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University of the Witwatersrand, Johannesburg

School of Literature, Language and Media

Linguistic analysis of early language acquisition: a case study of the Black Middle Class South African, 'Born Free' generation in Gauteng

A dissertation submitted to the University of the Witwatersrand, Johannesburg in the fulfilment of the degree of Masters of Arts in Linguistics

By

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September 2018

Plagiarism declaration

This thesis is my own work. All primary and secondary sources have been appropriately acknowledged. This thesis has not been submitted to any other institution as part of an academic qualification.

This thesis is prepared in partial fulfilment of the requirement of the degree of Masters in Linguistics, at the University of Witwatersrand, Johannesburg, South Africa.

Date ___19/09/2018_____

Signed _____ _____

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Abstract

This dissertation seeks to assess the presence of language attrition that leads to a language shift in Black middle-class, South African communities, specifically in the Gauteng province. According to the 2011 Census, there is a steady decline in the use of indigenous African languages (Stats SA, 2011). This decrease of indigenous African languages, has gained the attention of many researchers (De Klerk, 1999; Msila, 2014; Kamwangamalu, 2003; Bylund, 2014). While majority of previous studies assess this language shift and language attrition by assessing the language use of adults, the languages that are used in different social contexts and the language use of individuals from different socio-economic statuses, the present study aims to look at language attrition and the language shift that is occurring at the early developmental stages of language acquisition. This study aims to assess whether children with bilingual parents (L1 *Sesotho* and L2 English) are growing up as bilingual speakers or as monolingual English speakers. This study also sought to assess the lexical development of these young children and what linguistic strategies the children employ during early language acquisition.

In order to achieve the goals set out by this investigation, different methodology techniques were used to gather and analyse data. Parental input and educational input needed to be assessed in order to see what languages the children were exposed to, direct assessment of the children's lexicon needed to be carried in order to assess their lexical development and the gesture production of the children also needed to be assessed. Demographic questionnaires were distributed to parents or caregivers in order for the researcher to gain insight into the language input that the children receive in the home environment. Observational data was collected at the school which is in the Bedfordview region of Gauteng, South Africa to assess the educational input that children receive. Children were also directly assessed in the two languages that their parents spoke (*Sesotho* and English) in order to assess their proficiency in each language

The findings of this study show that there is a language shift that is currently taking place in this sample group, within the Gauteng province of Black middle-class, South African families. The children of bilingual parents in this specific sample group are developing as monolingual English speakers, with a passive knowledge of their parents L1. The results of this study also found that this is due to the fact that children are predominantly exposed to English in the educational context as well as the home environment. These particular children show a trend of monolingual development and are adhering to universal theories of

monolingual language development. This study also found that children use gesture as a strategy that is employed during language development. The gesture production by the children also indicated a passive knowledge of *Sesotho* in that they responded gesturally to *Sesotho* questions, and when they did respond verbally, it was only in English. This study shows the development of the 'born free' population who are exposed to English and how young children in the South African context are currently growing up in the midst of a language shift.

Introduction

This study looks at the broader theme of language attrition in South Africa. It examines how South African English is growing as a language especially in affluent Black populations in a country which has 11 official languages. Unlike earlier works of language attrition which looked at the phenomenon from a sociolinguistic and educational perspective, in this body of work, the focus is specifically on tracking the development of language in young children from Black middle-class families who are becoming increasingly monolingual English speakers from a psycholinguistic perspective. This introductory chapter examines the linguistic landscape of South Africa in terms of language shift, language attrition and language development in terms of language acquisition theory.

This study aims to build on existing literature on the contemporary phenomenon of language attrition in South Africa from a language developmental perspective. While previous studies focused on language attrition in adult populations from a variety of socio-economic statuses, the author aims to focus exclusively on the early acquisition period of language development of children born from Black, bilingual, middle-class families to track when language attrition occurs as well as the resulting linguistic skills of children as they enter school and become competent speakers in society.

It is important to frame the linguistic diversity of South African families as most households are multilingual. Thus this study seeks to explore the linguistic input that children receive from parents or caregivers and the educational environment that children are exposed to and the input that they receive from these educational environments. This study uses several data-elicitation methods:

- The first method explores the input that children receive to ascertain what language(s) they are expected to know based on their exposure.
- The researcher then moves on to examine the lexical development of children by using direct assessment tools to assess their linguistic knowledge of each language that they are expected to know based on the input they receive. This allowed the researcher to see if children are facing language atrophy of indigenous South African languages or if they are only acquiring one language and developing in a monolingual way linguistically, in line with literature on L1 speakers.

In this introductory chapter, the aims of this study are laid out as well as the gap that this study wishes to contribute to. An outline of the theoretical framework that has been used is briefly highlighted. In addition, an outline of the chapters to follow is discussed.

Background and context for the current study

South Africa is currently facing a language shift in terms of its linguistic landscape. The Census (Stats SA, 2011) has found that there is a gradual decrease in the use of South African indigenous languages. This is seen most prominently in the Black middle-class population of South Africa as the group is choosing to speak English instead of their indigenous African language. Scholars attribute this phenomenon to the prestige that English carries in socio-economic environment (De Klerk, 2000; Kamwangamalu, 2001). De Klerk (2000), Dyers (2008), Kamwangamalu (2001) and Msila (2014) have described this language shift, depicting how it is as a result of language attrition that is currently occurring in South Africa.

South Africa is one of the most diverse countries in the world and these differences can be seen in all elements: race, religion, cultural and linguistics. South Africa has 11 official languages and the majority of the South African population is, at the very least, bilingual.

In South Africa, according to Census 2011, approximately 11 million people or 22.7% of the population, are first language *isiZulu* speakers and four million people are first-language *Sesotho* speakers (Stats SA, 2011). Census 2011 data states that *Sesotho* speakers make up approximately 8% of the entire South African population (Stats SA, 2011). However, in this same Census, it was found that there was a steady decline in South African indigenous languages such as *isiZulu*, *Sesotho* and *isiXhosa* as more families are opting to use English as it is the language of business and, in many cases, education in South Africa. This means that English is being used more and more by Black middle class families (Posel & Zeller, 2016). Of South Africa's 11 official languages, nine are Bantu languages. These nine languages - including *Sesotho*, *isiZulu*, *isiNdebele* and *isiXhosa* - are indigenous South African languages. While the term 'Bantu' carries with it some negative connotations based on the geopolitical history of South Africa, Bantu languages are a sub-family of the Niger-Congo language family. The term 'Bantu language' refers to the linguistic classification of languages such as *isiZulu*, *isiXhosa* and *Sesotho*. Owing to this linguistic classification South African indigenous languages will be referred to as Bantu languages in this study.

In 1994, South Africa became a democratic country which saw the lifting of segregation laws and the abolishment of the separation of individuals based on race. With democracy came the

freedom to use Indigenous languages in all social, political and educational contexts. This, however, was not only the freedom to speak one's mother tongue but also the freedom to choose what language one wished to speak. The opportunity to change one's first language also arose. This allowed individuals across South Africa to speak the language that they felt would better suit them.

For many years, English has been the preferred language as it was seen to be the language of economics and politics within South Africa. English carries with it a prestige and is the first language (L1) for over 4.5 million speakers in the country (Stats SA, 2011) and a second language (L2) to a far larger portion of the population. Although some schools across South Africa aim to be bilingual or multilingual, there are very few left where English is not the medium of instruction.

After 24 years of democracy, some changes are being seen within South Africa as a whole. A language shift is being seen. Studies report a language shift in the Black middle class community from indigenous African languages to English being their first language (Bylund, 2014; De Klerk 2000a, 2000b; Dyers 2008; Kamwangamalu, 2003). Therefore, with the great diversity that exists within South Africa - which is the pride and joy of the nation - indigenous languages are dying out (Stats SA, 2011).

It is against this background that this study is rooted, in other words the socio-economic content of middle-class Black South African families. This study aims to look at what language children acquire in families where the parents or caregivers are bilingual speakers. However, considering all the above-mentioned facts – parents who are well-educated, white-collar workers who choose to send their children to English-medium schools and who know the prestige that English is seen to carry with it not only in South Africa but worldwide – what languages do these parents choose to expose their children to? It has been mentioned that language attrition in children tends to occur faster than in adults. In this study, the researcher aims to document if language attrition of parent's first language is occurring in young children or if the latter are not acquiring that language at all.

This study is conducted in Johannesburg with a sample population of Black middle-class participants. In this specific socio-economic status (SES), the language input that children receive, as well as their language production, is assessed to see the extent of the current language shift that South Africa is facing.

Theoretical framework

To meet the aims this study sets out to achieve, it employs an eclectic theoretical framework which includes language shift, language attrition and bilingualism as well as language acquisition theory. A language shift is defined as a phenomenon whereby a community - who speaks a specific language - begins to communicate with a different language. This shift usually happens gradually over an extended period of time (Fasold, 1984). Bilingualism plays an important role as the parents of participants in this study are bilingual. This means that the children receive bilingual input.

Language attrition is the loss of a language within an individual owing to a lack of use. It is also seen as being the opposite of language acquisition. Consequently, the reversal of bilingualism plays an important role in this study (Ecke, 2004). Previous studies on language attrition and the language shift in South Africa is of great importance. It needs to be looked at in great detail along with language input. The development of these participants in this study is assessed in relation to universal developmental theories.

