially with the passing of my mother.

Next, I would like to thank the family that participated in the research, thank you for offering your time; because of you, the research was possible.

To Dr Marcelyn Oostendorp, I am grateful for your support in making it possible for me to continue with my studies, by nominating me to receive an NRF bursary. Thank you for the times you checked in on the progress I was making with my thesis and for sharing articles to read, to assist me with the write up. The research for this thesis was financially supported by the National Research Fund (NRF) and their support is hereby acknowledged. Any opinion, findings, and conclusions or recommendations are my own and do not necessarily reflect the views of the NRF.

To Gert, SASL interpreter, thank you for assisting without any hesitation; because of your assistance I could continue and complete the analysis section. To Ivette, who copyedited this thesis, I can’t thank you enough for assisting me with the copyediting at the very last minute. Thank you for dedicating your time at such short notice, I truly appreciate it.

It is my privilege to thank my partner Herschel, who supported me on this journey from the very beginning. Thank you for the constant encouragements, phone calls/text messages when I was at campus busy with my studies. You would always remind me that my best is enough. I am grateful for all the times you listened to me and encouraged me, when I got overwhelmed and missed my mother during my research.

For my daughter, Leah-Grace, my greatest blessing, inspiration and source of motivation, thank you for all your kisses and hugs, it kept me going. Mommy loves you always.

I would like to express my gratitude towards my brother Elfranco, for always checking in on the progress of my studies and for motivating me to complete it. Thank you for the times you had to drop and fetch me at campus. Taking me for lunch after a difficult day at campus, I will always appreciate the love and support.

A heartfelt thanks to my parents. Thank you for all your love, encouraging words and support throughout my research project. In memory of my late Mom, this one is for you, I will always cherish you. To my Dad whom I owe a great deal, for always speaking positivity over me and saying that you are proud of me. Thank you for standing in the gap for mommy, I know this has not been an easy journey for us, but I am grateful for all your phone calls when I was at campus, encouraging me with the words “Your Mom is proud of you”. Thank you for driving me to campus and fetching me afterwards, for all the snack spoils. You always remind me of the scripture “I can do all things through Christ that strengthens me”. I could not have asked for a better Dad, thank you for all the untold sacrifices you’ve made for me during my studies and throughout my life, I Salute You.

Finally, I would like to thank my family, in-laws and friends, without their support and words of encouragements this would not have been possible. A huge thank you to my grandmother and in-laws, for taking care of my daughter, when I needed to work on my thesis and come to campus. It truly takes a village to raise a child, there are no words to thank you all enough because of you this achievement is possible.

Table of Contents

Declaration.....	i
<i>Dedication</i>	ii
Abstract.....	iii
Opsomming.....	iv
Acknowledgements	v
List of tables.....	ix
List of figures.....	ix
Transcription conventions.....	x
Chapter 1	1
Introduction.....	1
1.1. Purpose of the study.....	1
1.2. Research questions.....	2
1.3. Background on South African Sign Language.....	2
1.4. Structure of the thesis.....	3
Chapter 2 Literature Review	4
2.1. Background on bilingual development	4
2.2. Defining bimodal bilingualism.....	5
2.3. Input and interaction in deaf families.....	7
2.3.1. Hearing children of deaf parents (CODAs).....	7
2.3.2. Deaf children of deaf parents.....	8
2.3.3. Deaf children of hearing parents.....	8
2.3.4. Discussion of family language practices.....	9
2.3.5. Family language policy in deaf-hearing mixed families.....	11
2.3.6. Cross-cultural communication in deaf-hearing family.....	12
2.4. Features of bimodal bilingual conversation.....	13
2.4.1 Types of code-blending	14
2.4.2 Code-blending in deaf-hearing families	16
2.4.3 Language model of code-blending.....	17
2.4.4 Code-switching	18
2.5. Conclusion	22
Chapter 3	24
3.1. Design.....	24
3.2. Participants.....	24
3.3. Data collection	25
3.4. Data transcription.....	26

3.5. Data analysis.....	27
3.6. Ethical considerations.....	29
Chapter 4	30
4.1. Overview of the data.....	30
4.2. Overall analysis	31
4.2.1 Examples of code-blends.....	35
4.3. The influence of the addressee on family language choices.....	38
4.3.1 Dinner 1	38
4.3.2 Dinner 2	38
4.3.3. Dinner 3	39
4.3.4 Summary of data for family language choice	40
4.4. Code-switching	40
4.5. Conclusion	42
Chapter 5	44
5.1. Research Questions	44
5.1.1. What are the patterns of code-blending and code-switching observed in the language use of a bimodal bilingual/multilingual family?	44
5.1.2. What functions do code-blending and code-switching serve in the language use of a bimodal bilingual/multilingual family?	45
5.1.3. How, and to what extent, does the hearing or deaf status of the interlocutors affect the language use of the bimodal bilingual/multilingual family?	45
5.2. Limitations and Future Work.....	46
5.3. Conclusion	46
References.....	47
Appendices.....	50
Appendix A: REC Approval Letter	50
Appendix B: Parent/Legal Guardian Consent Form.....	52
Appendix C: Child Assent Form	55

List of tables

Table 3.1	Practical aspects of data collection.....	25
-----------	---	----

List of figures

Figure 2.1	Language Synthesis Model (Quadros et al. 2014:187).....	18
Figure 4.1	Language mode of utterances per participant.....	31
Figure 4.2	Types of code-blended utterances per participant.....	32
Figure 4.3	Types of partial code-blends per participant.....	33
Figure 4.4	Nature of code-blended utterances per participant.....	34

Transcription conventions

SIGN	Signs are written in capital letters
INDEX ₁	The pointing handshape used in INDEX signs designates pronouns. The subscript number signifies that the reference is being made to the specific person, thing, or intangible idea.
COME-TO	Signs glossed by two or more English words are joined by a hyphen
<i>Speech</i>	Spoken language is written in italics
<u>Code-switch</u>	Code-switched elements are underlined

List of Abbreviations

SASL	South African Sign Language
ASL	American Sign Language
NGT	Nederlandse Gebarentaal (Sign Language of the Netherlands)
BSL	British Sign Language
ISL	Indian Sign Language
VGT	Vlaamse Gebarentaal (Flemish Sign Language)
IS	International Sign
C1/2	Child 1 or Child 2
CODA	Child of deaf adult
Koda	Kid of deaf adult

Chapter 1

Introduction

1.1. Purpose of the study

This study examines the language practices of a bimodal bi-/multilingual family, focusing on the linguistic choices of the hearing children of deaf adults (CODAs). Specifically, I examine the use of code-blending and code-switching in English, Afrikaans and South African Sign Language (SASL) by observing the family's interactions with one another during dinner.

When children – either deaf or hearing – are exposed to a spoken language and a signed language in the home, they can become bimodal bilinguals. Bimodal bilinguals often make use of **code blending**, the phenomenon in which expressions are produced simultaneously in both speech and sign (Lillo-Martin, de Quadros & Chen Pichler & Muller: 181-182). Bimodal bilinguals therefore exhibit a special type of “mixing” when it comes to how the languages of a bilingual interact, as they produce not only code-switching but also code-blending (Lillo-Martin, de Quadros, Chen Pichler & Fieldsteel 2014:2). On the whole, not much research has been done on either bimodal bi-/multilingualism, or code-blending in bimodal bi-/multilingual families, especially in the South African context. A study by Lillo-Martin et al. (2014), which looks at four bimodal bilingual children and their deaf and hearing interlocutors, and analyses their longitudinal spontaneous production, shows that children are sensitive to the language used by interlocutors. They also exhibit the significant influence of the dominant community language (Lillo-Martin et al. 2014:1-13). However, to fully describe and understand bimodal bilingualism and its development, more research is needed (Lillo-Martin, de Quadros & Chen Pichler 2016:2).

The present study aims to provide a description of the linguistic choices and patterns of a bimodal bi-/multilingual family, consisting of deaf parents and hearing children, focussing on the use of code-blending, as well as code-switching, through the observation of the family's interactions during dinner. This study is important as it describes what occurs in a bimodal multilingual context, which is an under-researched topic; while there are studies that investigate bilingualism in bimodal families, not much research has been done on multilingualism in bimodal families. Moreover, the present study focuses on multilingualism in bimodal families in a specifically South African context and thus fills a large gap in the literature.

1.2. Research questions

The objective of the present study is to (i) provide a description of the phenomenon of code-blending and code-switching as used by a South-African bimodal bi-/multilingual family and to (ii) provide a fuller picture of interaction in a bimodal bi-/multilingual context. In order to accomplish these goals, this study seeks to answer the following research questions:

1. What are the patterns of code-blending and code-switching observed in the language use of a bimodal bilingual/multilingual family?
2. What functions do code-blending and code-switching serve in the language use of a bimodal bilingual/multilingual family?
3. How, and to what extent, does the hearing or deaf status of the interlocutors affect the language use of the bimodal bilingual/multilingual family?

1.3. Background on South African Sign Language

Typically, a sign language is used by deaf people to communicate with one another. However, there are hearing people who use a sign language, either because they learnt the language as a second language (L2) or, alternatively, because they are CODAs. About 10% of the South African population are disabled, with approximately 3.5% having some degree of deafness, as estimated by the Deaf Federation of South Africa (DeafSA) (Moroe & De Andrade 2018). Furthermore, deaf South Africans do not self-identify as being disabled, as they are immersed in their deaf community, living rich lives filled with everyday happiness and normality, same as the hearing person, in the hearing society. In South Africa, according to DeafSA (WFD 2008), SASL is used daily by approximately 500,000 South Africans who are culturally and linguistically deaf. More than 30 years of research has been done by linguists on the nature and characteristics of SASL. Their studies have shown that SASL is a distinct language rather than a pidgin, derivational or contact language. Thus, amongst linguists, it is firmly established that SASL is a natural human language, as it meets every criterion that a person might apply to describe a language (Reagan 2008:172-173).

Over the years there has been concerted lobbying to make SASL the twelfth official language of South Africa. In May 2023, the national legislature approved the 18th amendment to the constitution, and President Cyril Ramaphosa signed the bill into law mid-July 2023, making sign language the twelfth official language of South Africa (Tshangela 2023).

In an education domain, language planning and language policy matter, and choices are important. Often there is controversy in the education domain with regard to the use of sign

languages (Reagan 2008:165). South Africa is a country where language planning and policy have a complex history, partially because of racial segregation imposed by Apartheid (1948-1994). South African language policy has changed rapidly over the past decades. The following indicates justification to what has been mentioned above: according to the South African Schools Act of 1996, “[a] recognised Sign Language has the status of an official language for purposes of learning at a public school”. However, there are schools that have policies of total communication or oralism and there are cases where not enough teachers are fluent in SASL. This becomes problematic in such a manner that SASL is not always being used in schools for the deaf (Aarons & Akach 1998; Huddleston 2021:65). In July 2014, SASL became a school subject as part of the South African Curriculum and Assessment Policy Statement (CAPS) (Morgan, Glaser and Magongwa, 2016; Holness 2016; Huddleston 2021:65).

1.4. Structure of the thesis

The thesis is structured as follows: the first chapter consists of the introduction, the research questions and a brief description of SASL. Chapter 2 provides a literature review, which includes a brief background on bilingual development as well as a definition of bimodal bilingualism, focusing on how the family acquires a language as a whole, describing different family situations of deaf and hearing children and parents, and discussing family language practices. I also discuss the phenomena of code-blending and code-switching, including the different types of code-blending and code-switching. The results of and/or observations from previous studies of code-blending and code-switching are included in this chapter as well.

Chapter 3 focuses on the methodology, which is informed largely by the work of Baker, van den Bogaerde and Woll (2005) and Baker and van den Bogaerde (2008). This chapter describes the guidelines and procedures followed in these studies of bimodal bilingualism and outlines the methodology used in the present study, including the challenges faced in undertaking this research.

Chapter four consists of the data that will be presented and analysed in order to describe the phenomena of code-blending and code switching as observed in the language use of the bimodal bi-/multilingual family.

Finally, chapter 5, consists of a discussion of the results and the conclusion of this thesis. This thesis concludes by outlining the study’s original contribution to the existing research on bimodal bi-/multilingualism and the phenomenon of code-blending and its contribution to the understanding of interaction in a bimodal bi-/multilingual context.

Chapter 2 Literature Review

This chapter provides an overview on previous literature, which has examined bimodal bi/multilingualism and the phenomena of code-blending and code-switching. In Section 2.1, background on bilingual development is discussed, followed in Section 2.2 by a definition of bimodal bilingualism, focusing on how a child acquires a language, describing different family situations of deaf and hearing children and parents, and discussing family language practices. I also discuss the phenomena of code-blending and code-switching, including the different types of code-blending and code-switching.

2.1. Background on bilingual development

Before the 1990s, when cochlear implants began to be introduced in Western countries, deaf children and adults were nearly always bimodal bilinguals (Baker, van den Bogaerde, Pfau & Schermer 2016:64). Statistics show that 90-95% of deaf children are born to hearing parents. Hearing parents of deaf children would most likely not know any sign language, and this could result in sign language acquisition being considered less essential than spoken language acquisition (Pizer 2008:1-2; Christodoulou, Hadjidemtri, Konidari & Nicolaou, 2009; Moroe & De Andrade, 2018). As such, deaf children with hearing parents often receive low linguistic input in infancy. For example, in the United States, in the past, children's hearing loss was often not made known until age 2½ (Meier 2016:12). Furthermore, once the child's deafness has been identified, parents were discouraged from signing and gesturing to their children (Meier 2016:12).

For all children, whether hearing or deaf, learning a language depends on adequate language input. When comparing language input between signing deaf parents and hearing parents of deaf children, the signing deaf parent's language input is natural, whereas it is imperative that the hearing parents of deaf children need to learn the sign language and provide it as input to their child (Baker et al. 2016:69). The environment in which the child is brought up also plays a role in their language input. A study done by Blose and Joseph (2017) describes the nature of communication with a deaf child who is born into a hearing family with no prior experience of South African Sign Language (SASL), and compares this communication to communication in an educational setting from a South African perspective. The results show that, in terms of the home context, communication becomes problematic, as SASL communication mode was minimally used. The form of communication included natural gestures as well as oral and homesigns with frequent communication breakdowns. Conversely, communication within a

school context was more meaningful, as SASL communication mode was used with fewer communication breakdowns. This shows that, because hearing parents provide low sign language input, communication becomes problematic within the home context (Blöse & Joseph 2017:1149-1159).