Aims and Objectives of present study

The aim of this study is therefore to assess the extent of the language shift that South Africa is facing. It focuses on assessing if children are losing their parents' L1 owing to lack of use or if they are not acquiring their parents L1 at all. If children are not acquiring their parents' L1 at all, this report aims to assess if they are developing in a monolingual way and following the universal trends of monolingual English development in light of the fact that they are receiving input from bilingual speakers.

In order to meet the above-mentioned aims, the research questions are as follows:

1. What is the role of language shift in language attrition of South Africa's Gauteng Black middle-class population?
2. What is the lexical development of this South African 'born free' generation during early language acquisition?
    a. What linguistic strategies do children employ in early language development?

In order to answer these questions, this research pilots a combination of different data-collection methods to assess the linguistic input that children received. Direct assessments were used to assess the children's linguistic abilities.

Outline of dissertation

Chapter 1: This chapter provides an introduction to this study as well as an outline of its aims and the research questions.

Chapter 2: The literature review chapter provides a detailed insight into the theoretical framework on which this study is based. It analyses previous studies that have been conducted on similar topics.

Chapter 3: The methodology chapter provides detailed insights into the data-collection process and the pilot method that was employed to collect the data.

Chapter 4: The data analysis chapter looks at the data in terms of answering the research questions posed. Trends and patterns that arose are looked at in detail.

Chapter 5: The discussion and concluding chapter of this study looks at the trends and patterns that came out in the data analysis in terms of the existing literature that is directly related to this study. The limitations, implications and recommendations that this study came across are also outlined, in detail, in this chapter.

Chapter 2: Literature review

Introduction

Every day one uses words to communicate. One uses words to describe the environment and the objects within it (Clark, 1995). These words are stored in a person's lexicon, in other words, a human being's mental dictionary - the words that are known and understood which a person has acquired over their lifetime (Marslen-Wilson, Tyler, Waksler, & Older, 1994). Early acquisition of the lexicon can therefore be seen as the foundation upon which all language is based. New words are learned and meanings are built upon these words which are then stored in a person's mental dictionary.

The lexicon is tightly linked to phonology, comprehension and production, and grammar. This makes it crucial to study lexical acquisition continuously. The child's lexicon is dependent on the development of meaning construction and categorisation skills (Markman, 1991; Gentner, 1982; Kunene Nicolas & Ahmed, 2016). Existing literature focuses on homogeneous language societies such as English or French in the Global North and there are few studies that look at multilingual communities. Lexical acquisition does not take place in a single and standard way. In the context of South Africa one cannot assume that lexical acquisition refers to the acquisition of one language but rather to multiple languages. Bilingualism or multilingualism refers to an individual's ability to speak two languages or more languages respectively (Carroll, 2008). In South Africa, bilingualism and multilingualism is the norm rather than the exception.

Language Shift of SA Indigenous languages

The current language shift that is taking place in South Africa is occurring from generation to generation where there are far fewer speakers of indigenous African languages than there were before. Fasold (1984 as cited in Kamwangamalu, 2003) defines a 'language shift' as a gradual process whereby a community that speaks a certain language gives it up for one that is considered more powerful. It is a slow and gradual process that starts at an individual level (language attrition) and works its way through an entire community. With a language shift, a phenomenon known as 'linguistic genocide' can occur. During this process, a language dies as a more powerful and prestigious language becomes more dominant (Kamwangamalu, 2003). Research shows that since 1994, there has been a language shift from indigenous South African languages to English in middle-class to upper middle-class Black communities (De Klerk, 2000; Reagan, 2001; Kamwangamalu, 2001 as cited in Kamwangamalu, 2003).

Bilingualism is seen as the starting point of this language shift as speakers first begin to acquire a new language and become bilingual speakers, but then their L1 atrophies as the more dominant and powerful language becomes preferred. A language is most likely to be dominant and take preference when it has a higher socio-economical value, in other words if the language is particularly associated with money it is more likely to become a dominant language. This is the role that English has in South Africa. It is also seen that the decision for a language shift to occur is most likely to lie in the hands of parents who have seen the benefits and rewards of having their children speak English (Kamwangamalu, 2003).

This decision was taken by parents throughout the history of South Africa. During the apartheid era, government tried to enforce the Bantu Language Act which stated that Black children were to be taught in their home language up to Standard 6 (now Grade 8). This was seen by the Black community as another tactic that the apartheid government used to keep them from tertiary education and limit the prospects of international access of Black South Africans as the Black communities themselves were of the opinion that their home languages were not of value anywhere else but in South Africa. While the democratic government aims to encourage education in indigenous African languages, as can also be seen in the Language Policy for Higher Education (DHET), black parents still prefer for their children to attend formerly "white-only" schools and be taught in English as it carries a great prestige that can be seen that even in the home environment. Within the family unit of the Black upper-class community, a conscious effort is made to speak to children only in English (Kamwangamalu, 2003).

Within South Africa, English is seen as the desirable language by the majority - if not all - of the population. It is seen to have a greater socio-economic status and is more widely accepted and understood world-wide as opposed to South African indigenous languages which are less practical and functional (De Klerk, 1999). There are therefore many Black South Africans from the middle and upper-middle class who choose to send their children to former White-only schools, English-medium schools, for them to learn proper or correct English (Msila, 2014). This, therefore, results in a loss of competence in the indigenous languages for certain populations. Parents barely maintain these languages as they speak to their children only in English regardless of the loss of their mother tongue (De Klerk, 1999; Msila, 2014).

The important findings by these scholars, De Klerk (1999) and Msila (2014), point towards a growing trend in South Africa. The description of language shift can have a direct or indirect

impact on how children develop and are socialised into language. The assumption of this current study is that this language shift leads to the language attrition of South African Indigenous languages. It is important to understand if children whose parents or caregivers speak different languages provide an adequate input of linguistic building blocks that children require to develop conceptual and analytical skills. This study seeks to build on the findings of previous researchers and plot the trajectory children follow when they become competent speakers of their languages. This research addresses the gap in research between the description of language shift and language attrition during early language acquisition periods.

Language attrition of South African Indigenous languages

As already stated, some South African indigenous languages are being lost from generation to generation (Stats SA, 2011; Msila, 2014). Language attrition can be seen as the opposite or the reversal of language acquisition (Schmid, 2008). In other words, it is the loss of a language owing to the lack of use. In South Africa, a phenomenon similar to language attrition is taking place.

Language attrition starts at an individual level and gradually filters through to greater and larger contexts which create larger impacts on the community and the global level (Ecke, 2004). There is a constant fluctuation of language attrition and language acquisition which results in this ripple effect. In many studies, attrition can also be seen as the loss of language within a single human being, as in the cases of immigrants (Ecke, 2004; Yagmur, De Bot, Korzilius, 1999). This loss of language, however, is not owing to illness or brain damage (as would be the case with some types of aphasia) but is rather the loss of a language in a healthy human being. This is with specific regard to the loss of proficiency in a language owing to lack of use. This causes a decrease in skill as well as in the quantity and amount that a particular language is used. As mentioned previously, attrition is the loss of language in a single individual; however, this does impact greater communities and societies which can later result in a complete language shift.

Ecke (2004) mentions a number of possible psychological reasons behind language attrition which include: repression or suppression of a language in cases of people who have immigrated, they might avoid using their home language so as to fit into a new environment better, distortion, interference in cases of learning a new language and using that language more often may result in interference of an individual's first language, and decay.

In many cases, it can be seen that learning a new language might be to the detriment of an existing language, especially if an individual is in an environment where they are constantly required to speak the new language that they have acquired. Language decay can occur because of a lack of use. In bilingual research, it is usual that an L1 will have an impact on the L2 that is being acquired or that an L1 and an L2 will have an impact or 'interference' on the L3 that is being acquired. However, as attrition is seen as the reverse of acquisition, the interference that occurs of an L2 or L3 language can have a negative impact on an L1. In a bilingual or multilingual speaker, all the languages spoken by an individual place a heavy cognitive load on the mind and, as such, one language can take preference over other languages depending on which language becomes the dominant language and which language is used the most (Ecke, 2004).

On a global scale, language attrition is a phenomenon that the world is facing. While language attrition does happen within an individual, this has a ripple effect and has greater influences on societies within different communities as well as, to a greater extent, on the world. Batibo (2005) states that the statistics on language death are disturbing and are cause for great alarm. There is a high concern for language death all across the world but specifically in Africa where approximately one third of the world's languages originate from (Batibo, 2005). Batibo (2005) mentions more statistics from Krauss (1992) who states that by the 22nd century, there might possibly be only 600 remaining languages in the world. This means that, by this point, more than 90% of the world's languages would have become extinct. This is not just a concern for linguists but also for individuals such as politicians and language planners. Within Africa, language is seen as highly complex as, linguistically, it is an extremely diverse continent (Batibo, 2005).

In 1994, South Africa faced a major political change in the form of democracy. With democracy came the lifting of segregation laws which allowed people of all races and creeds to co-exist peacefully. People of different languages began mixing with each other and a rise of bilingual and multilingual homes was seen and is in existence today. How then do these languages mix within the family unit? In the study conducted by Batibo (2005), it was found that although English was the dominant language in schools, the economy and the politics of South Africa, different languages were still maintained and used in different areas of individuals' lives.

In South Africa, it is known that different languages dominate different provinces within the country except for Gauteng where no particular language is dominant (Dyers, 2008). In a study conducted by Dyers (2008), the author assessed what languages are used in the intimate environments of multilingual people and if there was a maintenance or decline of the mother tongue within the lower income families of South Africa's Western Cape. This study found that, even though teenagers spoke English at school, they maintained their mother tongue and strongly maintained the use of different languages in different contexts, such as the home and social environments (Dyers, 2008). However, this is not seen to be true in all studies that have been conducted (De Klerk, 1999; Kamwangamalu, 2003 and Msila, 2014). Also, reports from the Department of Basic Education (DBE) (2014) shows low literacy and numeracy skills in young South African children. This could be directly linked to language use in formal and informal environments.

Msila (2014) found that children who attended day-care centres in the city were much more enthusiastic and used to hearing stories in English as opposed to *isiXhosa* (the L1 of their parents). These same children seemed less interested, and a slightly confused, by stories that were read to them in *isiXhosa*. The author also found that children who attended township schools were less engaged by English stories and less developed in their speaking and understanding of English as opposed to those children attending schools in the city or urban areas. The study conducted by Msila (2014) also found that a child is greatly influenced by their parents and teachers. The majority of parents, whose children attended schools in the city or urban areas, spoke more English at home to their children as opposed to a Bantu language. The author states that parents selected day-care centres based on if the institution taught 'good' English (Msila, 2014:56).

Bylund (2014) found differences in language use in *isiXhosa*. The author found that children are speaking more English, as opposed to *isiXhosa*, than before (Bylund, 2014). A shift is taking place - from South African indigenous languages to English - as, in South Africa, English is looked at with a certain level of prestige. English is the language that parents opt for their children to speak as it is an international language which broadens the younger generation's horizons. Parents therefore send their children to English-medium schools (Bylund, 2014). It has also been seen that language is directly related to SES in the sense that English is the economic and political language of South Africa. Therefore, parents who have

completed tertiary education and post-graduate education are more likely to encourage their children to speak English (Bylund, 2014; De Klerk, 2000).

As mentioned above, English is fast gaining momentum as the lingua franca in South Africa and is becoming a language that is spoken country wide. However, this impetus is to the detriment of other languages (Bylund, 2014): Coloured and Black communities within South Africa are using English in the private environments and not only in the social or educational spaces. In a study conducted by Bylund (2014), it was found that the younger generations in the *isiXhosa* community were using English more often and this increased use of English was encouraged by parents and older siblings (De Klerk, 2000 as cited in Bylund, 2014). The study conducted by Bylund (2014) aims to look at *isiXhosa* and English bilingualism at the individual level, specifically looking at English loanwords when speakers are conversing in *isiXhosa*. This study found that participants who were more interactive with English were more likely to use loan words. If there is a break in L1 acquisition, meaning that while an individual is learning their home language and they are taken out of an environment that successfully aids them in acquiring that language, they will experience a break and not acquire that language fully. This will then lead to them using loan words to fill a lexical gap (Bylund, 2014). It was also noted by Bylund (2014) that language attrition occurs faster in young children than in adults. Considering the critical period hypothesis (that children acquire language during a certain period) and second language acquisition (that children can acquire a second language with native-like fluency if it is done within a certain period) Bylund (2009) posits that language attrition can occur faster in children than in adults.

Against this linguistic backdrop, the current study finds its roots and basis. The research area is in suburban areas where there is a high population of Black middle to upper-middle working class families in residential areas and where children attend schools in the suburb areas with the aim to assess the extent, if any, of language shift that is occurring in the Black middle to upper middle class society of South Africa within Johannesburg, Gauteng.

Bilingualism

It is therefore very important to examine the influence of bilingual or multilingual parents or caregivers on the language a child receives. Bilingualism is the ability of an individual to speak two languages with native-like fluency (Byers-Heinlein & Lew-Williams, 2013). Multilingualism is when an individual can speak more than two languages with native-like fluency. Bilingualism and multilingualism is extremely common with approximately half the

world being able to speak two or more languages (Carroll, 2008 and Harley, 2014). In some parts of the world, bilingualism and multilingualism are the norm rather than the exception, especially in areas such as Africa, Asia and South America (Carroll, 2008). Bilingualism can occur in one of two ways. Firstly, second language acquisition or L2 acquisition occurs by means of sequential bilingualism which occurs when an individual acquires a second language well after the critical period or after they have already acquired their first language. This occurs when an individual decides to learn a second language at a later stage in life or well after school-going age. Secondly, bilingual acquisition occurs by means of simultaneous acquisition, meaning that an individual learns two languages from infancy and grows up as a bilingual speaker (Carroll, 2008 and Volterra & Taeschner, 1977).

There has been a constant debate as to what might classify an individual as bilingual with many disputing opinions and conclusions that have been reached by some researchers (Wald, 1974). Some researchers state that 'bilingualism' refers to the fact that one can speak two languages with the same control as that of native speakers of the language (Bloomfield, 1933 as cited in Wald, 1974). Other researchers argue that one classification of bilingualism cannot be provided and that, rather, bilingualism is instead a continuum (Diebold, 1965 as cited in Wald, 1974). The researcher agrees with this definition of bilingualism, in other words that it occurs in a continuum. So, although there has been much dispute on the classification of bilingualism, an individual can be bilingual based on the extent of the knowledge of the two languages. If an individual has the ability to greet in another language they cannot be considered as bilingual but they rather fall on the lowest end of the continuum of what is considered bilingual (Wald, 1974).

Bilingualism is particularly relevant to this study as most children in South Africa are exposed to more than one language. This is extremely important because, although children from middle income groups are predominantly exposed to English, they may have acquired a passive or active knowledge of an indigenous South African language. Passive acquisition is when children are exposed to a certain language and therefore acquire some elements of the language but do not acquire it fully (Laufer, 1998). The acquisition of a first language or even a second language occurs on somewhat of a continuum where the speaker of the language begins learning the basics and gradually moves up the continuum to native-like fluency. Acquisition along this continuum can occur through simple exposure to a language or by an individually actively seeking to acquire a language (Laufer, 1998).

In the current research, second language acquisition plays an important role as children begin their journey to be speakers in their communities. There is a critical period in monolingual acquisition which occurs between two and 13 years of age and this is the optimal time for acquisition to take place (Curtis, 1977). Once this period has passed, acquisition can still occur but not without some difficulty (Singleton, 2005). Likewise, with L2 acquisition there is a critical period in which children can acquire native-like fluency in both languages and the grammar for both languages is fully established (Johnson & Newport, 1989). Bilingual speakers can acquire a full lexical inventory in their L2 but the acquisition of grammar is a greater challenge. This is not to say that adults cannot acquire an L2 with native-like fluency however, there will be some difficulty as interference from their L1 will be present when learning their L2. It has been found that there are "sensitive periods" during a child's life which make the acquisition of grammar a lot more effective. This study will therefore focus on the early language acquisition period. Early language acquisition is usually the period between birth and four years of age (Carroll, 2008; Harley, 1986). The researcher will thus look at children between 30 and 40 months.

As mentioned above, bilingualism occurs on a continuum (Wald, 1974), and while people might not be able to speak a particular language, they may still be a passive bilingual: 'passive bilingualism' or 'latent bilingualism' is when an individual is exposed to more than one language, whether it is in the home environment or school/work environment, but they do not become a speaker of that language (Basham & Fathman, 2008). It could mean that they understand the language to a certain extent but they cannot speak that specific language or use it as a primary means of communication. Passive bilingualism usually occurs when a community is in the process of a language shift. There are many terms relating to passive bilingualism such as receptive bilingualism or passive fluency, which basically means that individuals only understand a certain language but do not speak it. Passive bilingualism is a prominent position on the continuum between language attrition and language acquisition or language revitalisation.

When a language shift occurs through language attrition, members of a community begin using a language less frequently and therefore they or their children become passive bilinguals. The reverse process occurs when a language is being revived in that individuals will be exposed more and more to a language. However, they are more likely to comprehend a language before actually producing it (Basham & Fathman, 2008). In the midst of the language shift that is taking place in South Africa, it is expected that young children are

growing up as monolingual English speakers but could possibly be passive bilinguals. This study will investigate some Black middle-class children to test if they are passive bilinguals or monolingual speakers.

Language development

As children grow, the way people communicate with them changes (Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Manchaca and Coufield, 1988). When children are one years old they are only told the names of whole objects, e.g. 'dog'. As children get older and their language development improves, adults speak to them in a different manner. Instead of merely naming objects, adults start using complex linguistic structures such as asking questions, e.g. 'what is the dog doing?' These are linguistic cues that are used by parents, whether knowingly or unknowingly, that aid in the language development of young children. Picture books also play an important role in language development as parents and teachers will refer to items within the picture books and ask children questions based on these pictures (Whitehurst, et al., 1988).

Language is a biological process and it is a part of what makes us human (Bates, Thal, Finlay and Clancy, 1992). This innate and biological process of language needs to be nurtured for it to develop. This makes the process of language development an extremely intriguing concept as it is an intricate process that is both innate and needs nurturing. By the age of four, children are able to understand and grasp the most basic concepts of their native language. This shows that cognitive, language and social development has been obtained for children to master the basic concepts of their language. This proves that even at the young age of four years old, children are extremely sophisticated beings (Bates, et al., 1992).