Since the 1980s, sign language has been seen as the native language of deaf children and the spoken language as their second language, although this may differ from country to country (Schermer, 2012). Thus, when it concerns bilingualism, deaf children do not have a choice; for them to properly operate in the hearing society, it is imperative to learn the spoken language or the written form of it (Baker et al. 2016:64). However, at present, in many Western countries, deaf children receive a cochlear implant, making it possible for deaf children to acquire a spoken language at a better rate than deaf children who do not have a cochlear implant (Baker et al. 2016:64). The implication of this on bimodal bilingualism is that deaf children with cochlear implants might move away from signing and solely use the spoken language, as it is the majority mode of communication in the hearing society we live in today. This may result in children becoming unimodal bilingual (speech-speech) rather than bimodal bilingual (sign-speech). The families of children with cochlear implants often believe that signing in some way disrupts their speech development, thus focusing solely on the development of spoken language (Quadros, Lillo-Martin, Chen Pichler 2014:190-191). A study by Davidson, Lillo-Martin and Chen Pichler (2014) provides evidence against this view, as the results shown in their study indicate that, when sign language input is received at an early enough age and in an unrestricted manner, it does not have any negative impact on spoken language acquisition, but rather facilitates it (Quadros et al. 2014:190-191). According to Hassanzadeh (2012), in order to improve deaf children's ability in spoken language after cochlear implantation, it is of utmost importance to encourage them to communicate in sign language from a very early age, before receiving the cochlear implant (Hassanzadeh 2012:989; Quadros et al. 2014:191).

2.2. Defining bimodal bilingualism

Bimodal bilinguals make use of both their sign language and their spoken language simultaneously. However, when an individual is bimodal bilingual, each individual language input is different because of their disparate upbringing or the age at which the individual first receives exposure to a language. These factors play an important role in the output of language. Often, deaf children are bilingual in both a signed and a spoken language because they are living in a hearing society (Baker et al. 2016:52). However, there are situations where deaf

children only receive spoken language input from birth and this results in them not receiving sign language input. These children often make use of the gestures which they observe within their surroundings and create their own signs. This is a form of communication known as “homesign” (Baker et al. 2016; 53). Homesign may be classified as a linguistic phenomenon, as is not a language and it does not make an individual bilingual.

Hearing children of deaf adults, CODAs, are also often bimodal bilinguals, as they acquire their first language – the sign language –from their parents, and the spoken language from the community and at school.

There are several ways to define the term “bilingualism”. The four types of bilingualism are as follows: (i) balanced bilingualism, which is when an individual has equal competence in both languages; (ii) dominant bilingualism, when an individual’s level of proficiency is greater in one language than the other; (iii) simultaneous bilingualism, when an individual acquires both languages at the same time; and lastly (iv) sequential bilingualism, which refers to an individual who acquires one language later than the other.

A person may also understand bimodal bilingualism in another way, which does not take into account the age at which people acquire the second language, but rather the type of input. For instance, hearing people who acquire a sign language through formal education, bimodal bilingualism should apply to them as well (Lillo-Martin et al. 2016:4). Several studies have been done on adult bimodal bilingualism where the focus is on participants who grew up using a sign language. Fewer studies have been done on adults who did not grow up using a sign language but acquire the language at a later stage (through formal education) (Lillo-Martin et al. 2016:4).

As mentioned above, bimodal bilinguals may make use of both their sign language and spoken language simultaneously. Thus, they have two output channels, namely the vocal tract and their hands, whereas unimodal bilinguals have a single output channel for both spoken languages, namely the vocal tract. Of course, signers may also be unimodal bilinguals, as they may know and produce two sign languages, through one single output channel, namely the hands. For bimodal bilinguals, one language is perceived visually and the other language auditorily, whereas for unimodal bilinguals, both languages are perceived auditorily. Therefore, it is impossible for unimodal bilinguals to produce two spoken words or phrases at the same time, and this is a severe production constraint (Emmorey & Thompson 2005:663).

Many studies have been conducted on unimodal bilinguals, which involve two spoken languages and not bimodal bilinguals. There is little research on bimodal bilinguals. Therefore, it is important to address this under-researched topic, to better understand communication in deaf-hearing families.

2.3. Input and interaction in deaf families

When looking at the development of bimodal bilinguals (that is, the acquisition of a sign language and a spoken language), one may differentiate between different groups (or family situations) of children. Often, people believe that all deaf people are living in the same situation or going through the exact same situation. This is not accurate, as no two deaf people are alike, nor do they share the same development path (Baker et al. 2016:4). Thus, when explaining the different groups, more focus is placed on the first language acquisition of hearing children of deaf parents, as these children are generally brought up to be simultaneous bimodal bilinguals, although there might be a delay in the spoken language acquisition (Baker et al. 2016:4-5).

Often one finds that hearing children who are born or raised in a family where the parents are deaf live between two cultural and linguistic worlds. These hearing children are constantly exposed to at least two languages. Thus, if the parents are signers of SASL and are active in the larger South African Deaf community, the children will then be exposed to at least two linguistic varieties, English and/or Afrikaans (or another South African spoken language) and SASL, as well as to two cultural communities, namely Hearing and Deaf (Pizer 2008:1). The participants in this study, for example, are multilingual in English, Afrikaans and SASL. Typically, parents and children in bi-/multilingual families make choices in their home language use, which influence the children's competence in the minority language and the maintenance thereof (Pizer 2008:1).

In the following subsections, the various family situations are described, namely hearing children of deaf parents, deaf children of deaf parents, and deaf children of hearing parents. I will also discuss family language practices and policies as well as cross-cultural communication in deaf-hearing families.

2.3.1. Hearing children of deaf parents (CODAs)

This study focuses on a particular family group situation, namely hearing children of deaf parents, which is an ideal situation for bilingual bimodal development, as both signed and spoken language are fully available to these hearing children. Thus, CODAs are certainly

exposed to sign input. Several studies have found that deaf parents expose their hearing children to both signed and spoken languages. Hence, the spoken language is used in the hearing children's environment, either through the hearing family or at crèche (Baker et al. 2016:64-66). The present research focuses mainly on CODAs, as both of the child participants are hearing children of deaf parents. Whether a child is born to one or two deaf parents, they are considered to be CODAs. CODAs are raised in deaf families but are not necessarily raised in a Deaf community (Pizer 2008:2; Moroe & De Andrade 2018). The term KODA (kid of deaf adults) can also be used when referring specifically to young children of deaf parents (Spector 2020:1).

2.3.2. Deaf children of deaf parents

With regards to deaf children of deaf parents, first language acquisition follows the same pattern as for spoken language acquisition. However, this only occurs if the input from the parents includes a sign language, which is also subject to the same input conditions that are pertinent for a spoken language (Baker et al. 2016:65-66). Deaf children of deaf parents may experience a greater variety of linguistic modality variations, despite sharing the same family characteristics (Baker et al. 2016:1-4).

Often in this group, a sign language is a home language; this allows the children to acquire the sign language as their first language. Deaf parents sign to their newborn from birth and when they later discover that their child is deaf or hearing, they may decide whether or not to offer their child both a sign language and a spoken language. In this case, the children are brought up in a simultaneous bilingualism situation, and deaf children are raised to be bilingual and bicultural, although there are raised in different living situations, as no two deaf people are alike, nor share the same development (Baker et al. 2016:1-4). Of course, their ability to access the spoken language depends on many factors, including amount of hearing loss.

2.3.3. Deaf children of hearing parents

As mentioned above, the vast majority of deaf children are born to hearing parents. These children automatically receive a spoken language input (this could be during the period in which the parents do not know yet that the child is deaf). However, this language input is not effective as it is offered in a modality that is inaccessible to the child. In this case, when a hearing parent does not provide any input in a sign language, homesign systems often develop (Baker et al. 2016:65-66, see Section 2.3.1).

For hearing parents, learning a sign language is beneficial for their deaf child, as they will then be able to provide sign language input to the child. In a few countries, deaf children may attend a special crèche and thereafter a deaf school. In this group, a form of bimodal bilingualism may therefore occur at an early age, if the children receive schooling where the two languages are being provided (Baker et al. 2016:65-66).

2.3.4. Discussion of family language practices

The present study focuses on the influence of the hearing/deaf status of the interlocutors on their language use, hence the importance of examining previous research, such as Pizer (2008), which focuses on the influence of language on choice/mode¹ in family interaction. Studies have shown how significant the variation is in the hearing children of deaf parents, specifically in their sign language fluency and their code choice practices, such as shown by Preston (1994). Preston (1994) focuses on the cultural identity and affiliation of hearing children of deaf parents. He observes that many adult hearing children of deaf parents do not identify themselves as hearing and have to find a middle ground between two different worlds, being culturally “Deaf” yet functionally hearing (Preston 1994).

The ethnographic study conducted by Pizer (2008) includes 13 interviews with hearing adults who have deaf parents and case studies which analyse the communication in three American families consisting of deaf parents with young hearing children. Pizer’s (2008) study examines whether parental code choices directly affect the children’s code choices. The first family has a deaf mother and her two-year-old hearing daughter; in the second family both parents are deaf with hearing sons ages three to ten; and the parents of the third family are both deaf as well, but have three hearing sons aged four to 16. The families were videotaped in their most spontaneous contexts (during mealtimes and playtimes at home), four to five times over the course of several months (Pizer 2008:47-50). The videotapes and parental reports show a clear indication that all the children of each family are fluently bilingual in English and ASL (Pizer 2008:47). Although the two-year old is still young and still developing her language skills, so it may be challenging to claim that she is fully bilingual.

In addition, Pizer (2008, 2012) discusses the question of how childhood language practices of CODAs can lead to the variation observed among adults. She makes use of two theoretical frameworks – audience design (Bell 1984, 2001, cited in Pizer 2008) and language ideologies

¹ In this study, the code focuses on the language (English, Afrikaans or SASL); whereas mode focuses on the modality (the different modes, sign versus spoken versus code-blending).

(Kroskrity 2004, cited in Pizer 2008) – in order to analyse the communicative behaviour of families with deaf parents and hearing children (Pizer 2008: 3-4, 85). Pizer (2008) coded every communicative turn in terms of the role that each family member performed, namely: speaker/signer, addressee, participant, bystander and for the communication behaviour: sign (Si), gesture (Ge), fingerspelling (FS) mouthing (Mo), shout (Sh), singing (Sing), speech (Sp), vocal gesture (such as, shriek, whine or a sound effect for a toy) (VG), whisper (Wh) and under breath (UB) (Pizer 2008:4-5). A coding system of gaze direction and attention-getting cues (such as touch or wave) was used as well in this particular study.

Pizer's (2008) discussion focuses mainly on the families of the older and younger boys (Family 1 and 3) as the family with the mother and daughter (Family 2) had no variation in addressee (Pizer 2008:47). In Family 2, both mother and daughter produced relatively frequent speech in comparison to the other two families. In the family of the older boys, Family 1, the children often signed to their deaf parents whereas they addressed their hearing siblings almost only in speech (Pizer 2008:57-60). In the family with the younger boys, Family 3, the children were adept at adjusting their language use when speaking to both their hearing addressees and deaf parents. To their mother they spoke more whilst signing, and they made more sign-only turns to their father. The boys in Family 3 produced more turns that included both speech and sign than the older boys in Family 1 did, because their communication with their mother frequently included speech. However, their language behaviour to their father was similar to that of the family with the older boys, Family 1 (Pizer, 2008:65-66). The language choices made by the family with the younger boys, Family 3, were similar to those of the younger children in the family of older boys, Family 1, demonstrating a nearly complimentary distribution between the language types they combined with one another.

The children in both Family 1 and 3 occasionally signed to one another, but this signing was almost always done for an obvious reason, such hiding a secret or teaching a sibling a sign. The parents in these families changed their language choices according to their addressees, just like their children did (Pizer 2008:67).

Overall, there is a pattern in this study where hearing children of the families typically communicate with their parents in whatever combination of languages and modalities has evolved in their own family habitus, but conversely, with their hearing siblings and friends, they used spoken English almost exclusively, whether or not their parents were present and involved in the conversation. These hearing children of deaf parents appear to have a language

ideology that values exerting communicative effort to reach an addressee but disapproves of such effort when motivated by other factors (Pizer 2008:84-85).

2.3.5. Family language policy in deaf-hearing mixed families

Family language policy (FLP) refers to the language ideologies and practices of bimodal, multilingual, deaf/hearing households against a background of broader discourses (De Meulder, Kusters & Napier, 2018). A research project was conducted by De Meulder, Kusters and Napier, who are three mothers working in academia (two are deaf and one hearing), where signing is a part of their everyday lives and at home. With this research project, these academic mothers combine their cumulative knowledge of sign language policy, multilingualism, and language brokering from their various academic backgrounds (a form of interpreting). According to De Meulder et al. (2018), there have been prior studies on family sign language policies which mostly concentrated on the hearing parents of deaf children who did not previously have access to sign language and using various techniques like surveys and interviews. Additionally, past studies have generally concentrated on the language development of deaf infants and young children. De Meulder et al.'s (2018) project is different in that it focuses on hearing children over the age of two who are already bilingual or multilingual, using a variety of spoken and signed languages, and have a mix of hearing and deaf grandparents as well as hearing and deaf parents. The authors conducted a pilot study within their own homes; all three mothers and their family utilize numerous languages and modalities over several generations, and there are different distributions of deafness and sign languages in each family.

Since the study is limited, the authors only made use of children-parents-grandparents units, however, in their future study their aim is to include broader social networks which are inclusive of other family members and friends (De Meulder et al. 2018). In the different family homes, every family uses one or more sign languages. Altogether, four spoken languages and four sign languages are used: English, Dutch, German, Marathi, British Sign Language (BSL), Indian Sign Language (ISL), Flemish Sign Language (VGT) and International Sign (IS). The grandparents who participated in the study have varying levels of signing proficiency compared to the deaf and hearing children and parents who are all fluent signers. The data collection entailed making ethnographic video recordings in their family interactions in different contexts, for instance, at home or when the grandparents would visit, and these video recordings would take place during mealtimes and at story times. With regards to the analysis, they concentrate

on the languages/modalities used in the different contexts, and on switches between and combining languages and language modalities (De Meulder et al. 2018).

Overall, a few findings resulted from De Meulder et al.'s (2018) preliminary analysis of the data. The first is that FLP is much more complex than using a specific number of different signed/spoken languages at home. Real data are messy. Secondly, the connection between eye gaze and sensory differences and how it affects modality choice – whether someone chooses to use their voice or not – showed interesting patterns. For instance, the people at whom participants look and their hearing or deafness may affect how they choose to communicate. It is also interesting how much signing is acquired from peripheral vision rather than through direct eye contact, such as when telling stories. This study shows how crucial and regular touch is in family language communication, in contrast to regular sign language communication between deaf and hearing sighted signers (De Meulder et al. 2018). For instance, when a mother is talking to someone and their child seeks attention, she holds and rubs the child's hand to show that she is aware the youngster needs attention and asks the other person to wait (De Meulder et al. 2018).

De Meulder et al. (2018) observe how important family language policies and practices are, noting that there are very few “clean switches” between languages, and that the relationship between one person and a single language or language modality is not binary.

2.3.6. Cross-cultural communication in deaf-hearing family

Cross-cultural conflict may occur between hearing and deaf individuals, according to a study by Tittle and Singleton (2000). The vast majority of individuals often only think of interactions that occur between a deaf adult and a hearing provider or educator. However, one should think of cross-cultural communication issues which could also occur within families with deaf parents and hearing children (Tittle & Singleton 2000:224).

According to Tittle and Singleton (2000:225), despite ASL being a legitimate language for family interaction, it is important to know the disparate dyads within a deaf-parented family, as they might make use of disparate communication systems whereby a few may be using ASL and others not. Furthermore, with communication in a cross-cultural deaf-hearing family, there is a possibility that a hearing child and a deaf parent would not always have symmetrical speech/sign. During communication between the deaf parent and hearing child, the deaf parent could produce an incomplete spoken utterance, but expect the child to sign back to them (Tittle & Singleton 2000:225).

2.3.7. Language choice and ideologies in a deaf-hearing family

There are various factors that can influence language choices, such as catering to the audience, the topic of discussion, the environment, and the social and cultural identities of the participants in the conversation (Pizer 2008:19). Language ideologies are defined as “beliefs, or feelings, about languages as used in their social worlds” (Kroskrity 2004: 498). Thus, language ideologies serve as a social rather than linguistic purpose (Piller 2015:4). All members of a family with hearing children and deaf parents are likely to form ideologies about the languages spoken in the home, which in turn will influence the language choices made by those family members. Sociolinguistic situations arise from language ideologies by framing the ways that speakers think about languages and language behaviour (Pizer 2008:19). Through interviews with adult CODAs, Pizer (2008) examines the way in which participants interpreted and evaluated their own behaviour and others, viewing these through the analytical framework provided by language ideologies. Pizer’s (2008) study ties together multiple kinds of linguistic data—interviewee reports and narratives as well as observed family behaviour—and allows her to find structure among individual variation (Pizer 2008:20).

Pizer’s (2008) findings on language ideology indicates that hearing children of deaf parents seem to share the value of expenditure of communicative effort by being invested in getting the message across to the addressee, but disapprove of this effort given any other motivation. Furthermore, the fact that the language ideologies, as well as the family language practices that have developed from them, serve to support the families’ communication is indicative of the efforts of CODAs to harmonize the beliefs and customs of the two communities in which they reside. As such, they harmonize their identities as individuals who can hear, with comprehension of their obligation as members of a deaf family to provide communication with the family's deaf members (Pizer 2008:84).

2.4. Features of bimodal bilingual conversation

As noted in Section 2.1, bimodal bilinguals make use of both their sign language and their spoken language simultaneously and sequentially. This results in an interesting phenomenon named “code blending”, which describes expressions produced simultaneously in both speech and sign (Lillo-Martin 2015:185).

This section focuses on describing and providing examples of the different features of bimodal bilingual conversation. First, code-blending is discussed, including the different types of code-blending. It is important to differentiate between code-blending and Simultaneous

Communication, abbreviated SimCom. SimCom is a forced effort to sign along with speech, which is used often in educational settings for the deaf (Emmorey et al. 2005, cited in Lillo-Martin, 2016). Code-switching, on the other hand, occurs when there is a language switch made within a sentence or between sentences. This often occurs in spoken languages, where unimodal bilinguals may easily switch back and forth between different languages. However, they are not able to produce two phonological representations at the same time, whereas bimodal bilinguals may produce both speech and sign at the same time (Lillo-Martin 2016:10). This means that bimodal bilinguals are able to code-blend and code-switch during bi-/multilingual interactions.

2.4.1 Types of code-blending

In this section, I discuss the different types of code-blending and provide illustrative examples. An example of a simple sentence in which both languages are used equally, in code-blending, is given below. This example shows code-blending in Sign Language of the Netherlands (NGT) and Dutch (Dutch words are glossed in English) (Baker et al. 2016:316).

(1) NGT-Dutch code-blending

Signed BOOK FETCH
Spoken *book fetch*
Meaning “I am going to fetch the book”.

(Baker et al., 2016:316).

Firstly, four types of code-blending are described in this section, as discussed by Baker and van den Bogaerde (2008). These types of code-blending are based on their study which includes three CODA participants aged between 1;06 and 6;00 who acquired NGT and Dutch simultaneously. In their typology, there is no focus on the syntactic structures being used in an utterance, but rather the utterances are characterised by the languages which were used for expressing content (Baker & van den Bogaerde 2008). According to Baker and van den Bogaerde (2008), the four types of code-blending are the (i) speech-based code-blending, (ii) sign-based code-blending, (iii) full code-blending and (iv) mixed code-blending. A similar typology, proposed by Spector (2020), distinguishes between partial and full code-blending.

2.4.1.1 Speech-Based Code-Blending

Speech-based code-blending involves utterances that are frequently spoken, but with infrequent simultaneous production of signs that are alike in meaning to the spoken words, as illustrated example (2) given below.

(2) NGT-Dutch speech-based code-blending

NGT			VALLEN
Translation			fall
Dutch	<i>die</i>	<i>gaat</i>	<i>vallen</i>
Translation	that	goes	fall
Meaning	‘That [doll] is going to fall.’		

(Baker & van den Bogaerde 2008:7)

2.4.1.2 Sign-Based Code-blending

Sign-based code-blending involves utterances that are mostly signed with little speech, as illustrated in example (3) given below.

(3) NGT-Dutch sign-based code-blending

NGT	INDEX _{hij}	JAS	BLAUW
Translation	he	coat	blue
Dutch			<i>blauw</i>
Translation			blue
Meaning	‘He has a blue coat’.		

(Baker & van den Bogaerde 2008:8)

2.4.1.3 Full Code-Blending

Full code-blending indicates that the proposition in this utterance is fully expressed in both speech and sign, as illustrated in example (1) above and (4) below.

(4) NGT-Dutch full code-blending

NGT	MAMA	LEZEN
Translation	Mummy	read
Dutch	<i>mama</i>	<i>lezen</i>
Translation	Mummy	read
Meaning	‘Mummy [must] read.’	

(Baker & van den Bogaerde 2008:9)

2.4.1.4 Mixed Code-Blending

Mixed code-blending is where parts of the utterance are expressed in sign and parts in speech modality. This then requires both sign and speech to determine the full meaning of the proposition, as illustrated in example (5) given below.

(5) NGT-Dutch mixed code-blending

NGT	POLITIE	ANDER	MENSEN	SCHIETEN
Translation	police	other	people	shoot
Dutch	<i>politie</i>	<i>ander</i>	<i>mensen</i>	<i>doodmaken</i>
Translation	police	other	people	kill
Meaning	‘The police shot the other people’.			

(Baker & van den Bogaerde 2008:8)

2.4.1.5 Partial vs Full Code-Blending

Another way to categorise code-blending is to divide it into partial vs. full code-blending (Spector 2020). In partial code-blends, some but not all of the semantic information conveyed in one language is conveyed simultaneously in the other language. On the other hand, in full code-blends all of the semantic information in the one language is fully expressed in the other language. This is similar Baker and van den Bogaerde’s (2008) categorisation, but subsumes sign-based, speech-based and mixed code-blending under the category of partial code-blending. Partial code-blending then includes speech-based, sign-based and mixed code-blends and contrasts with full code-blending.

2.4.2 Code-blending in deaf-hearing families

Baker and van den Bogaerde’s (2008) study showed that deaf mothers largely made use of mixed code-blending. This resulted in a mixed form between NGT and Dutch in an organization that is well-matched with both NGT and Dutch. Their observation of the deaf children, who were aged up to three-years-old, showed that they were at the beginner stage of becoming bilingual, producing a lack of code-mixed utterances. However, the hearing children who were bilingual in NGT and Dutch, tended to use code-blending of the mixed type similar to how their mothers did (Baker & van den Bogaerde 2008:141). The results of the study have shown that “[t]he children’s output does not seem to be driven by input” (Baker & van den Bogaerde 2008:119), as the children did not imitate their deaf mothers’ choices of Dutch, NGT, or code-blended utterances that their mothers made. However, the children’s language seemed to be encouraged by the type of language use the mothers agree to receive from their children. The mothers allow the children to use their own form of language to communicate with them,

whether they use the correct or incorrect grammatical order; the mothers would decide to accept or not to accept the language type the children produced.

There are three types of strategies that can be seen in this study. One of the three mothers used the “monolingual strategy”, whereby the mother insisted on complete signed utterances from the child by asking for elucidation of code-blended and spoken utterances. Thus, the child used the most NGT utterances and the most code-blends that was grammatically based on NGT. A “bilingual strategy” was used by another mother in which the child mostly used Dutch; the mother accepted these utterances as long as she understood them. Lastly, a mother and child made use of both a “maternal strategy” and child behaviour. One sees the importance during family interactions with one another and what impact they have, as there is an influence of local ideologies on language use within the family (Baker & van den Bogarde 2008:99-131; Pizer, Walters & Meier 2012:77-78).

2.4.3 Language model of code-blending

The research conducted by Lillo-Martin et al. (2016) on the development of bimodal bilingualism shows that code-blending and the data from bimodal bilinguals can be described in a formal linguistic theory which is termed by them as “the Language Synthesis Model”.

Lillo-Martin et al. (2016) put forward three possibilities for how code-blending is possible for the human language faculty:

a. Possibility 1

Code-blending illustrates the potential for two completely separate derivations expressing two different propositions.

b. Possibility 2

Code-blending relies on two separate derivations, but a single proposition.

c. Possibility 3

Code-blending uses one derivation to express a single proposition.

(Lillo-Martin et al. 2016:741)

They argue for possibility three, namely the Language Synthesis Model (Lillo-Martin et al. 2016:18). According to Lillo-Martin et al. (2016), this model commences with the fundamental premise that bilinguals, particularly bimodal bilinguals, differ solely in having two sets of objects (roots, functional morphemes, and/or vocabulary items) to enter into a single derivation (Lillo-Martin et al. 2016:747). The Language Synthesis Model was proposed by the adding on

to previous models by taking on the minimalist perspective which was argued by MacSwan, as one can see below Figure 2.1 (MacSwan 2000, 2005, cited in Lillo-Martin et al. 2016), that the bilingual code-mixing utterances can be accounted for through a universal computational system.

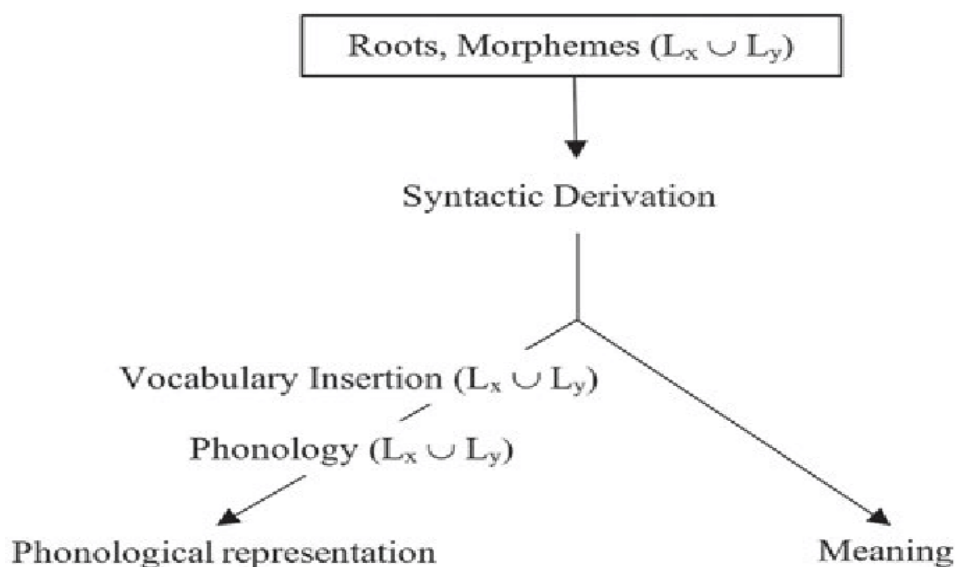


Figure 2.1: Language Synthesis Model (Quadros et al. 2014:187)

Spector (2020) applies the abovementioned language synthesis model in her study, which examines code-blending patterns in the narrative retellings in English and ASL of two primary school-aged early bimodal bilingual hearing boys with deaf signing parents, at two different points (Time 1 age 6;09 & Time 2 ages 8;01 & 8;02). Both parents are deaf, and both participants acquired English and ASL as their first languages (Spector 2020:1-2). Spector (2020) focuses on whether the code-blending patterns of young bimodal bilinguals show developmental shifts with regards to the following four aspects; (i) frequency, (ii) code-blend type, (iii) semantic equivalency and (iv) the syntactic category distribution in their narrative retellings in English and in ASL. The results show that both children tend to produce fully bimodal utterances and only a few code-switches were observed (Spector 2020:63). The study by Baker and van den Bogaerde (2008) shows similarities, as children produced code-blended utterances, which were semantically congruent propositions.