There are several debates on theories of language acquisition and are many theories regarding this. These are the Innatist Theory, the Behaviourist Theory and the Cognitivist Theory (McGregor, 2015):

- The Behaviourist Theory, which was developed by BF Skinner in 1957, states that children acquire language from their parents. They imitate language and that his how their language develops.
- The Innatism Theory that was developed by Chomsky, states that children are born with the innate ability to acquire language.
- The Cognitivist Theory states that language is just one element of the child's overall development.

What the current study ultimately sets out to show is the reversal of language acquisition, that is, a loss of language owing to their environment. The lack of input from the environment with regards to Sesotho results in them acquiring English as monolinguals. This study takes a view that all the theories of language acquisition present strong merit, however, it shows the greater influence that is presented by the environment and, to an extent, the role of the behaviourism theory in language acquisition and attrition (McGregor, 2015).

The Stages of Early Language Acquisition

When looking at language development, it is important to look at the stages and milestones that are reached during development by children and at which ages they are expected to reach these milestones. It can be seen that as cognitive development takes place so does language development (Carroll, 2008; Harley, 2014). During early language acquisition, children communicate non-verbally. That is, they use gesture to communicate which contributes to their language development. Children are exposed to language long before they are able to use (produce and understand) language (Altmann, 1998; Clark, 2009).

From the time they develop ears and hearing in the womb children are able to hear language. When children are born, their caregivers speak to the child and to other people around them thus further exposing the child to language. The language development of children can therefore be seen as somewhat consistent and follows certain development stages except for cases of atypical development. However there are individual differences that do occur during development. For the most part, children follow the same stages of language development, and acquire and reach certain milestones at approximately the same age. Long before verbal and even non-verbal communication in young children, children communicate using sounds, in other words laughing and crying to communicate. Although these forms of communication are not purpose driven, parents are able to distinguish what different cries mean and are often able to attend to the specific need of the child based on this.

At approximately eight months of age, children begin with non-verbal communication in the form of gestures. Children are able to do so at this specific age because their cognitive ability has developed to a point that allows them to understand language and so respond with gestures (Carroll, 2008). During this stage of early communication, children are able to point in order to draw attention to an object, indicate an object they desire, wave to say ‘hello’ or ‘goodbye’ or put their hands up to show that they want to be lifted up (Bates, 1976; Carroll, 2008 and Iverson & Goldin-Meadow, 2005). All of these gestures are done to get a desired

response. This shows that children have developed to a point where they understand how communication works long before they are able to produce speech. This proves that language comprehension is developed well before language production (Carroll, 2008).

After the non-verbal stage of communication, children start producing speech in the form of cooing and babbling (Carroll, 2008 and Iverson & Goldin-Meadow, 2005). This begins between six and seven months of age when children produce and repeat vowel-consonant combinations. With time and development over the next five months, these vowel-consonant combinations become more complex and include different vowel-consonant combinations. Children first form the sound system of their particular language before joining the sounds together to form words with meanings. By the end of the first year of the child's life, they begin to combine sounds and gestures to communicate. It is at this point during the child's development that they learn words have meanings and objects have names. Children therefore learn and acquire the names of objects but in some cases they create idiomorphs where they give objects their own names. This shows that children are aware of the creativity that accompanies language.

At around 12 months of age, children begin to produce their first words. It is only towards the end of their second year that children begin joining these words to produce simple sentences. These are formed by making simple word combinations. Children are expected, by the age of three, to have mastered the basic linguistic and language structure of their own language, that is, the language they are primarily exposed to. This language therefore becomes the child's first language or only language if the child is growing up as a monolingual speaker (Carroll, 2008).

As children grow, and their cognition and language ability develop, they acquire words at an exponential rate (Carroll, 2008). Their lexicon increases very quickly. In basic numerical terms, by the age of six, children know 14 000 words. This, however, is merely in the complete basic sense as one cannot claim to know and understand how children 'know' words; children and adults may know the meanings of certain words but the way children and adults know and understand these meanings are completely different. Adults and children process words in different way and the linguistic knowledge that adults have is far more extensive than that of children. This is still, however, an impressive feat knowing how extensive and vast the lexicon is of such a young child.

When young children are acquiring new words, their linguistic knowledge is focused on words that relate to them as well as their present and immediate environment. Their words also consist of predominantly, but not only, nominals as well as objects that the child can directly manipulate. Between three and four years old, children go through a stage of fast-mapping. At this stage, children acquire words and their meanings at an extremely fast rate (Carroll, 2008; Altmann, 1998).

In language development, with specific regard to phonetics, some parts of the system are acquired early on and others are not acquired until a child is in primary school (Gleason & Ratner, 2005; Clark, 2009). Therefore at young ages, it is not expected of children to know all the phonetics of their L1 as some elements are far more difficult than others. By the two-word stage, children are already able to combine words in a way that is grammatically correct in their L1. It has been found across many different languages that young children have this ability in their respective languages regardless of the varying linguistic structures. Sentences therefore, become more and more complex however still grammatically correct as the child's language develops (Gleason & Ratner, 2005).

While the main focus of this study is the lexical acquisition of young children, phonetics and syntax cannot be ignored as these play a vital role in development and acquisition. This research seeks to confirm if children are evolving as typical L1-speaking children develop or if there are visible effects of bilingualism.

Language Input

'Input', or language input, refers to the language that the child receives from the parent. In basic terms 'input' can mean the exposure of a child to a language. A child must be exposed to a certain language to acquire it and likewise with bilingual children: they must be exposed to two languages to acquire them (Pearson, Fernández, Lewedeg, & Oller, 1997). Lexical acquisition is directly related to the input that a child receives (Gentner & Boroditsky, 2001). However, the input of the language - or the child's exposure to a language or two languages - needs to be direct. Parents need to speak directly to the child, engage him or her in conversation and this will lead to the child acquiring the language. Lack of exposure to a language could result in deficient acquisition or attrition of that particular language. (Pearson et al., 1997). Children also do not only learn words explicitly as parents do not give the meaning of the word while speaking to the child. A lot of the meanings of words come to children through context and inference (Nagy & Gentner, 1990).

When looking at the input that a child receives, it is important to take note of the family unit as this is the primary source of input that a child receives. In a study conducted by Pancsofar & Vernon-Feagans (2006), the authors looked at a modern family unit. This means that, in a modern context, a family where both mother and father work full time, the input of both parents need to be closely looked at. Fathers, in the modern family context, are far more involved in their children's life than ever before.

Many different contexts influence the language development of a child. These contexts include, as mentioned above, both parents, childcare and day-care facilities, extended family and the greater society. Pancsofar & Vernon-Feagans (2006) report that the higher the socio-economic status of the parents, the more likely it will be that said parents will have a higher level of education. It was found that highly educated mothers tend to have a higher input when talking to their child. Also, it was found that these mothers' language input tend to contain more labelling of objects, they set language goals when talking and communicating with their child and they played more language-involved games with their children which are behaviours that are valued at schools.

As previously mentioned, children do not only receive language input from their mothers and fathers but also from the greater society. This study found that children enrolled in high-quality care centres have stronger and more developed language skills. Many previous studies focused on the mother's language input and while this influences the child's language development the father's input cannot be ignored. While mothers have a more verbal and directing tone, fathers tend to communicate more physically with children with regards to play time and the like. The study conducted by Pancsofar & Vernon-Feagans (2006) found that fathers' language input influences the later language development of children and while mothers' input might be more in quantity than the fathers, they are both important to the development of the child's language. The research conducted by Pancsofar & Vernon-Feagans (2006) is directly relevant to the current study as it focuses mainly on parental speech. It looks closely at the output that the parents produce and at the input that the children receive. It is also particularly relevant here as it provides criteria for the participants that need to be a part of the study. Certain variables are controlled for, such as SES and the education level of the parents. These are important factors that are considered in this investigation.

Children without any learning disabilities, who grow up in a normal environment, are expected to acquire language in the expected fashion (Hoff-Ginsberg & Shatz, 1982). This

acquisition is somewhat based on the input that children receive from their environment. There is therefore a relationship that exists between the input a child receives and the acquisition of language that takes place. As an example, one would expect a child to acquire a language that he or she hears most often. One would not expect that parents or caregivers of a child speak one language and the child acquires a different one. Therefore the input and acquisition of languages acts as the internal and external contributions to language acquisition. This can somewhat be seen as the relationship between nature and nurture in the acquisition of language. And while humans do have the innate ability to acquire language unlike any other mammal, this capability needs to be nurtured for acquisition to take place successfully (Hoff-Ginsberg & Shatz, 1982).

From a very young age the primary input that a child receives is that of the parents. The 'home language' or L1 that a child acquires is usually the language that their parents speak to them (De Houwer, 2007). De Houwer (2007) states that because children grow up in bilingual homes does not necessarily mean that they will acquire both languages and be bilingual themselves. Owing to the fact that one parent or both parents speak two languages, does not mean that the child will acquire both languages. It has been found that language can work as a bonding agent within families. In immigrant families, if the child learns to speak another language that is not the L1 of their parents, there tends to be some emotional distance between the parents and the child. In all cases that have been looked at by De Houwer (2007), it was found that children will usually pick up on majority languages spoken by their parents. It was therefore found, in this study as well, that children will pick up on the majority language depending on the input they receive from their parents. If a child is exposed to two different languages because the parents speak two different languages, the child can acquire both languages. In the case of bilingual parents where both parents have the same L1 and the same L2, the child will acquire the language spoken in majority (L1) and may not acquire the language spoken in the minority (L2). In the case of bilingual parents, children will acquire languages based on the frequency with which they hear languages. Monolingual and bilingual children depend highly on parental input for the acquisition of language. With this information, parents can take steps to modify the input that children receive to allow them to acquire a particular language. Steps can be taken such as hiring a care giver who speaks a specific language, only speaking to the child in a particular language or allowing the child to spend time with family members who only speak the specific language (De Houwer, 2007). The study by De Houwer (2007) is particularly relevant to the current investigation as this

study focuses on children who acquire the L2 of their parents. It was noted that the L2 is mostly spoken to the child and that will be the higher frequency language. It is for that reason that this current study focuses on the parental input that the child receives and how this input is modified to allow for the acquisition of a particular language.

Lack of exposure to a particular language will result in the child not acquiring it. In the context of this study, children only receive English input from their bilingual parents which results in a loss of the mother tongue (in the case of this study, *Sesotho*) from generation to generation (De Klerk, 1999; Msila, 2014). It is for this reason that parental input plays such a significant role in the child's acquisition of language. Thus this study pays particular attention to the input the child receives from the primary care givers (parents) and how, in turn, this input affects the child's comprehension and production.

Language development, whether it be monolingual or bilingual development, is extremely dependent on the input that children receive from their parents (Scheele, Leseman, & Mayo, 2010). Input is also extremely dependent on other contributing factors such as SES of the parent, level of education of the parent or whether the parent is an immigrant or not. It must also be questioned if bilingual and monolingual development has different effects on the cognition of young children during the early acquisition phases. In a study conducted by Scheele, Leseman and Mayo (2010) it was found that monolingual and bilingual acquisition is dependent on the input that the child receives and - while development may be less proficient in bilingual as opposed to monolingual children - general non-verbal intelligence was not different (Scheele et al., 2010)

Narrative Assessment

When acquiring a language, a child moves and develops from one stage to the next (Altmann, 1998; Carroll, 2008; Clark, 2009; Gleason & Ratner, 2005; Harley, 2014). Through these stages children reach different milestones and are expected to be able to complete specific tasks at definitive ages.

After the first-word stage, children's lexical acquisition occurs at an exponential rate. They learn words and the meanings of words. They are soon able to string sentences together. As their language ability increases so do the cognitive functions that accompany these language abilities. Narratives, whether these be personal narratives or the retelling of a story, are extremely important tools in assessing language acquisition and development as to produce a narrative, a high number of cognitive skills are required along with higher-level language

skills (Paul, Hernandez, Taylor and Johnson, 1996). Narratives are also effective as these can be used to assess any delays in development in atypical populations (Bishop and Edmundson, 1987 as cited in Paul, et al., 1996).

For one to be able to tell a story or a narrative, a few requirements need to be met. Firstly, one needs to be able to narrate a sequence of events (Paul et al., 1996; Berman & Slobin, 2013; Kunene Nicolas et al, 2015). In order to produce an effective narrative, one needs to be able to follow a sequence of events. An effective narrative therefore has a start, middle and an end. Secondly, cohesive devices need to be used to tell a detailed narrative. This includes referent tracking throughout the story and using cohesive devices in a manner that the story makes sense to the listener. Thirdly, in order to tell a narrative story a specific kind of vocabulary needs to be used to maintain context throughout the story and convey ideas in a way that is easy and effective. Lastly, when giving a narrative one must be able to structure it in a way that shows a cause and effect. The account must be structured in a way that sequence events make sense and follows the correct order (Paul et al., 1996).

Using a narrative can be an effective way to assess development especially in young children. It can be a tool for researchers to use to assess if children have reached the developmental age and mental acuity needed to produce a narrative successfully. Children can effectively tell a narrative when they are able to tell the story in the correct sequence, use the correct vocabulary and grammar as well as provide the correct context in which the story takes place (Colletta et al, 2015; Kunene Nicolas, 2015; Kunene Nicolas, Guidetti & Colletta, 2017; Sun and Nippold, 2012).

Narratives are believed to be far more complex than a normal conversation as children are required to use higher cognitive abilities to recount a narrative. To produce a narrative, children are required to talk about the past which means they need to rely on memory. They need to talk about ideas that are abstract and exist outside of their current context. According to Applebee (1978 as cited in Stadler and Ward, 2005) to produce a narrative, children's development must have reached a certain cognitive level where they can understand cause and effect and have empathy to know that people feel differently than they do. Narratives are also believed to be culture specific and it is for that reason that the narrative-elicitation task that was used in this particular study was based on observations made in the classroom with items that the children were familiar with.

This investigation aimed to use a narrative-elicitationa task, as well as the free speech narrative produced by children during interactions with those around them to assess the lexicon and the lexical development of the child. It is expected that narrative skills developed in children between the ages of three and four years (Stadler and Ward, 2005). That is the age group of the participants for this particular study fall into; they have developed to a point where they can produce a narrative.

Most studies either look at a cross-sectional group of children with various experimental conditions but this study employed an observational design where children were observed during spontaneous speech individually as well as with other children. The children also participated in a simple individual narrative elicitation task and interview to assess their linguistic skills based on their development.

Lexical Acquisition

The lexicon is an important aspect of this study because it is the input of the lexicon and the production of the lexicon that is going to be assessed in this study. The lexicon and lexical acquisition are therefore very important aspects of this study.

The process of language acquisition that young children go through is an extremely complex one and there are many contributing factors. A human has the innate ability to acquire language and the potential to learn and use language as a human's brain and organs are developed in a way to allow communication through the use of language. Language is therefore unique to humans (Hauser, Chomsky, & Fitch, 2002). However, in acquiring language there are also the environmental factors that need to be taken into account. As a child grows up and develops, language will be acquired from parents or caregivers as these are the people by whom the chid is surrounded. A child will acquire a language that he or she has been exposed to and the grammatical features of this language will be acquired by the child as they develop.

When learning language, the vocabulary feeds into the grammar. The latter is therefore based on the vocabulary that has been learned. It can therefore be agreed and concluded that the lexicon and the building thereof is vital and central to language acquisition (Montrul & Foote, 2014). The lexicon is built based on the input that is received. 'Early bilinguals' refers to individual who have been exposed to two languages from a very early age and have acquired the lexicon and grammar of both languages. 'Late bilinguals' refers to individuals who have been exposed to a second language at a later stage in life or after puberty. The lexical

acquisition of bilingual speakers is therefore an extremely interesting topic of study. With early bilinguals, when presented with a lexical item (i.e. an item that they are required to provide a name for) some items may be answered in one language and other items may be answered in another. A possibility for this occurring is that the lexicon is developed in ways that are context specific. Especially in cases involving young children, one language may be spoken in a particular environment and therefore all the words that are specific to that context will be in that particular language. The same is true for a different language spoken in an alternate environment. As an example, if a child speaks English at home and *isiZulu* at school, then items in the house are more likely to be labelled using English terms and items at school will be labelled using *isiZulu* terms. This can also be applied to the different times that individuals acquire the lexicons of different languages. The lexicon of children acquiring such of two languages may differ to the words acquired by an adult who is acquiring the same languages (Montrul & Foote, 2014).

Within the lexicon, words are divided and separated into distinct categories (Baker, 2003). These are known as lexical categories or, more commonly, as parts of speech. For many years, the lexicon has been divided into distinct categories and it has been found that this division is one of the oldest linguistic discoveries (Robins, 1989 as cited in Baker, 2003). 'Lexical categories' refer to parts of speech such as nouns, verbs, adjectives and adverbs. Each word or lexical item needs to fit a particular criterion to be placed in a particular category. Nouns are words that represent concrete or abstract items whereas verbs represent a particular activity or process (Baker, 2003). The main focus of this study, however, is on the input, comprehension and production of nouns. While other lexical categories are of vital importance, this study focuses predominantly on nouns.

Between the ages of 18 and 24 months, children go through a phenomenon known as 'language explosion' (Waxman & Kosowski, 1990), in other words the rapid syntactic and semantic development that takes place in the vocabulary acquisition of children during this age (McMurray, 2007). The language explosion that takes place is a very interesting phenomenon and can be the focus of multiple studies (Waxman & Kosowski, 1990). This study seeks to gain information regarding language explosion in the South African population.

When assessing the lexicon and lexical development, there are universalities that exist among children and certain expected delays or lags. These lags, however, are not because the child is

unable to acquire these lexical items but rather because these items are much more difficult to acquire than others. Irregular verb forms in English are one of the lags that children face in lexical development. Irregular verbs in their past tense forms are difficult to acquire as one single rule cannot be applied to all irregular verbs. Owing to the fact that the number of irregular verb forms is so great and vast, it makes the acquisition process a lot harder (Bybee & Slobin, 1982). In some cases a single vowel change is needed, e.g. 'sing/sang' and in other cases, the entire word changes, e.g. 'go/went' (Bybee & Slobin, 1982) As an example; children acquire irregular verbs at a much later stage than they do regular verbs (Kuczaj II, 1977). This leads to children producing errors because they overgeneralise the past tense morpheme ('-ed') in words where the structure changes completely in the past tense form such as 'ate' becoming 'eated' or 'go' becoming 'goed' or 'wented'. They use the overgeneralisation in words where a null morpheme still depicts past tense in words such as 'hit' becoming 'hitted' (Kuczaj II, 1977). Another language feature that children may have difficulty with is that of sounds, or the phonological aspects of language. Some sounds are more difficult for children to acquire than other and it is therefore normal for children to acquire some sounds far later than others (Gleason & Ratner, 2005). Children will therefore use easier sounds in place of harder sounds until they have acquired the harder sounds.