2.4.4 Code-switching

In this section I discuss code-switching and provide illustrative examples. The following is an example of code-switching from Afrikaans to English:

(6) English-Afrikaans intersentential code-switching

Maandag is ek in Kaapstad. I am going to meet friends for lunch.

Monday be I in Cape Town

“On Monday I will be in Cape Town. I am going to meet friends for lunch.”

In this combination of sentences, two friends are having a normal conversation, and both have a good understanding of Afrikaans and English. Bilinguals (or multilinguals) switch between two or more languages in conversation without necessarily changing interlocutor or topic, which is a process known as code-switching (Spector 2008:3). Code-switching as a bilingual phenomenon has been examined by researchers in numerous ways. For unimodal bilinguals, code-switching involves ceasing to produce one language so that the other can be produced.

Four types of code-switching can be identified: (i) intersentential, (ii) intra-sentential, (iii) intra-word and (iv) tag-switching. The two types of code-switching that have been discussed extensively are intersentential and intra-sentential code-switching (Spector 2020:5). The example in (6) above is of intersentential code-switching, where the switch occurs between two sentences.

Intra-sentential code-switching occurs when a shift has been made in the middle of a sentence, usually performed without a pause or interruption (Winford 2003; Spector 2020:6).

(7) Afrikaans-English intra-sentential code-switching

Meantime het hy sy driver's license geslag.

did he his PST-pass.

“In the meantime, he passed his driver’s license.”

Intra-word code-switching occurs when there is language mixing within a single word (Winford 2003; Spector 2020:6).

(8) Afrikaans-English intra-word code-switching

Ons het lekker geparty.

we have nice PST-party

‘We partied nicely.’

Alternatively, *geparty* may be a loanword in Afrikaans, which is indicative of the multilingual nature of the discourse. Finally, tag code-switching occurs mostly in intra-sentential switches, where the switching of either a tag phrase, or a word, or both, from one language to another takes place (Spector 2020:6).

(9) Afrikaans-English tag code-switching,

Sy is van Kaapstad en hulle praat soos dit, you understand.
she be of Cape Town and they speak like that
“She is from Cape Town and they speak like that, you understand.”

A number of studies have also looked at code-switching in bilingual and multilingual contexts. In these studies, the sociolinguistic and the grammatical approaches have been identified as being the two main types of approaches. While the grammatical approach concentrates on the syntactic and morphological features being code-switched, the sociolinguistic approach places more emphasis on social aspects such as the relationship and context of the speakers (Strauss 2016:6).

The next subsection will be focusing on Myers-Scotton’s (1993) Markedness Model. This model is relevant for the current study, as it analyses the occurrences of code-switching and the social factors involved when the family interact with one another during dinner time.

2.4.4.1 Markedness model

Myers-Scotton (1993) introduced the Markedness Model to describe the social indexical motivation for code-switching. According to Myers-Scotton (1993:113), the “negotiation principle” underpins all code choices in the context of code-switching and is based on Grice’s (1975, cited in Myers-Scotton 1993) co-operative principle. This negotiation principle is concerned with the selection of a linguistic variety in connection to the rights and obligations that the speaker expects to apply to that specific conversation or a given interaction (Myers-Scotton 1993:113). Myers-Scotton (1998:4) defines markedness as the choice of an individual’s linguistic variety above other potential varieties, “as speakers may use the possibility of making code choices to negotiate interpersonal relationships, and by extension to signal their perceptions or desires about group memberships” (Myers-Scotton 1993:478). A language user can (i) identify a continuum of linguistic variety and (ii) comprehend that language users will respond differently to marked versus unmarked choices because of the markedness evaluator concept. Thus, a marked choice is what the community norm would not predict, whereas an unmarked choice is what the community norm would be able to predict (Myers-Scotton 1993:5). The Markedness Model includes four complementary maxims (Spector 2020-9:10).

2.4.4.2 *The four maxims of code-switching*

The **sequential unmarked choice maxim** is when situational features change throughout a conversation to the point where the unmarked choice changes (for example, the composition of conversation changes, i.e., topic change) (Myers-Scotton 1993:114). Participants then switch from one unmarked code to another. The unmarked choice is observed in many bi/multilingual cultures, where speakers use two languages in the same discourse (Myers-Scotton, 1993:117). The **unmarked code-switching maxim** is invoked when the communication intent is conveyed through the overall pattern of code-switching rather than through a specific indexicality for each transition, setting it apart from other types of code-switching (Myers-Scotton, 1993:117). The **marked choice maxim** governs when a participant switches to a marked choice in order to negotiate a different rights and obligations balance than the one indexed by the unmarked choice, thus the speaker takes a different path Myers-Scotton (1993:131). Finally, the **exploratory choice maxim** applies when the unmarked choice is not clear, and speakers use code-switching to make alternate, exploratory choices (Myers-Scotton 1993:142).

2.4.4.3 *Code switching between signed and spoken languages*

There is a difference between code-switching which involves two spoken languages and code-switching involving a signed language and a spoken language. With regards to the two spoken languages, the two languages cannot be used at the same time, whereas signs and spoken words are effortlessly used at the same time (this is referred to as code-blending and was discussed in Section 2.4.2). Code-switching between signed and spoken language is defined by Emmorey, Borinstein and Thompson (2008), as the phenomenon in which a person stops talking and switches to signing, or vice versa.

Emmorey et al. (2008) analyse different types of interaction situations of hearing ASL-English bilinguals and adult children of deaf parents' language production. In the bilingual situation, the participants produced only 6% code-switched utterances, indicating that bimodal bilinguals rarely code-switch (Emmorey et al. 2008:47). Bimodal bilinguals are inclined to code-blend rather than code-switch (Emmorey et al. 2008:57). According to Emmorey et al. (2008: 58), code-switching serves discourse and social functions such as creating identity, establishing linguistic proficiency, signalling topic changes, and creating emphasis, as predicted by Myers-Scotton's markedness model. However, according to Emmorey et al. (2008:58), bimodal code-

switching, unlike unimodal code-switching, can also be motivated by differing physical constraints on the two languages.

For example, bimodal bilinguals have been observed switching from speaking to signing during dinner conversations when eating impedes speech or switching to ASL when the ambient noise level in an environment becomes too loud (e.g. in a bar when a band starts to play loudly).

(Emmorey et al. 2008:58)

As such, bimodal bilinguals may code-switch due to the biology of speech and sign, which is a reason unique to bimodal bilingualism.

2.5. Conclusion

Only limited previous research on bimodal bilingual families has been conducted. There is not much research on multilingualism in bimodal bilingual families. According to statistics, deaf children are more likely to have hearing parents than deaf parents. We see that acquiring a language depends on receiving enough input whether one is deaf or not (see Section 2.1). Furthermore, the signing deaf parent's language input is natural, whereas the hearing parents of deaf children need to learn the sign language and provide it as input to their child. Where the background on bilingual development is discussed, it becomes evident that early and unrestricted exposure to sign language does not affect the learning of spoken language in any detrimental way. Hearing children of deaf adults are often bimodal bilinguals, as they learn sign language from their parents and their spoken language from the community or at school.

There is little research on bimodal bilinguals, as only a few prior studies have focused on this topic, whereas more research has been done on unimodal bilinguals (see Section 2.2). Often, we look at deaf people as living in the same family situations, but this is not the case, as no two deaf people are alike, nor do they share the same development path. There are different family groups in which deaf children grow up in (as seen in Section 2.3). In this study, we focus on one particular group, namely the hearing children of deaf parents. Studies have demonstrated the wide range of abilities among hearing children of deaf parents, particularly in sign language proficiency and code choice practices (see Subsection 2.3.4). Language ideologies, family language policy and choice are relevant to this current study, given the focus on the social factors governing code choice of bimodal bilingual families.

There are different ways to categorise code-blending and code-switching, as well as different reasons for such language phenomena. Chapter 3 focuses on the methodology of this study, indicating how the different types of code-blending and code-switching are coded and analysed. Lastly, the frameworks presented in chapter 2 will be discussed in the data analysis section below.

Chapter 3

Methodology

This chapter examines the details of code choice in three video recordings of naturalistic interaction during dinnertime in a single family with two hearing children and two deaf parents. As described by Baker, van den Bogaerde and Woll (2005), the analysis of a language in the visual-spatial modality shares many difficulties with the research of a spoken language, but the sign language modality has different challenges of its own, given that this field of research is still quite new (Baker et al. 2005:7). This study thus implements the guidelines which Baker et al. (2005) propose and will be discussed below. In this chapter, I look at various facets of the research design of sign language acquisition studies and show how this particular study will be formulated. Sections 3.1 and 3.2 describe the design and the participants, respectively. In Section 3.3, the data collection process is described, followed in Section 3.4 by a look at the data transcription and analysis framework. Section 3.5 examines the ethical considerations involved in undertaking this study.

3.1. Design

This study is a continuation of a pilot study that I completed in my honour's year, which focused on observing the interaction of a single bimodal bilingual child with her various caregivers. Baker et al. (2005) note that, rather than an individual child, groups of children are often chosen for a study as it helps in generalizing the findings of the analysis. However, this research focuses on a bimodal bi-/multilingual family and their use of code-blending whilst interacting with one another during dinner time. When compared to my honour's research project, the generalizability increases to some extent as another same age-hearing family member is included, which changes the dynamics, by having more interlocutors being present.

This particular study is cross-sectional as it focuses on a particular state rather than on development and change, whereas a longitudinal study focuses on language development and change over a period of time (Baker et al. 2005:8). The reason for cross-sectional research is primarily due to the limited timeframe given to complete this study and because the focus is not on language development nor language change.

3.2. Participants

The participants in this study are a family from Worcester: deaf parents and two hearing twin sisters (nine years old). All participants are bi-modal multilingual, with SASL as the parents'

first language (L1), Afrikaans as their second language (L2). The children are Afrikaans and SASL L1 speakers/users, having been exposed to both languages from birth. All four participants have English as L2/L3. The parents were approached via the supervisor's social network; their permission for their children and themselves to participate in this study was requested and given.

3.3. Data collection

The research design was first explained to the parents only, via text messages, and then the parents explained the study to the children. Before commencing with the video recording, the parents and children had a virtual meeting (due to COVID-19) with myself to explain the research to the children again and to ensure that they were all comfortable participating in the study. Thereafter, the necessity of giving explicit consent was explained to both parents and children, and subsequently consent/assent was given by the participants. I delivered the video camera to Worcester, following COVID-19 social distancing protocols, and discussed the recording set-up with the family. One week of video recording was conducted during the school holidays of the parents and children's interactions around the dinner table. There were no other persons present in order to keep the family interactions with one another natural and spontaneous. For all the recording sessions, only one camera was used, resulting in one camera angle which meant that family members' faces, mouths and hands were sometimes not visible (Pizer 2008:48). The mother disguised the camera to ensure that it would not be visible to the children and distract them from interacting as naturally as possible. The mother did this by hiding the camera on the shelves between the flower vase. When the children and father were not present, the mother proceeded to set up the camera a few minutes before dinner time. Table 1 below provides an overview of the practical aspects of the data collection procedure (Baker et al. 2005:18).

Table 3.1. Practical aspects of data collection	
Style	Spontaneous
Setting	at home (dinner table)
Video-recording angle	corner/sides; the camera was situated in the corner, where it could capture all angles/sides of the room.
Number of cameras	One camera
One individual or interaction	interaction of the whole family at the dinner table
Durational aspects	one week of recording, during the January school holidays
Presence	other persons present: none (no interaction from researcher)

The data was spontaneous, as this research is based on natural interaction rather than on structured data collection, even though more structure allows the researcher to have much greater control over language behaviour (Baker et al. 2005:19-20). The reason for choosing a home environment is because informality is a feature of spontaneous data and because it is important to capture this type of data in an informal setting (Baker et al. 2005:20-21).

As mentioned in chapter one, the methodological challenges will be discussed. One challenge was the use of only one camera and the camera angle obscured some signing, and non-manual features, which limited the number of utterances that could be included as data, During the data collection process the initial family that the researcher contacted to take part in the study, which included deaf children, accepted but thereafter declined due to COVID-19 and the announcement of a lockdown. This resulted in having to find a new family that met the criteria of the study, which prolonged the timeframe of the data collection. Lastly, another challenge or complex issue for myself as a hearing researcher was transcribing the signing, as it is imperative for sufficient knowledge of the language to be present, the reason being is to make a dependable transcription of the languages under study (Baker et al., 2005:35). Therefore, the interactions between the children and parents were transcribed with the help of a fluent SASL signer,

3.4. Data transcription

The data were transcribed by an SASL interpreter employed by Stellenbosch University. Three dinner sessions were transcribed which totalled approximately an hour of interaction. Only those utterances which showed evidence of code-blending or code-switching were analysed.

Often, deaf parents and their hearing children make use of code-blending by signing and speaking at the same time. As noted in chapter 2, there are different types of code-switching and code-blending, and this study facilitates the identification and analysis of the disparate types of code-switching and code-blending the family produced at the dinner table. Thus, this methodology addresses the aim of this research which is to better understand the phenomenon code-blending in a bimodal bi-/multilingual family.

For the transcription, the signed utterances were glossed and translated, and the spoken utterances were transcribed and translated where necessary. Regarding the spoken utterances, Afrikaans utterances were translated to English. It is essential that all code-blended utterances are transcribed and that they are held apart from sign only utterances in the analysis. This is because the output of signs followed by a spoken language can have an influence on the structural organization of the sign part (Baker et al. 2005:27). As I am a hearing researcher, the transcription was done by a fluent SASL signer (see Baker et al. 2005:35).