Lexical categories

From as young as infancy, children are able to perceive intonation and it is at this point that children start differentiating between different lexical categories (Lany and Safran, 2010). From infancy, children are able to perceive and pay attention to stress, sequences, etc., and this is what lays down the foundation for later lexical acquisition. These contribute as building blocks to language development as once these lexical items are put in place, semantic value can be added to each lexical item. In previous studies, it was found that children are able to group sounds together and, from the age of 12 months, children are able to tell their native language apart from artificial languages (Lany and Safran, 2010).

The question still stands on how children learn words. It is an extremely complicated process. Some theories state that children learn the meaning of majority of the words in their lexicon based on context (Nagy and Gentner, 1990). Children therefore gain the meaning of words implicitly by placing constraints on words and what the possible meaning of that word could be. While a lot of the meanings of words may be learned by explicitly looking up the meaning in a dictionary, the majority of the words that make up the lexicon of children are learned through context and implicit knowledge (Nagy and Gentner, 1990).

It has often been stated that, in early language acquisition, children tend to acquire nouns first especially during the first-word stage (Gentner, 1978; Macnamara, 1972; Nelson, 1973). There have been many reasons and explanations for this as nouns are believed to be more conceptually accessible to young children than other lexical categories that make up the predicate such as verbs or prepositions (Gentner, 1982). In simpler terms, things that are considered nouns are simpler to understand and are more basic than things that are denoted by verbs. It is also important to note that language development in very young children is difficult to quantify as one tries to state what lexical category is first acquired by children based on adult grammar. At a very young age children do not conceive words as belonging to different lexical categories, in other words they do not consider words to be nouns, verbs or prepositions. Therefore the first words that are acquired by children are what are considered to be nouns in adult grammar (Gentner, 1982).

Verbs seem to lag behind noun acquisition in almost all elements and manners (Gentner, 1978). This could be as nouns refer to real-world entities whereas verbs refer to the relationships and actions between the real-world entities (Gentner, 1978)

The current study focuses on nouns in particular and the emergence of nouns in the input and production of children. The development of children – in particular concepts and the words used to represent these concepts – has been of great interest to both psychologists and linguists alike (Waxman & Kosowski, 1990). Concepts and their definitions are not easy to acquire as one has to know the word that describes a particular concept without any further knowledge that a particular word refers only to this object, not a part of the object and not to any other object that may have similar features to the object. Children, however, seem to acquire words quite effortlessly and easily grasp concepts and the corresponding lexical item that refer to the concept. Children seem to gather meanings for different concepts from context and other syntactic categories to assist them in deciphering the semantic content of certain words. There are countless meanings that young children can apply to a particular word; therefore, there are theories that have been set in place which are assumed to set limits on the number of meanings that can be applied to a particular word (Waxman & Kosowski, 1990).

There have been many assumptions and theories about how children acquire their lexicon given that there are countless possibilities and definitions that children can apply to a particular concept. A universally accepted theory is the Noun Bias Theory which states that

in general, young children acquire nouns more easily than they acquire verbs (Gentner, 1982 as cited in Tardif, Gelman, & Xu, 1999). It is assumed that children learn nouns before they learn verbs as they are predisposed to apply a word to an actual, real-life object as opposed to applying a word to an act being done by or done to the object (Tardif et al., 1999). Children therefore want to name objects before they name abstract items of verbs because to know that an object is conducting an act, one needs to know what the object is.

The aim of a study conducted by Tardif, Gelman and Xu (1999) was to assess if the Noun Bias Theory is indeed universal. The authors conducted their study on English- and Mandarin-speaking children. They aimed to assess the acquisition of nouns as opposed to verbs in these two languages. For the study, the authors used common nouns and main verbs which were culturally applicable in both sample groups and remained constant between both sample groups. Twenty-four English-speaking children and their mothers took part in this study as well as twenty-four Mandarin-speaking children and their mothers. There were three sessions of 10-minute play that took place in this study where the mothers and children were presented, by the experimenter, with picture books as the noun-eliciting task, mechanical toys as the verb-eliciting task and manual toys to provide a neutral context. When presenting the materials to the participants, the experimenters were careful not to prompt the mother or the child to use particular nouns or verbs. Mothers primed and assisted the children in their responses.

After the three sessions were completed, the mothers were asked to fill out three questionnaires:

- The child-development questionnaire which allowed the mother to state what developmental milestones the child has achieved,
- The MB-CDI, as well as
- A demographical questionnaire.

This study found that Mandarin speakers used more verbs than English speakers. It also found that in both the English and Mandarin groups, the children did use more nouns than the adults which could support the Noun Bias Theory but there are many contributing factors which may influence this and which need to be looked at before claiming Noun Bias Theory (Tardif et al., 1999).

It is simple to see how the Noun Bias Theory might have taken root and how it can be so well established and agreed upon. This can be seen as nouns typically refer to objects (Imai et al., 2008). Objects are constant across time and space and once the concept has been established in the mind of the child, little can be done to rename the concept. Conversely verbs refer to actions which only last for a short period of time. This makes them a bit more difficult to assign lexical item to it (Imai et al., 2008). Verbs and prepositions (which form part of the predicate) are shaped by language as opposed to nouns which, in most cases, refer to concrete objects (Gentner & Boroditsky, 2001). This could contribute to the reason why nouns are acquired first. These are universally conceptualised objects and their meanings are fixed over space and time. Verbs, however, usually have referents which exist for a brief period of time. These parts of speech also depend strongly on their argument and they cannot exist independently.

To assess the difficulties of children acquiring meanings of words, the semantic errors made by children can be closely analysed. Bowerman (1974, 1976, 1978 as cited in Gentner & Boroditsky, 2001) looks at spontaneous speech errors in young children and found that more errors are committed with verbs as children overextend the English verb rules because in English, the denoting and causative states of verbs can be used interchangeably. It is for these reasons children acquire nouns before verbs and prepositions (Gentner & Boroditsky, 2001).

Dhillon (2010) has highlighted the debate of noun bias and its claim to universality in detail, discussing both sides of the debate and all the issues that arise in between. In this study, Dhillon (2010) states that while many researchers believe nouns are acquired first in young children as they are easier to acquire and represent concrete objects, there are other researchers who have found that in some cases, verbs are acquired first and faster or that it is difficult to quantify how and why nouns are believed to be dominant in language acquisition.

The study by Dhillon (2010) was conducted to assess if the parameter settings of different languages influence the emergence of noun bias or not. Three languages were used based on their parameter settings of null subjects: English was used because null subjects are strictly forbidden in English; Spanish is a pro-drop language allowing the subject to be dropped while maintaining grammatical meaning; and Mandarin is a topic-drop language allowing for both a null subject and a null object while still maintaining grammatical meaning. The aim of this study was to assess the emergence of noun bias in different language typologies. It found that while a noun bias does emerge in both English and Spanish, it was not found in

Mandarin as there was no clear noun bias. However, in one sample group a clear verb bias was found. If noun bias was indeed universal, there would be clear, undisputable evidence and emergence of noun bias across all three languages. There also proved to be a distinct difference between all three languages in that pro-drop languages and topic-drop languages had a difference in the emergence of noun bias as well as between pro-drop languages and language where subject and object are required (Dhillon, 2010).

There are few studies that have looked at early lexical acquisition in South Africa. One recent study is that of Kunene Nicolas and Ahmed (2016) who assessed the lexical acquisition of monolingual L1 *isiZulu*-speaking children in South Africa. The PiNG Tool, which is a picture and naming game used to assess the lexical comprehension and production in young children, was adapted and used in a study that took place in a South African context (Kunene Nicolas & Ahmed, 2016). The overall results of this study showed that comprehension does precede production in *isiZulu*-speaking children and also that the children performed better in the noun-comprehension and noun-production task as opposed to the predicate-comprehension and predicate-production task (Kunene Nicolas & Ahmed, 2016).

The study conducted by Kunene Nicolas and Ahmed (2016) only looked at monolingual children and did not look at input the children was receiving. The current study aims to continue from such a foundation by also looking at the input children receive from home or school. Although closely linked to this study, Kunene Nicolas and Ahmed (2016) assessed the lexical acquisition of monolingual children in South Africa however the authors did not control for the lexical acquisition and development of children receiving input from bilingual parents in a South African context. Therefore, this study focuses on the input that young children receive from their bilingual parents or caregivers with specific emphasis on the noun. By assessing the input that the child receives, this study was also able to test the comprehension of the child based on what input they receive and the words that the child produces.

Different lexical categories are looked at in this study, such as the noun and verb. It assesses if universalities are present in the lexical development of a specific sample group. This will then provide an insight into if children are developing as monolingual English speakers, bilingual speakers or passive bilingual speakers.