3.5. Data analysis

The data was analysed by categorising the type, amount and functions of code-switching and code-blending in order to answer the research questions. Coding was done according to turns. A turn was considered to be a continuous linguistic and/or communicative production during which the role relationships of the people present did not change. These roles were identified as speaker/signer, addressee and participant. A participant is a person participating in the conversation, but who not directly addressed. Following Pizer (2008: 51), turns were coded and counted rather than utterances because firstly, “utterance boundaries are often unclear, and [secondly] coding for every utterance would have multiplied the coding time significantly”.

A turn was coded as **code-blended** when the spoken language was accompanied by the signed language or vice versa. Each time the language mode changed between turns (from spoken-only to signed/code-blended or from signed/code-blended to spoken-only), it was coded as a **code switch**. A turn was coded as **semantically congruent** if the code-blended elements (words/signs/turns) were semantically equivalent. If a single sign/word was simultaneously produced in the spoken and signed language, it was coded as a **single sign/word code-blend**. Multiple signs/words, simultaneously produced in the spoken and signed language, were coded as **multi sign/word code-blends**.

Code-blended turns were then categorized as partial or full. A code-blend was analyzed as **partial** if some but not all of the semantic information in one language was conveyed

simultaneously with the other language. A code-blend was analyzed as **full** if all of the semantic information in the one language was fully expressed in the other language.

Partial code-blended turns were further categorized as spoken-base, signed-base or mixed. In **spoken-base code-blends**, all the semantic information is conveyed in the spoken language, and the signs do not contribute additional meaning (semantically congruent). In other words, everything that is signed is said, but not everything that is said is signed. In **signed-base code-blends**, the semantic information is conveyed in the signed language, and the spoken words are semantically congruent. In other words, everything that is said is signed, but not everything that is signed is said. A **mixed code-blend** is where both signs and words are necessary to interpret the full meaning (no semantic congruency). In other words, some is signed, some is spoken, not everything that is signed is spoken AND not everything that is spoken is signed.

Data that were **unanalysable** due to unclear articulations or not visible to camera could not be categorised. When the participant speaks or signs in general and not addressing a specific person/participant, we look whether or not the topic he/she is talking about is followed after the last participant that spoke or signed.

The signed utterances were glossed and translated (into English), and the spoken utterances were transcribed and translated (from Afrikaans to English).

It is important to transcribe all code-blended utterances, as well as to keep them apart from sign only utterances in the analysis. The reason for this is that the production of signs which are accompanied by spoken language may have an effect on the structural organisation of the signed part (Baker et al. 2005:27).

It is imperative for sufficient knowledge of the language to be present, the reason being to make a dependable transcription of the languages under study (Baker et al. 2005:35). I took into consideration that this could be a complex issue for myself as a hearing researcher transcribing signing. The interactions between the children and the parents were therefore transcribed with the help of a native signer of SASL.

Code-switching was identified whenever an interlocutor **switched** from one language to another at the start of a turn. A change of language mode from one turn to another was therefore coded as a **code-switch**, i.e. from spoken-only to signed/code-blended, or from signed/code-blended to spoken-only, or from spoken English to spoken Afrikaans, or vice-versa.

As discussed in Chapter 2, the following types of **code-switching** occur: (i) **intersentential code-switching**, where the **switch** occurs between two sentences; (ii) **intra-sentential code-switching**, when a shift has been made in the middle of a sentence; (iii) **intra-word code-switching**, when there is language mixing within a single word; and (iv) **tag code-switching**, where the **switching** of either a tag phrase, or a word, or both, from one language to another takes place. Code-switching was examined to determine which of the Markedness Model maxims apply, in order to identify the functions of the code-switches.

3.6. Ethical considerations

I applied for, and was granted, Ethical Clearance from the General Linguistics Departmental Ethics Screening Committee (DESC) and the Stellenbosch University Research Ethics Committee (Humanities) (see Appendix A). Parents of the children were contacted via the supervisor's social network and invited to participate in the study. The parents were informed that participating in this study is voluntary and that they could terminate their and their children's participation at any time. A consent form was provided to the children's parents in order to acquire their informed consent to participate and consent for their children to participate (see Appendix B). The children gave assent (see Appendix C). The language in which the consent and assent forms were made available was English. Written versions of the consent and assent forms were prepared and sent electronically, which all participants signed, as the parents and children are fluent in written English and Afrikaans. A video call skype session was scheduled with the parents and children; consent was given for a transcriber to assist with analysing the videos, as I am a hearing researcher with limited signing ability.

Chapter 4

Data Analysis

This chapter addresses the language choice of deaf parents and their hearing children whilst interacting with one another during dinner time. This is qualitative and quantitative research, as it gives a descriptive analysis and descriptive statistics of the different code-blend types present in the data, as well as a description of the presence and possible reasons for code-switching. I refer to each of the three videos as separate dinner family interactions. It is obvious when analysing these three videos that the children are fluent in SASL and Afrikaans. They understand and speak English as well, but it is not possible to indicate the extent to which they are fluent in English, as there were not many utterances spoken in English. This may be because of the presence/identity of their interlocutors' or the greater competence that both parents and children have in Afrikaans and SASL, rather than English.

This chapter is structured as follows: first, an overview of the data is given in Section 4.1, this is followed by the analysis of the three dinner conversations in Section 4.2, including examples of code-blend types evident in the data. The influence of the addressee on family language choices is discussed in Section 4.3, as described below. The family members' language choices were primarily driven by the identity of their addressee, rather than by topic or by the presence of other participants in the conversation. I then describe code-switching and provide examples from the data in Section 4.4, speculating on the reasons for these switches. Lastly, in Section 4.5, a summary of the data analysis is provided. This chapter enables me to answer the disparate aspects of the three research questions. Research questions one and two focus on the patterns and functions of code-blending and code-switching in the language use of a bimodal bilingual/multilingual family and is addressed in Sections 4.2 and 4.4. Question three, which looks at how interlocutors' hearing or deaf status influences the language use of the bimodal bilingual/multilingual family, is addressed in Section 4.3. Thus, answering the research questions allows us to better understand the phenomena of code-blending and code-switching, in terms of the language choice of deaf parents and their hearing children whilst interacting with one another during dinner time.

4.1. Overview of the data

As discussed in chapter three, three dinner time conversations were transcribed, totalling approximately an hour of recording time. The following is a description of all three video recordings.

Dinner 1

Dinner 1 is 24 minutes in length. Child 1 (C1) produced 106 turns, child 2 (C2) produced 88 turns, the father produced 47 turns and the mother produced 28 turns. Eight turns in this video were unanalysable due to unclear articulations or camera angle. The main topics of conversation discussed between the family in this video recording included the supper they were about to eat, the game *Boereplaas*, who won the game the previous evening and who will win after dinner. The children also spoke about the last time they visited their grandparents in Cape Town, whether the dog was fed already, and they spoke about thunderstorms and animals (spider, scorpion).

Dinner 2

Dinner 2 is 17 minutes in length. C1 produced 92 turns and C2 produced 82 turns. In contrast to Dinner 1, in Dinner 2 the mother produced 56 utterances, and the father produced 52 utterances. The conversation in this video between the family covers various topics, including animals, specifically snakes, the holiday venue Silverstrand that they went to, catching fish with their aunt and how they tried to make her scared with a plastic fish. The family also spoke about the ice-cream they were going to eat for dessert, and C1 spoke about one of her friend's brother having a sugar rush.

Dinner 3

Dinner 3 is only 7 minutes in length. C1 produced 21 turns and C2 produced 20 turns. The mother produced 20 turns and the father produced 16 turns. Three turns in this video were unanalysable due to unclear articulations or camera angle. The main conversation topics in this video recording included C1's favourite school subject, the mother spoke about the food that she shared between their dogs and C1 spoke about how she ate too much food and now she is full.

4.2. Overall analysis

When analysing all three videos, I followed the approach of Pizer (2008:54). Figure 4.1 gives descriptive statistics of the different language modes evident in the data within the three dinner conversations.

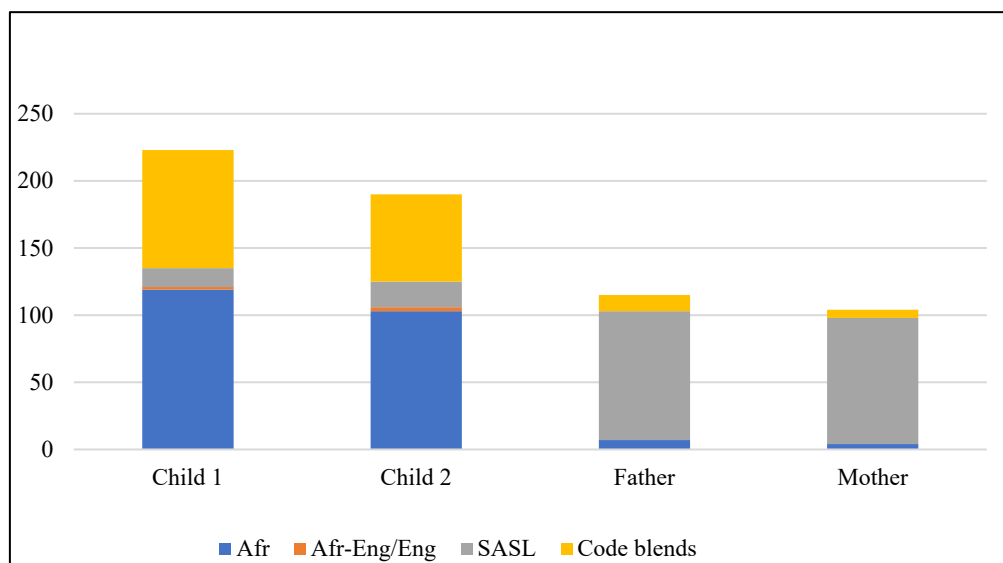


Figure 4.1. Language mode of utterances per participant

Across all three dinner conversations, C1 produced a total of 219 turns, C2 produced 190 turns, the father produced 115, and the mother produced 104 turns. Eleven turns in this data were unanalysable due to unclear articulations or camera angle, as noted in Section 4.1.

When analysing the language mode of C1, 55% of the 219 turns were spoken language only, i.e. produced in Afrikaans, or Afrikaans-English/English, 6% of the turns were in SASL, and 40% were code-blended. When examining the turns produced by C2, 56% percent of the 190 turns were spoken language only, i.e., produced in Afrikaans, or Afrikaans-English/English, 10% were in SASL and 34% were code-blended. The language mode of the mother shows that of the 104 turns produced, 90% were in SASL, 6% code-blended and 4% in Afrikaans. Lastly, 83% of the 115 turns produced by the father were in SASL, 10 % were code-blended and 6% in Afrikaans.

The language mode of the children shows that the majority of the time, they conversed in their spoken language and would code-blend rather than sign only. The parents' primary language mode is SASL, which is their L1, and they would code-blend rather than speak only in limited cases.

The graph in Figure 4.2 shows the two types of code-blends which are partial code-blends and full code-blends, and the extent to which each participant uses these types of code-blends. As discussed in chapters 2 and 3, partial code-blending is when some but not all of the semantic information in one language was conveyed simultaneously with the other language. Full code-

blending is when all of the semantic information in the one language was fully expressed in the other language (Baker and van den Bogaerde 2008; Spector 2020).

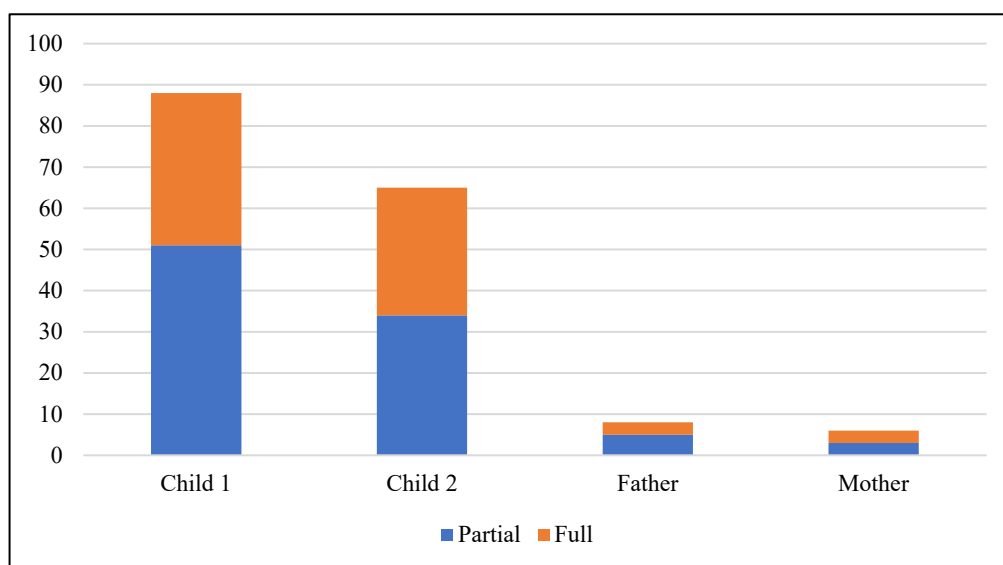


Figure 4.2. Types of code-blended utterances per participant

Overall, across all three dinner conversations, C1 produced a total of 88 code-blends of which 58% were partial code-blends and 42% were full code-blends. C2 produced a total of 65 code-blends of which 52% were partial code-blends and 48% were full code-blend utterances. The overall percentages of C1 and C2's type of code-blending shows that the children produce partial code-blends more than full code-blended utterances.

The father produced a total of 12 code-blends of which 42% were partial code-blends and 25% were full code-blended utterances. The mother produced a total of 6 code-blends of which 50% were partial code blends and 50% were full code-blended utterances. Overall, the father tends to produce partial code-blended utterances rather than full code-blends. On the other hand, the mother produced an equal amount of partial and full code-blended utterances.

The graph in Figure 4.3 shows the type of partial code-blended utterances produced by the children and parents. The three different types of partial code-blends that the participants produced are spoken-base, sign-base and mixed (Baker and van den Bogaerde 2008; Spector 2020).

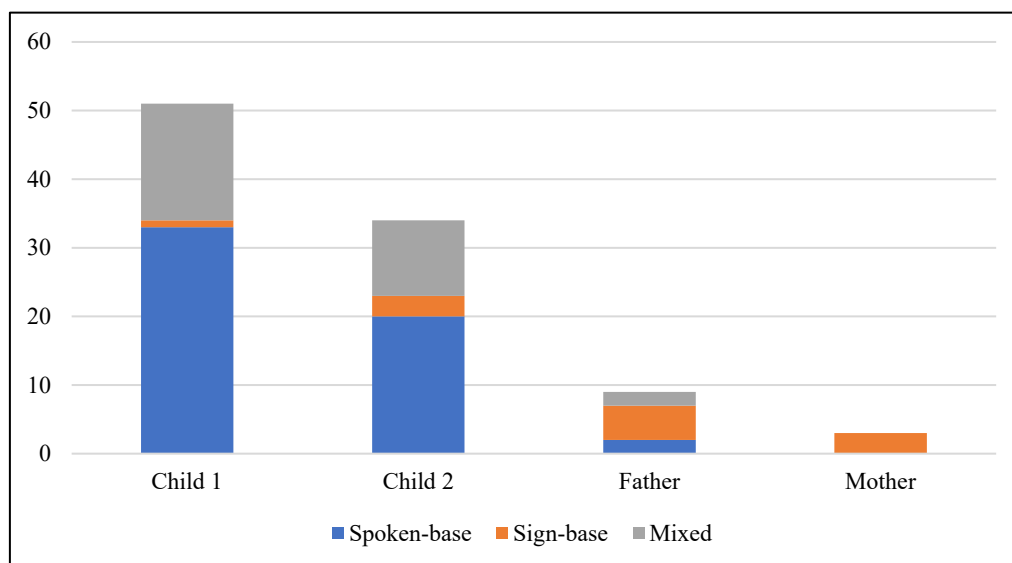


Figure 4.3. Types of partial code-blends per participant

Across all three dinner conversations, C1 produced a total of 51 partial code-blends of which 65% were spoken-based, 2% were signed-based and 33% were mixed code blends. C2 produced a total of 34 partial code-blends of which 39% were spoken-based, 6% were signed-based and 22% were mixed code-blends. The percentages of types of code blends produced by C1 and C2 show that the children produce spoken-based code-blended utterances the majority of the time, followed by mixed code-blends. Lastly, only a few utterances were signed-based code-blends.

The father produced a total of 9 partial code-blend utterances of which 22% were spoken-based, 56% were signed based and 22% were mixed-based utterances. The father produced all three status code-blends of which the majority were produced in his L1 and an equal percentage of 22% each is spoken and mixed-based utterances. Whereas the mother only produced 100% signed-based code-blended utterances of which were 3 partial code-blend utterances.

The graph in Figure 4.4 shows the nature of code-blend utterances produced by the children and parents. The two categories analysed are single and multi-sign/word code-blends. Single code-blends are when the participant produces only one word/sign combination, whereas multi-sign/word code-blends are when the participant produces more than one word or sign (or both) in an utterance (see Chapter 3).

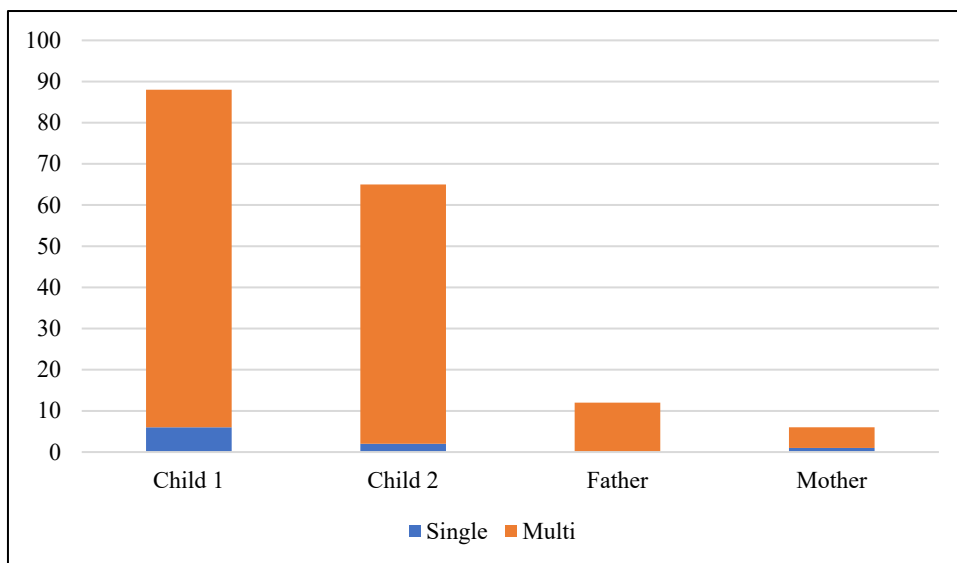


Figure 4.4. Nature of code-blended utterances per participant

Across, all three dinner conversations, C1 produced a total of 91 code-blends of which 93% were multi code-blends and 7% were single code-blends. C2 produced a total of 68 code-blends of which 97% were multi-sign/word code-blends and 3% were single code-blends. The percentages between C1 and C2 shows that the children produces more multi-sign/word code-blends than single code-blends.

The father produced a total of 12 code-blends of which 100% were multi-sign/word code blends and 0% were single code blends. On the other hand, the mother produced a total of 6 code-blends of which 83% were multi-sign/word code blends and 17% were single code blends.

4.2.1 Examples of code-blends

The types of code-blends that the participants produced are shown in the examples below. The first example is when C1 said a prayer, producing a full code-blend, as all of the semantic information in SASL is fully expressed in Afrikaans as well. The nature of the code-blend was a multi code-blend, as C1 produced more than one word/sign.

- (10) Child 1, Full code-blend, multi-sign [SASL-Afr]

JESUS THANK-YOU EVERYTHING WE HAVE, THANK-YOU DELICIOUS
Jesus dankie vir alles wat ons het, dankie vir lekker

FOOD AND WE ALL TOGETHER TONIGHT CAN, AMEN
kos dankie dat ons almal saam vanaand kan kom. Amen

“Jesus thank you for everything that we have, thank you for the delicious food and thank you that we all can come together this evening. Amen”

In (11), the C2 produced a conversational code-switch to her interlocutor (C1). Whilst interacting with C1, C2 partial code-blends, as everything signed is said, but not everything said is signed. The status of the code-blend is speech-based, as all the semantic information is conveyed in the spoken language and the signs do not contribute additional meaning. The nature of code-blend is multi-word/sign, as C2 produced more than one word.

- (11) Child 2, Partial code-blend, spoken, multi-sign [SASL-Afr]

CLOSE
Wat selfs so toemaak
“It closes by itself.”

In (12), child 1 is speaking, and the mother engages in conversation with her and responds to C1 using a full code-blend. All of the semantic information in the SASL is fully expressed in Afrikaans as well. Given that the mother produced many signs, the nature of the code-blend is a multi-sign code-blend.

- (12) Mother, Full code-blend, multi-sign [SASL-Afr]

COME-TO INDEX₂
Kom na jou toe
“Comes to you”

In the example in (13), the father answered C1’s question. The father produced a partial code-blend, as everything signed is said, but not everything said is signed. The status of the code-blend is mixed code-blend, as some is signed, some is spoken, not everything signed is spoken AND not everything spoken is signed. The nature of code-blend was multi-sign, as the father produced more than one word/sign.

- (13) Father, Partial code-blend, mixed, multi-sign [SASL-Eng]

INDEX₃ NOT
She don’t want
“She doesn’t want”

In example (14) the mother has a conversation with C1. The mother produced a full code-blend, as all of the semantic information in the SASL is fully expressed in Afrikaans as well. Given that the mother produced only one word, the nature of the code-blend is a single-sign/word.

(14) Mother, Full code-blend, single-sign [SASL-Afr]

ENGLISH
Engels
“English”

In example (15), Child 2 has a conversation with her mother. C2 produced a partial code-blend, as everything signed is said, but not everything said is signed. The status of the code-blend is mixed code-blend, as some is signed, some is spoken, not everything signed is spoken AND not everything spoken is signed. The nature of code-blend was multi-sign/word, as child 2 produced more than one word/sign.

(15) Child 2, Partial code-blend, mixed, multi-sign [SASL-Afr]

RAIN STORM
Ek wil nooit sulke dag hê
“I don’t want a stormy day like that”

C1 answered the father’s question in example (16). C1 produced a full code-blend, as all of the semantic information in the SASL is fully expressed in Afrikaans as well. The nature of code-blend was multi-sign/word, as C1 produced more than one word/sign.

(16) Child 1, Full code-blend, multi-sign [SASL-Afr]

SILVERSTRAND NO
Nee Sliverstrand
“No Silverstrand”

In the example in (17) the father answers C1’s question. The father produced a partial code-blend as everything signed is said, but not everything said is signed. The status of the code-blend is mixed code-blend, as some is signed, some is spoken, not everything signed is spoken AND not everything spoken is signed. The nature of code-blend was multi-sign/word, as the father produced more than one word/sign.

(17) Father, Partial code-blend, mixed, multi-sign [SASL-Eng-Afr]

MEAN NO WAY
Weet jy wat beteken, no way.
“I said you know what it means, no way”

In the next section, I examine the influence of the hearing/deaf status of the addressee on the language choice.

4.3. The influence of the addressee on family language choices

4.3.1 Dinner 1

When analysing each video, I followed the approach of Pizer (2008:55). During this video, C1 addressed her sister (C2) using speech only 94% of the 47 turns she addressed to her. Four percent of her turns to her sister consisted of simultaneous sign and speech and one turn included SASL (2%). When C2 addresses her sister (C1), the sister almost always communicated verbally as 83% consisted of speech only and 17% included simultaneous sign and speech. No turns were produced by the sister in sign only.

When the children address their parents, they predominantly make use of code-blended utterances, which consist of 90% of the total utterances addressed to the parents. Four percent of their turns to their parents included speech only and 6% consisted of SASL only. Based on the interaction during dinner time, the children addressed the mother at times in speech only. This could be that the mother is more skilled than the father with lip-reading (because of the presence of hearing interlocutors in her workplace). However, the majority of the time the children sign and speak at the same time to their parents.

All twelve turns that the parents addressed to each other were in sign only. The mother and father always signed to one another. However, when addressing their children, the parents sometimes added Afrikaans-based mouthing; vocal gestures would be produced more by the dad and the mother would occasionally make use of spoken words. For the father, voicing often represented an enhancement to a more complete message produced in the sign language. It appears that the children notice the differences in the parents' linguistic behaviour, as there is a slight difference where the children communicate differently to each parent. As noted above, the children do address their mother at times in spoken language only.

4.3.2 Dinner 2

During this video, C1 addressed her sister (C2) using speech only in 95% of 64 turns C1 addressed to her sister (C2). Two percent of her turns addressed to her sister consisted of simultaneous sign and speech and three percent of her turns addressed to her sister included Afrikaans and English. There was no sign only utterances between C1 and C2. When child 2 addresses her sister (child 1) by using speech in 89% of the 63 turns. Five percent of child 2's

turns included simultaneous sign and speech and two percent consisted of sign only utterance. One turn consisted of English only (2%), this production occurred when Child 2 responded in English to Child 1 question, *waar is die lepel?* (“where is the spoon”) Child 2 responded by saying in English *I got it*. Another turn included Afrikaans-English speech only utterance (2%).

When the children address their parents, the majority of the time they produce code-blended utterances, as 56% of the 64 turns addressed to their parents included simultaneous production of speech and sign. Thirty-three percent of their turns to their parents were in speech only. This shows that the parents understand/lipread when interacting with their children. Eleven percent of their turns to their parents were in sign only, this indicates that the children show no preference for speech over sign, or vice-versa, despite being hearing or the parents being deaf.

When the parents address one another, both predominately produce turns in their L1, SASL. The mother produces 96% of 25 turns addressed to the father in sign only and four percent was in sign and speech only. No turns produced by father were in sign and speech only. The mother and father predominately signed to one another. The father produced all utterances addressed to the mother in sign only. The parents’ mouthed whilst signing most of the time. When the parents interacted with the children, 98% of 52 turns were in sign only, and 2% included a code-blended utterance.

4.3.3. *Dinner 3*

In this video, the children tend to interact with the parents more than with each other. Child 1 made use of speech modality, then signing to her sister (child 2), as three utterances of the four turns was in speech and one utterance was in sign only. While interacting with her sister, Child 1 did not code-blend. Child 2, likewise did not code-blend to her sister (Child 1) nor made use of sign only. Child 2 interacted with her sister in four turns which included speech only.

As seen by the fact that 69% of 35 turns made to their parents comprised simultaneous production of speech and sign, it is clear that the children mostly use code-blended utterances while interacting to their parents. Speech only was used in 14% of their turns to their parents. This demonstrates that the parents engage with their children while lipreading. Although their parents are deaf, 17% of their turns to them were in sign-only, indicating that the children prefer utilizing speech over sign.

In dinner 3, both parents produced sign only utterances whilst addressing each other. The mother produced 33% of the 6 turns in sign only to the father. The father produced 67% of the

turns in sign only utterances to the mother. When the parents addressed the children, 79% of 28 turns were in sign only. The mother signed more than the father; however, the father was the only parent that code-blended to the children. Fourteen percent of the 28 turns were in speech only, in which the father had 3 turns in Afrikaans and the mother only 1 turn. Although the father is deaf, this video shows a form of multilingualism as the father can solely make use of speech modality when addressing his interlocutors.