Gesture

Language is multimodal and it has been well established that speech and gesture are closely linked and related in language studies (McNeill, 1992; Kendon, 2004; Colletta, et al., 2015). Gestures are important in language acquisition as young children are reliant on non-verbal communication before verbal communication has been established (Capirci, Iverson, Pizzuto & Volterra, 1996; Capirci & Volterra, 2008). Before children produce their first word, they communicate by using gestures, for example pointing, nodding or shaking their head and lifting their arms. Children do not stop using gesture throughout their life and while it is of great importance during language acquisition stages, it remains constant throughout life (Capirci, Iverson, Pizzuto & Volterra, 1996; Colletta, et al., 2015). Gesture development begins long before lexical development as it is seen that gestures are used before words and gesture-word combinations are used before two-word combinations. Gestures are therefore an integral part of communication in young children. As children develop lexically and cognitively, their gestures develop too and they move on to more complex means of communications which ultimately include co-speech gesture. These gestures are used during narratives and, in some cases, are used instead of speech (Capirci & Volterra, 2008; Colletta, et al., 2015).

In a study conducted by Iverson and Goldin-Meadow (2005), it was found that gesture actually paves the way, and is the foundation, for the development of the lexicon. If children produce gesture for certain items, these items are moved to the verbal lexicon. It was found that children who were first to produce gesture and word combinations were first to produce two-word combinations. It can therefore be seen that gesture development can be an indication of verbal development (Iverson & Goldin-Meadow, 2005).

As gesture plays such an important role in language as well as language development and acquisition, the role gesture plays in deaf children is also of great interest. Gesture is seen as closely related to sign language. It has been found that deaf children who grow up in hearing families with no exposure to sign language are likely to come up with signs of their own for communication purposes (Capone and McGregor, 2004). During language development, an important gesture that children produce is the ‘showing gesture’ which essentially leads to the pointing gesture. Children point to something to draw attention to that specific object. This is an important step in lexical and gestural development (Capone and McGregor, 2004).

Gesture and speech are forms of communication that are more complex than any other animal can produce. Gestures serve a more complex function than speech and provide a full and complete image for communication (Kendon, 2004). Facial expression, hand and arm movements as well as body movements are all forms of gestures that present a means of communication that cannot always be carried out by words alone. As gesture and speech are so closely related, these can be seen as synchronised. Gestures help convey a fuller message than can be done by only the verbal modality of communication. McNeill (1992) defines the different types of gestures that are produced: iconics and metaphorics which describe both concrete objects and abstract objects respectively, beats which are repetitive gestures that emphasise speech, cohesives that link speech together and deictic gestures which are pointing gestures. While young children may not start with iconic or metaphoric gestures, deictic gestures are present in their development process (McNeill, 1992; 2006).

As the children in this particular study are at an age where lexical development is at its most prominent, it is expected that children will resort to gestural responses when they are nervous or asked more difficult questions. Gesture can therefore be seen as a tool that assists children to communicate things that are otherwise harder for the child to communicate (Iverson & Goldin-Meadow, 2005). Thus, this study aims to seek what strategies children will employ when answering questions, both verbal and gestural. It also seeks to assess what types of gestural responses are employed by children and how often these strategies are employed.

A child in the pre-linguistic phase uses gesture before gradually incorporating speech. During the gesture development stages, children use various means to communicate with adults, such as manipulating tools and objects to get their attention (Volterra, Caselli, Caprici & Pizzuto, 2005). After this stage is the one-word labelling stage where children point at objects and name these. The pre-verbal stage that children go through is known as the Illocutionary Stage. During this phase they communicate intentionally without speech (purely through gesture) and the Locutionary Stage is where children communicate with speech (Volterra et al., 2005). It has also been found that pre-linguistic gestures are seen in both deaf and hearing children (Volterra & Erting, 1998).

This study examines how children use gestures at the cusp of their language development to see if this is present and if it aids the child's production. In other words, the role of gestural production - as a strategy children use to mitigate cognitive load – is investigated.

This chapter presents a literature review of relevant studies that are directly linked to this research report. It provided an overview of the different findings on language shift, language attrition, language development, language input, personal narrative development, lexical acquisition, and gesture. Using the previously mentioned studies, this study seeks to foreground existing literature, address the gaps and contribute to new knowledge in early language development within the South African perspective. The following chapter presents the methods used for data collection and the analysis of the data for this study.

Chapter 3: Methodology

Introduction

This chapter provides a detailed insight and overview of the research methods that were used to conduct this study as well as the instruments and tools that were used for data collection, the procedures and protocols that were carried out during the data-collection processes and the methods that were employed to analyse the data.

This study seeks to examine the role of language shift in language attrition. The second aim of this investigation is to examine lexical acquisition of South African, 'born-free' children living in Johannesburg, Gauteng. This includes investigating the developmental trajectory of young children and the linguistic strategies they employ during early language acquisition.

A qualitative research method is used in this study. A 'qualitative study' is one which takes on a naturalistic approach to data collection (Golafshani, 2003; Silverman, 1985). A qualitative method offers an effective way to witness a real-world setting and allows for the most naturalistic data to be collected as opposed to information that has restrictions set in place by a laboratory setting. The results that are obtained in a qualitative study are not arrived at by using statistical means. This means that statistics are not used in this study. As a qualitative study occurs in a naturalistic environment, researchers are allowed to watch the data unfold in a natural environment so that any phenomenon that may arise and can be observed in the least-controlled condition as possible (Silverman, 1985). Researchers also play a big role in the data collection that occurs in a qualitative study and the researchers embrace their involvement in the process by immersing themselves into the data that is being collected. They interact with participants and place themselves into the naturalistic environment of participants (Golafshani, 2003).

The current study observed the lexical development of a particular group of young children - between the ages of 30 and 40 months, who belong to middle-class Black families - in an educational environment using a mixed method design. By eliciting speech from children, one can evaluate the type of words that are present in the child's lexicon and therefore assess their development at that language development stage.

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Research design

This study is ethnographic. According to Wortham (2010), 'ethnography' is a research design used by most anthropologists. It is the means of studying a culture, organisation or a community of people by immersing oneself into the culture. It is fieldwork which is done by the researcher placing themselves in the environment of prospective subjects and collecting data through observations and interviews. When conducting an ethnographic study, the researcher can obtain an objective or subjective view of the participants. As researchers, one is able to immerse oneself into the culture, or one can observe (from an objective standpoint) all that occurs (Wortham, 2010). An ethnographic design was best suited for this study in order for the researchers to gain as much insight into the input that children receive and how this in turn impacts a child's lexical development. Therefore, fieldwork was carried out in an environment familiar to the participants, in other words their school.

Ethnographic studies are a social method of data collection where the researcher participates in the daily lives of participants for extended periods of time (Hammersley & Atkinson, 2007). This involvement can occur openly or covertly and can be done to gain data effectively by watching; listening and asking questions which specifically relate to the aims that the research wishes to carry out. Ethnographic studies allow for naturalistic data to be collected in the environment that the participants naturally exist (Hammersley & Atkinson, 2007).

Four data-collection techniques were used in this research, namely: questionnaires, observation, interviews and an elicitation task. The following section details these techniques.

Data-collection techniques

1. Questionnaires: In South Africa, a population is classified as working middle class population when a household with four individuals has an income of between R5 600 and R40 000 per month (Visagie, 2013). The parents of the participants in this study needed to be bilingual speakers, in other words they both needed to speak both English and any other Bantu language. The parents were required to speak an L1 Bantu language and their L2 needed to be English. The demographic questionnaires were sent out to potential parents or caregivers to assess the linguistic input children were exposed to at home (see Appendix C). The researcher then performed observational data collection which took place in the classroom setting to build a list of the lexical items used by the children.

2. An observational design allows for the researcher to assess the participants' language input and production, without interference in a setting that is most natural for the participants.

3. Interview: The interview was conducted to obtain a personal narrative from the participants and to make them feel comfortable. By talking about themselves and things that are familiar to them, children are likely to speak more and be more comfortable.

4. Elicitation Task: The Elicitation Task was conducted to prompt a narrative from the children. The narrative allowed the researcher to assess language development. The narrative allowed the researcher to assess if children are at a level of development where they are able to narrate a sequence of events (Paul et al, 1996). The elicitation task is therefore based on narrative production and researchers could also assess the lexical items produced by the child throughout their narratives. The elicitation task can allow for consistency and the data from each participant can therefore be compared if need be (Ambridge & Rowland, 2013). When using this design method, children are able to say whatever they want to but with strong hints from the researcher. During the Elicitation Task, the researcher is in control which can allow for extremely structured versions of what is being said by each participant. The researcher can guide the participant by asking specific questions as about to what is occurring in certain events or the elicitation task can be less structured by participants simply narrating a wordless story. Also, because this study aims to assess the comprehension as well as the production of young children, many different means of assessing comprehension was looked at. Children did not need to produce any words in order for them to comprehend what was being said to them. Therefore gestures such as pointing and nodding of the head are also a means of assessing comprehension (Ambridge & Rowland, 2013).

Three researchers made up the data collection team: the main researcher, along with two research assistants. For the observational data collection, this was most effective so as to allow for more data. One researcher can only observe one part of the classroom at a time, whereas multiple researchers can observe all the participants and their interaction regardless of where they are in the classroom. For the elicitation task and the interview task, the two research assistants performed the direct assessment with the participants in English and Sesotho respectively, allowing for the direct assessments to be carried out by L1 speakers of each language.