4.3.4 Summary of data for family language choice

As noted above in Section 4.2, the analysis of language choice of the participants shows that C1 produced most of the utterances, followed by C2, the father, and finally the mother. The language code choice that the children used in majority of cases was in their spoken language, and the data show that they code-blend rather than sign only. The parent's primary language mode is SASL, which is their L1, and they code-blend rather than speak only, in limited cases. The three dinner data analyses show that, despite the parents being present or whether or not they are following their conversation, the children still choose to communicate chiefly in their spoken language to each other. Lastly, when the children address their parents, they mostly produce code-blended utterances, whereas the parents mostly produce sign only utterances rather than code-blend utterances to the children. However, in the dinner 3, the father shows a form of multilingualism as he addresses the children in a spoken language only.

4.4. Code-switching

Code-switching, as discussed in Chapter 2, occurs whenever an interlocutor switches from one language to another. In this study, as outlined in Chapter 3, a switch of language mode from one turn to another was coded as a code-switch, i.e. from spoken-only to signed/code-blended, or from signed/code-blended to spoken-only, or from spoken English to spoken Afrikaans, or vice-versa. No quantitative analysis of code-switching was done, rather a qualitative examination of the possible reasons for code-switching was undertaken. In terms of type of code-switching, most instances were analysed as intersentential code-switching, as they occurred between turns, as seen in examples (18) and (19) below. A few intrasentential code-switches were observed, when the code-switch occurred between two spoken languages, English and Afrikaans, as seen in example (20).

With regards to the reasons for code-switching, the majority of code-switches were due to change of addressee, switching because the addressee is deaf (switching to SASL or SASL-Afr) or hearing (switching to Afr). This can be seen in example (18).

(18) Child 2, Change of addressee code-switch [SASL-Afr-Code-blend]

C2 to Mother: LOOK A-LOT CHEESE

“Look at how much cheese there is!”

C2 to C1: *verskriklik baie kaas*

“A lot of cheese”

C2 to Mother: A-LOT CHEESE

Verskriklik baie kaas

“A lot of cheese”

In example (18), C2 remarks to her mother in SASL about how much cheese there is in the lasagne. She then makes the same observation to her sister C1 in Afrikaans. She then turns and taps her mother on her shoulder and repeats herself again, this time using code-blending mode. Here, we can clearly see the switch from one language mode to another, on the basis of the change in addressee.

The second most common reason for code-switching was conversational code-switching, when participants spontaneously code-switch when communicating with one another.

(19) Child 2, Conversational code-switch [Afr-Code-blend]

C2 to C1: *Papa het die nuwe deure opgesit*

“Dad put up the new doors.”

C2 to C1: CLOSE

Wat selfs so toemaak

“It closes by itself”

In example (19) C2 is speaking to her sister in Afrikaans. She then switches for a turn to code-blending mode. This is similar to unimodal unmarked code-switching. The code-blend in the second utterance is a partial, speech-based, multi-word code-blend.

Finally, bilingual mode, which is akin to using code-blending and involves the participant code-switching between Afrikaans and English, was observed. In this case, two spoken languages are used in a single turn. In example (20) below, C2 switches from Afrikaans to English in the same sentence.

(20) Child 2, Code-switch between two spoken languages [Afr-Eng]

Nee dis 'n sugar rush.
no its a
“No, its a sugar rush.”

Alternatively, *sugar rush* may be a loanword in Afrikaans, however this is still indicative of the multilingual nature of the discourse. Lastly, to identify code-switching functions, the Markedness model was followed. The predominant maxim that appears to be in effect is the sequential unmarked maxim choice. Code-switching was a sequence of unmarked choices, which was largely determined by change of addressee or change of topic. As mentioned by Emmorey et al. (2008), bimodal bilingual code-switching can also be motivated by physical constraints on the two languages, unlike code-switching by unimodal bilinguals. For example, it was observed that when the children were speaking to each other and then started to eat, they switched to signing or code-blending as they were unable to speak because their mouth was filled with food.

4.5. Conclusion

The analyses of the family interactions during dinnertime have shown that the children and parents prefer to communicate in their dominant mode, Afrikaans and SASL respectively. When communicating with their parents, the children would rather code-blend than code-switch fully into SASL. The analysis of the types of code-blending the participants produce, shows that C1 produced most of the code-blends, followed by C2, and then the father produced more code-blend utterances than the mother did. As noted in section 4.2, the overall percentages of C1 and C2's type of code-blending shows that the children produce partial code-blends more than full code-blended utterances. The mother produces partial and full code-blended utterances equally, while the father shows a similar pattern to the children, as he produces more partial code-blends than full code-blends.

Furthermore, the analysis of the nature of partial code-blends shows that the children produce more multi-sign/word code-blends than single code-blends. Lastly, a brief examination of the presence of code-switching shows that, while limited, code-switching appears to be a sequence of unmarked switches. Functionally, code-switching is predominantly triggered by a change in interlocutor or topic, or by physical constraints, but the code-switches are occasionally conversational in nature. The next chapter will discuss the findings of influence of the

addressee on family language choice and further discuss the data analysis results, by comparing them to the findings from previous studies.

Chapter 5

Discussion and Conclusion

This chapter will discuss the findings obtained by this study and use these findings to answer the research questions as set out in Section 1.2 (Section 5.1). A brief look at possible future research and limitations of this study appears in Section 5.2. Finally, Section 5.3 concludes the thesis.

5.1. Research Questions

5.1.1. What are the patterns of code-blending and code-switching observed in the language use of a bimodal bilingual/multilingual family?

As mentioned in Chapter 2, previous studies have shown a preference for code-blending, rather than code-switching, in bimodal bilingual language mixing (Spector 2020:63). The findings in this research shows the same preference, as the children code-blend more than code-switch. Furthermore, the parents also tend to code-blend more than code-switch.

When analysing all three video recordings individually, the dinner 1 video shows that, when the hearing children are sitting alone around the dinner table, they interact with one another only in speech, and often their speech is accompanied by gestures. When the parents are around, the children sign and speak. Code-blended utterances are predominantly used by the children in this video. C1 is most dominant with interacting with everyone, as she produced the majority of the turns. When the father asks C1 to say a prayer, she makes use of semantic equivalency code-blending as she signs and uses speech simultaneously. In dinner 2, the children produce code-blended utterances most of the time, especially when interacting with their parents; they rarely produce sign only utterances. When the children interact with one another, they only make use speech utterances with fewer code-blended utterances. The parents produce sign-only utterances when interacting with one another and with their children. In this video, one notices a form of multilingualism where the children code-switch into English. The children tend to speak mostly Afrikaans, despite the fact that they are together with their deaf parents. Lastly, dinner 3 shows a difference in the family interaction, as the father use some speech-only utterances. Although SASL is the primary form of communication of the parents, the father code-blends in this interaction and makes use of speech only utterances. The mother predominantly signs, and only one turn was in speech only. This video shows multilingualism, that is, how the family can interact with one another not only in two languages but also in three

languages. Whether the family member is hearing or deaf, they produced SASL, Afrikaans and English utterances. For example, the father (who is deaf) signed in one turn and spoke Afrikaans and English. All four types of code-blending were produced by the participants.

5.1.2. What functions do code-blending and code-switching serve in the language use of a bimodal bilingual/multilingual family?

The children and parents often code-blend because of their interlocutors presence, as mentioned above in dinner 1, the hearing children speak to one another when their deaf parents are not around but as soon as they are present the children code-blends. In all three videos, the parents sign only to one another but when they communicate with the children, they majority of the time sign only but there were a few utterances being produced as code-blends. This indicates that the language choice of the participants are affected by the interlocutors presence.

As noted in section 4.4, the majority of code-switches were due to change of addressee, switching because addressee is deaf (switching to SASL or SASL-Afr) or hearing (switching to Afr). Secondly, most common reason for code-switching was conversational code-switching, when participants spontaneously code-switch when speaking to one another. Lastly, in bilingual mode, two spoken languages are used in a single sentence or turn. Interestingly, Spector (2020) notes that children switch to another language because they feel that the one language might have more affective weight than the other (Spector 2020:79).

5.1.3. How, and to what extent, does the hearing or deaf status of the interlocutors affect the language use of the bimodal bilingual/multilingual family?

The analyses of the family interactions during dinnertime given in Chapter 4 have shown that the children and parents prefer to communicate with one another in their dominant mode, with less code-blending and very little code-switching. The findings by Pizer (2008) is similar to this study, in which the hearing children communicated comfortably and easily in their spoken language, regardless of the parents being present. As such, the children in the present study, when they speak to one another, they speak mostly Afrikaans whether or not their deaf parents are present. Furthermore, when the children converse with the parents they tend to code-blend rather than speak only or sign only to their parents. As noted above, the family members' language choices are primarily driven by the identity of their addressee, rather than by the presence of other participants in the conversation. Thus, the parents use signing predominantly when interacting with each other and when interacting with their children, they code-blend

occasionally, using a combination of the two languages (SASL-Afr) and very rarely use speech only (Afr/Eng).

The findings in this study shows that there is an element of cross-cultural communication, as discussed in Section 2.3.6, as the children do belong to a hearing culture, and the parents belong to a Deaf culture, even if their family culture is a combination of the two. These hearing children of deaf parents appear to have a language ideology that values exerting communicative effort to reach an addressee but disapproves of such effort when motivated by other factors (Pizer 2008:84-85).

5.2. Limitations and Future Work

A limitation of the current study was the number of participants, the limited recording and that all recordings were done in the same setting; by only focusing on one family because of this small subject pool study, it is difficult to generalise about what was observed. However, the findings of this research have given some insight into the types of code-blending present and answered the research questions. Further research needs to be done on a wider pool of participants. Future family language research should include grammatical category analysis of the code-blended utterances. Such studies should also include families with both deaf and hearing children, as this study only focused on hearing children, and broaden the family participants to include bystanders, grandparents, friends, especially where more than one family is being analysed. For more in-depth analysis, especially with analysing these types of studies, making use of ELAN to transcribe and analyse the data would be better. The current study was limited to only analysing the videotapes on how the family interacted with one another without having scheduled interviews with the participants. The study done by Pizer (2008:84) included interviews with the adults, which is important to implement for more additional information on the patterns of how the presence of the interlocutor may affect the input or output of a child, and to better explain the language ideologies and family language policies present in deaf families.

5.3. Conclusion

This thesis has taken a preliminary look at a bimodal bilingual/multilingual deaf family within South Africa. The findings of this research have given some insight into the types of code-blending and code-switching present in a bimodal bilingual/multilingual family.

References

- Aarons, D & P, Akach. 1998. South African Sign Language- one language or many? A sociolinguistic question. *Stellenbosch Papers in Linguistics* 31: 1-28. <https://doi.org/10.5774/31-0-55>.
- Baker, A.E., & B. van den Bogaerde. 2008. Code-mixing in signs and words in input to and output from children. In C. Plaza-Pust & E. Morales-López (Eds.). *Sign Bilingualism: Language development, interaction, and maintenance in sign language contact situations*, 1-27. Amsterdam: John Benjamins.
- Baker, A.E., B. van den Bogaerde, R. Pfau & T. Schermer (Eds.). 2016. *The Linguistics of Sign Languages: An Introduction*. Amsterdam: John Benjamins.
- Baker, A.E., B. van den Bogaerde & B. Woll. 2005. Methods and procedures in sign language acquisition studies. *Sign Language & Linguistics* 8(1-2): 7-59.
- Blose, Z.M. & L.N. Joseph. 2017. The reality of every day communication for a deaf child using sign language in a developing country. *African health sciences*. Available at: <https://pubmed.ncbi.nlm.nih.gov/29937887/> (Accessed: 10 May 2023).
- Christodoulou, D., E. Hadjidemteri, M. Konidar, & N. Nicolaou. 2009. The experiences of Cypriot hearing adults with deaf parents in family, school, and society. *Journal of Deaf Studies and Deaf Education* 14(4): 486-502. <https://doi.org/10.1093/deafed/enp01>.
- Davidson, K., D. Lillo-Martin & D. Chen Pichler. 2014. Spoken English language measures of native signing children with cochlear implants. *Journal of Deaf Studies and Deaf Education* 19: 238-250.
- De Meulder, M., A. Kusters & J. Napier. 2018. *Exploring family language policy in deaf-hearing mixed families*. [online] Available at: <https://maartjedemeulder.be/2018/12/05/exploring-family-language-policy-in-deaf-hearing-mixed-families> [Accessed 11 May 2021]
- Emmorey, K., H.B. Borinstein, & R. Thompson. 2005. Bimodal bilingualism: Code-blending between spoken English and American Sign Language. In J. Cohen, K. T. McAlister, K. Rolstad and J. MacSwann (Eds.). *ISB4: Proceedings of the 4th International Symposium on Bilingualism*, 663-673. Somerville, MA: Cascadilla Press.
- Emmorey, K., H.B. Borinstein, R. Thompson & T.H. Gollan. 2008. Bimodal Bilingualism. *Bilingualism* 11(1): 43-61.
- Hasanzadeh, S. 2012. Outcomes of cochlear implantation in deaf children of deaf parents: Comparative study. *Journal of Laryngology and Otology*, 126: 989-994.
- Holness, W. 2016. The development and use of sign language in South Africa schools: the denial of inclusive education. *African Disability Rights Yearbook* 4: 141-189.
- Huddleston, K. 2021. Negation and polar question-answer clauses in South African Sign Language. *Sign Language & Linguistics* 24(1): 63-86.
- Kroskrity, P.V. 2004. Language ideologies. In A. Duranti (Ed.) *A companion to linguistics anthropology*, pp. 496-517. Malden, MA: Blackwell.
- Lillo-Martin, D., R.M. de Quadros, D. Chen Pichler & Z. Fieldsteel. 2014. Language choice in bimodal bilingual development. *Frontiers in Psychology* 5: 1-15.

- Lillo-Martin, D., R.M. de Quadros & D. Chen Pichler & R. Muller. 2015. Bimodal Bilingualism. Sign Language and Spoken Language. In M. Marschark & P.E. Spencer (Eds.), *The Oxford Handbook of Deaf Studies in Language*, 185-196. Oxford: Oxford University Press.
- Lillo-Martin, D., R.M. de Quadros & D. Chen Pichler. 2016. The Development of Bimodal Bilingualism: Implications for Linguistic Theory. *Linguistic Approaches to Bilingualism* 6(6): 719–755.
- MacSwan, J. 2000. The architecture of the bilingual language faculty: Evidence from intrasentential code-switching. *Bilingualism: Language and Cognition*, 3: 37-54
- MacSwan, J. 2005. Codeswitching and generative grammar. *Bilingualism: Language and Cognition* 8: 1-22.
- Meier, R.P. 2016. Sign Language Acquisition. In *Oxford Handbooks Online*. <https://doi.org/10.1093/oxfordhb/9780199935345.013.19> [Accessed 12 September 2022]
- Moroe, N. F. & V. de Andrade. 2018. *Hearing children of deaf parents: Gender and birth order in the delegation of the interpreter role in culturally Deaf families*, *African journal of disability*. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5968869/> [Accessed 10 March 2023).
- Morgan, R., M. Glaser & L. Magongwa. 2016. Constructing and rolling out the new South African Sign Language (SASL) curriculum – reflexive critique. *Per Linguam* 32(2): 15-29. <https://doi.org/10.5785/32-2-648>.
- Myers-Scotton, C. 1993. *Social motivations for code-switching. Evidence from Africa*. Oxford: Clarendon Press.
- Myers-Scotton, C. 1998. A theoretical introduction to the Markedness Model. In C. Myers-Scotton, (Ed.). *Code and consequences: Choosing linguistic varieties*, 18-38 New York: Oxford University Press.
- Piller, I. 2015. *Language ideologies - language on the move*, *Language Ideologies*. Available at: https://www.languageonthemove.com/wp-content/uploads/2015/05/Piller_Language-ideologies.pdf [Accessed: 20 July 2023]
- Preston, P. 1994. *Mother Father Deaf*. Cambridge, MA: Harvard University Press.
- Pizer, G. 2008. *Sign and speech in family interaction: Language choices of deaf parents and their hearing children*. Doctoral dissertation. University of Texas of Austin. <https://repositories.lib.utexas.edu/bitstream/handle/2152/17720/pizerd.pdf>.
- Pizer, G., K. Walters, & R. Meier. 2012. "We Communicated That Way for a Reason": Language Practices and Language Ideologies Among Hearing Adults Whose Parents Are Deaf. *Journal of Deaf Studies and Deaf Education*, 18(1):75-92.
- Quadros, R.M., D. Chen Pichler & D. Lillo-Martin. 2014. Code-blending in bimodal bilingual development. Paper presented at the 6th Conference of the International Society for Gesture Studies (ISGS), San Diego, CA.
- Reagan, T. 2008. South African Sign Language and language-in-education policy in South Africa. *Stellenbosch Papers in Linguistics* 38: 165-190. <https://doi.org/10.5774/38-0-28>.

- Schermer, T. 2012. Sign language planning in the Netherlands between 1980 and 2010. *Journal of Sign Language Studies* 12 (4):467-493. <http://www.jstor.org/stable/26190876>
- Singleton, J. L., & M.D. Tittle. 2000. Deaf Parents and Their Hearing Children. *Journal of Deaf Studies and Deaf Education* 5:221-236. <https://doi.org/10.1093/deafed/5.3.221>.
- Spector, K. 2020. Code-blending patterns of school-aged bimodal bilingual children. MA Thesis. California State University, Long Beach.
- Strauss, S. 2016. Code-switching and translanguaging inside and outside the classroom: bi-/multilingual practices of high school learners in a rural Afrikaans-setting. MA Thesis. Stellenbosch University.
- Tshangela, L. 2023. *SA sign language becomes 12th official language*. Available at: <https://www.sabcnews.com/sabcnews/sa-sign-language-becomes-12th-official-language/> [Accessed: 20 October 2023]
- WFD. 2008. Global Survey Report World Federation of the Deaf Regional Secretariat for Southern and Eastern Africa (WFD RSESA).

Appendices

Appendix A: REC Approval Letter



NOTICE OF APPROVAL

REC: Social, Behavioural and Education Research (SBER) - Initial Application Form

3 August 2020

Project number: 14662

Project Title: A Case Study of the use of code-blending by a bimodal bilingual/multilingual deaf family

Dear Miss Levern Arries

Your response to stipulations submitted on 29 July 2020 was reviewed and approved by the REC: Social, Behavioural and Education Research (REC: SBE).

Please note below expiration date of this approved submission:

Ethics approval period:

Protocol approval date (Humanities)	Protocol expiration date (Humanities)
12 June 2020	11 June 2021

INVESTIGATOR RESPONSIBILITIES

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

If the researcher deviates in any way from the proposal approved by the REC: SBE, the researcher must notify the REC of these changes.

Please use your SU project number (14662) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD

You are required to submit a progress report to the REC: SBE before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary).

Once you have completed your research, you are required to submit a final report to the REC: SBE for review.

Included Documents:

Document Type	File Name	Date	Version
Non-disclosure agreement	ResearchAssistantConfidentialityAgreement	27/02/2020	1
Data collection tool	Multimedia files Arries	27/02/2020	1
Parental consent form	GENL-2020-14662-SU HUMANITIES Consent form Parent-Legal guardian Arries (2)	20/05/2020	2
Assent form	GENL-2020-14662-SU HUMANITIES ASSENT form Child-Levern Arries	20/05/2020	2
Informed Consent Form	GENL-2020-14662-SU HUMANITIES Consent form Parent-Legal guardian Arries (2)	20/05/2020	2
Informed Consent Form	GENL-2020-14662-SU HUMANITIES ASSENT form Child-Levern Arries	20/05/2020	2
Research Protocol/Proposal	GENL-2020-14662_Arries Master's Research Proposal_(2)	20/05/2020	2
Budget	GENL-2020-14662_Budget outline for Master's-Levern Arries (2)	20/05/2020	2

Default	Maadje_Vos Short CV template_REC application	20/05/2020 1
Default	GENL-2020-14662_Response to Ethics Review_Levern Arries	20/05/2020 1
Default	GENL-2020-14662_Response Letter to Ethics Committe	29/07/2020 2

If you have any questions or need further help, please contact the REC office at cgraham@sun.ac.za.

Sincerely,

Clarissa Graham

REC Coordinator: Research Ethics Committee: Social, Behavioral and Education Research

National Health Research Ethics Committee (NHREC) registration number: REC-050411-032.
The Research Ethics Committee: Social, Behavioural and Education Research complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research: Principles Structures and Processes (2nd Ed.) 2015. Annually a number of projects may be selected randomly for an external audit.

Appendix B: Parent/Legal Guardian Consent Form



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY
jou kennisvenoot • your knowledge partner

STELLENBOSCH UNIVERSITY PARTICIPANT CONSENT AND PARENT/LEGAL GUARDIAN CONSENT FOR CHILDREN TO PARTICIPATE IN RESEARCH

I would like to invite you and your children to take part in a study conducted by myself, Levern Arries, a Master's student in the Department of General Linguistics at Stellenbosch University. You and your children have been invited as a possible participants because you are all South African Sign Language (SASL)-Afrikaans/English bimodal bilinguals/multilinguals.

1. PURPOSE OF THE STUDY

This study aims to describe the use of code-blending by bilingual/multilingual bimodal children and adults by observing family interactions during dinner time. Code-blending refers to the use of more than one language in more than one modality at the same time.

2. WHAT WILL BE ASKED OF ME AND MY CHILDREN?

If you consent to you and your children taking part in this study, I will then ask your children for their assent to take part in the study. If your children agree to take part in the study, I will provide you with two video cameras and ask that you video-record your dinner-time informal conversations. I will provide suggestions for how to arrange the cameras to best capture the conversations. I will also ask you to send the video recordings to me via a file-sharing platform. I will provide data for you to do this.

3. POSSIBLE RISKS AND DISCOMFORTS

There are no evident risks to partaking in this study, but should you or your children start to feel uncomfortable for any reason, you can stop the video-recording immediately. You will be in control of what interactions get video recorded and sent to the researcher.

4. POSSIBLE BENEFITS TO THE CHILD OR TO THE SOCIETY

There are no direct benefits to anyone who partakes in this study. The study aims to describe the patterns of language use by bimodal bilingual/multilingual deaf family. This will help us to understand SASL and its acquisition better.

5. PAYMENT FOR PARTICIPATION

You will receive data (or remuneration to cover internet costs) as well as grocery vouchers as a gesture of appreciation for your participation.

6. PROTECTION OF YOUR AND YOUR CHILD'S INFORMATION, CONFIDENTIALITY AND IDENTITY

Any information you or your children share in the video recordings and that could possibly identify you or your children will be protected. This will be done by using code names for each participant and protecting the data collected. The data will be kept on two hard drives in password protected folders.

These hard drives will stay with the supervisor (Dr K Huddlestone) and myself. They will be kept in rooms that will remain locked to anyone without permission to enter. Participants can choose, at any time, to have their information and data removed from the study, they only need to contact me.

The family will be videotaped and the recordings will be analysed. Clips and stills from these videos may be used in the research report and in articles and conference presentations resulting from the report. Due to the nature of sign languages, we will not be able to blur anyone's faces or black out their eyes, because this will cause us to lose crucial linguistic information. However, confidentiality and anonymity will be maintained as far as possible, given these constraints. These recordings will be stored for possible future use in research on SASL and SASL acquisition and uploaded to a database for researchers studying language acquisition that is publically accessible via the web. Should you not want the data made available in this way, you can indicate this on the following page. In this case enactments of the data will be used in presentations, rather than the actual recordings.

7. PARTICIPATION AND WITHDRAWAL

You and your children can choose whether to be part of this study or not. If you consent to your children taking part in the study, please note that your children may choose to withdraw or decline participation at any time without any consequence.

RESEARCHERS' CONTACT INFORMATION

If you have any questions or concerns about this study, please feel free to contact Levern Arries at 072 332 7289 or via email at 20095139@sun.ac.za, and/or the supervisor Dr Kate Huddlestone at katevg@sun.ac.za.

8. RIGHTS OF RESEARCH PARTICIPANTS

You and your children may withdraw their consent at any time and discontinue participation without penalty. Neither you nor your children are waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your or your child's rights as a research participant, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

DECLARATION OF CONSENT BY THE PARENT/ LEGAL GUARDIAN OF THE CHILD-PARTICIPANT

As the parent/legal guardian of the children I confirm that:

- I have read the above information and it is written in a language that I am comfortable with.
- I have had a chance to ask questions and all my questions have been answered.
- All issues related to privacy, and the confidentiality and use of the information have been explained.

By signing below, I _____ (*name of parent*) agree that the researcher may approach my children to take part in this research study, as conducted by Lavern Arries, and by ticking the boxes below I agree that videos/stills may be used in various ways.

- Videos/stills of my children may be uploaded to a research database
- Videos/stills of myself as parent/legal guardian may be uploaded to a research database
- Videos/stills of my children may be used in conference presentations and research articles
- Videos/stills of myself as parent/legal guardian may be used in conference presentations and research articles

Signature of Parent/Legal Guardian

Date

DECLARATION BY THE PRINCIPAL INVESTIGATOR

As the **principal investigator**, I hereby declare that the information contained in this document has been thoroughly explained to the parent/legal guardian. I also declare that the parent/legal guardian was encouraged and given ample time to ask any questions.

Signature of Principal Investigator

Date

Appendix C: Child Assent Form



ASSENT FORM FOR MINORS



TITLE OF THE RESEARCH PROJECT: A Case Study of the use of Code-blending by a South African bimodal bilingual/multilingual deaf family

RESEARCHERS' NAME(S): Lavern Arries

RESEARCHER'S CONTACT NUMBER: 072 332 7289

What is RESEARCH?

Research is something we do to find **NEW KNOWLEDGE** about the way things (and people) work. We use research projects or studies to help us find out more about children and teenagers and the things that affect their lives, their schools, their families and their health. We do this to try and make the world a better place!

What is this research project all about?

This project is about the way that Deaf and hearing people who use both sign language and Afrikaans or English languages together. We are going to ask you whether we can video record you talking to your parents and two siblings whilst interacting with them during dinner time. That means that the way that you sign will be teaching us about South African Sign Language!

Why have I been invited to take part in this research project?

You have been invited to help us with this research because you use South African Sign Language and Afrikaans or English and because you are the right age for us to get the results that we are looking for to help us learn about how children communicate.

Who is doing the research?

My name is Lavern Arries and I am a Master's student at the University of Stellenbosch. I really enjoy researching sign language and I am very interested in the way that children use SASL and Afrikaans or English together.

What will happen to me in this study?

You will interact with your parents and two siblings during dinner time, like you normally do and then your parents will be recording you talking to them and your two siblings.

Can anything bad happen to me?

There are not supposed to be any things bad that can happen to you while you help us with this research. If anything does make you feel bad or uncomfortable, then you can tell your

parents and they can stop video recording immediately. Nobody is going to be mad at you for stopping.

Can anything good happen to me?

Nothing good will happen to you specifically, but this information can be used to help us understand more about South African Sign Language.

Will anyone know I am in the study?

All of the information about you will only be available to me and my supervisor (my teacher who helps me with this project). We can't blur your faces, but we will not use your names or any information about you that can tell people who you are.

Who can I talk to about the study?

You can talk to me, Levern, via email () or via telephone (). You can also contact my supervisor, Dr Kate Huddlestone via email ().

What if I do not want to do this?

You can decide that you don't want to do this at any time, even if we have already started. Your parents might have already given permission for you to do this, but it is your choice whether or not you want to start it or continue it. No one will be angry or upset with you, there will be no negative consequences.

Do you understand this research study and are you willing to take part in it?

 YES NO

Has the researcher answered all your questions?

 YES NO

Do you understand that you can STOP being in the study at any time?

 YES NO

By ticking the boxes below, I agree that videos/stills may be used in various ways.

- Videos/stills of myself may be uploaded to a research database
- Videos/stills of myself may be used in conference presentations and research articles

Signature of Child

Date