Participants

The participants for this study were found at a private school in Bedfordview in Gauteng. Five families were selected as participants for this study (see table 3.1). The participants were selected based on a questionnaire that had been answered by the parents as participants needed to meet a certain criteria to be a part of this study. The questionnaire (Appendix C) contains information about the parents' education, income, childcare, family composition and family demographics. The criteria that participants needed to meet are that the parents must be bilingual L1 Bantu language speakers and L2 English speakers, they must belong to the working middle class, participants must be a particular age and the child must have typical development (no known disabilities or handicaps). Atypical populations were excluded from this study, in other words any participants with learning disabilities, language impairment and Specific Language Impairment (SLI). All participants belonged to the same school and all participants were assessed at the play school which is a day care/preschool in the Bedfordview area.

Language acquisition studies have long been documented in which between the ages of 18 and 24 months, 'language explosion' takes place (Gopnik & Meltzoff, 1987; McMurray, 2007; Waxman & Kosowski, 1990). This is the phenomenon where the lexicon of the child increases exponentially. After this the lexicon of the child grows and develops to a point where they are now able to string words together to form sentences. Once the child is able to do this, they are then able to produce narratives. It is at this age that the assessment took place as participants were required to give a narrative of a wordless story with toy objects.

Individual variation needed to be taken into account and while this study could not control for things such as illness or absenteeism from participants, the environment was controlled as best as possible with all assessments happening at the play school or crèche during the children's daily routine. It is important to note and take into account that not all observations can be the same and constant. A child might be sick or tired and therefore absent. This renders the results isolated and not entirely representative of the child's vocabulary. This means that the results that were obtained from this study can only be seen a representation of this particular participant cohort and cannot be generalised to the rest of the population, or even to those who were absent from class. Also, children have different personalities and some may respond differently to others during the observational and narrative tasks. Some children may produce more words than others simply because they are more talkative and outspoken.

Strategies for access to participants

The researcher also needed to be familiarised with children so as not to alter the responses children might give that may affect the results of the study. This required the researcher to immerse herself into the environment of the children for a period of time. After the familiarisation period, observations of the participants were made from a purely objective point of view as interactions were documented between child participants, as well as between the participants and the teacher and teaching assistants.

This study collected observational data in a naturalistic environment where spontaneous speech was collected in an extremely familiar environment of the participants that was not primed and that was collected from a completely objective point of view. After the one-month observational period, one-on-one interviews were conducted with the participants.

The lengthy periods of observation allowed researchers to take into account the possibility that illness may occur which may prevent participants from taking part in the study. During the observational data collection some participants were absent on some days and present on others. The reasons for absenteeism varied from illness to holidays or parents choosing to keep the child at home on a particular day.

It is extremely important, when working with young children, to begin with a thorough familiarisation phase where children get to interact with the researchers. The researcher spent a month prior to data collection visiting the school three times a week and sometimes playing with the children during break time. The researcher was also in the classroom until the children were familiar with her.

Population and sampling

The sample population of this study consists of children aged 30 - 40 months born of middle class Black families that live in Johannesburg, Gauteng. Data collection took place over four weeks with researchers visiting the school three times a week. Before any video or audio recording was done or direct assessments were conducted, observational data was collected by the researcher during this time. The researcher would record interactions between the children in class and between the children, teacher and teaching assistants. During the observation and familiarisation period, all the children were together as a class along with the teacher, the teaching assistant and the three researchers.

Number of participants

Although participants were narrowed down to five children of the entire class of 16 children, observation and familiarisation took place with the entire class so as not to make any child feel uncomfortable or shy. This also allowed for a completely naturalistic setting and environment for all children so when the direct assessments actually did take place, they were in a familiar environment with people they were used to seeing in this space. The observation and familiarisation period not only allowed the children to get used to the researcher but also allowed her to familiarise herself with the class routine. The researcher noted the lexical items and conversations that occurred between the children as well between the children and the teacher. As children were not separated into those who are participating and those who did not participate in this study, observations were made of participants interacting with other children in the class as well.

Data collection was done to assess the lexicon of children aged 30 - 40 months. The data was collected from a private play school in the Bedfordview area which is part of a primary school which goes up to Grade 7. The play school accommodates children from six months old to Grade R (pre-school). This particular school is an English medium school where teachers only use English as the medium of instruction even in the baby classes.

	Age (in months)	Gender	Part of Entire Data Collection Process
Participant 1	36	Female	Yes
Participant 2	39	Male	Yes
Participant 3	41	Male	Yes
Participant 4	39	Female	No
Participant 5	39	Male	No

Table 3.1: Biographical Data of Child Participants

Researchers initially began the process of collecting data by e-mailing the principal of the school and communicating the aims of the research. The principal then agreed to meet the researchers so that more information could be communicated to the school and for the principal to provide insight into the population of the school (whether or not researchers would successfully find participants, with the specific demographic requirements, to take part in this study at the school).

On meeting the principal, information sheets, consent forms and demographic questionnaires were given to hand out to families who fit the criteria that this particular study was looking for. This allowed the principal, teachers and parents to be well aware - that data collection would take place - before researchers began the observational data collection. On the first day when observational data collection commenced, the researchers received the consent form and demographic questionnaires which the parents had returned to the principal. Of a possible eight participants, consent was received for five children (see Table 3.1).

Instrumentation

During the observation period, lists of words that the children use in class and during play time were noted. Some concepts were introduced to children for the first time in class and the teacher would repeat these concepts. Alternatively, at a later stage the teacher would ask if the children remembered what a specific word meant. The observation and familiarisation period took place over the first three weeks of the researcher being at the school. The actual data collection that was recorded with each participant individually took place on the second last day of the four-week visit to the school. The entire visit took place during November 2017 which is towards the end of the academic year. Researchers were present during play time whether it took place outside or indoors. As the children became more and more familiar with the researchers, they would interact with the researchers more often. This allowed for conversations to take place and a greater insight into the child's lexical ability. Three researchers were present at the school at any given moment during the data-collection period. This was done to get a more holistic view into the children's lexical abilities. Therefore if one researcher was observing one group of children, other researchers would be in different places observing other children which minimised the possibility of the researchers missing anything of vital importance. It was also for this reason that the observation period took place over four weeks so as to gather a more complete view of the children's lexicon. Although a complete look at the children's lexicon cannot be obtained without spending time constantly with the children, the more data that was collected allowed for a greater insight.

Direct assessment procedure

By the fourth week, the children who were participating in the study were familiar with all three researchers and even knew them by name. During the direct assessment, an interview was first done with each participant and an elicitation task was done after the interview. Before either task could take place, permission was obtained from the principal and the

teachers for a quiet room to be used during class time. This room was separated from the classroom to avoid any interference.

The direct assessments were conducted in the morning upon the recommendation from the teacher who informed the researchers that this was the best time to get effective interactions and responses from the children.

Set-up for the interview and elicitation task

The researchers set up the recording equipment before any child was asked to come in for the direct assessment.

The elicitation task was based on a box (see Figure 3.1 and 3.2)

Figure 3.1: Layout of elicitation task

Figure 3.2: Layout of elicitation task with animals

The box on which the wordless elicitation task would be conducted was set up in the room and the video camera was placed on the tripod at a 90-degree angle facing the participant. This was tested with the researchers before the actual data collection took place. The camera was placed in a wide frame facing the participant. This was done to see what was being done during the elicitation task by the researcher, as well as the entire body of the participant so that gestures may be recorded as well.

On the cardboard box was a green sheet of paper with green coconut shavings in order for it to look like grass. There was a small cardboard house and some small flowers. There was also sand and stones on the green paper that looked like gravel and a pathway. On the side of the box was a container filled with water. There was a toy horse and a toy cow which were the main characters in the enactment of the elicitation task.

Before play time, each participant was called into the room, one by one, where the camera had been set up. Upon entering the room the child and the researcher sat down on the floor on opposite ends of the cardboard box, facing each other, and the researcher asked each of them if they wished to play a game and answer some questions as a form of verbal assent. Recording then began and the researcher began with the interview, followed by the elicitation task. The direct assessment was first conducted in *Sesotho* and then in English to avoid any priming from the English questions.

The interview questions that were asked in *Sesotho* and English can be seen in Table 3.2 below:

Sesotho questions	English questions
O kae?	How are you?
O apere eng ?	What are you wearing?
Naa diaparo tsa gao ke mmala o byang/o feng?	What colour are your clothes?
Ke mang a go thusitseng go apara diaparo mo mosong?	Who helped you get dressed this morning?
O jele eng mo mosong?	What did you have for breakfast?
Ke mang a go tlisitseng sekolong mo mosong?	Who brought you to school this morning?
O tlile ka koloi?/E tsamaya ka lebelo kgotsa e tsamaya ga nyane?	Did you come in a car? Does it go fast or does it go slow?
O nale mengwaga e mekae?	How old are you?

Table 3.2: Sesotho and English interview questions

These were the questions that were asked to each participant although these varied slightly depending on the direction that the conversation went. However, the researcher asked all the participants the questions above, or some variation of the questions in Table 3.2. These questions were asked in both *Sesotho* and English.

Directly after the interview was conducted, participants were asked if they would like to play a game with the researcher.

In order to elicit a form of a personal narrative, the researchers enacted a wordless scene with toys during the elicitation task which included all elements that were present on the box (see figures 3.1 and 3.2). When the child agreed to continue the game/assessment, the researcher began the elicitation task and the child watched.

The elicitation task was in the form of a story. The story was resumed in six macro-episodes that present the story schema. The researcher used farm animals as they were part of the toys that children were exposed to. The researcher performed all movements with no speech but sometimes some onomatopoeic sounds were produced, such as sounds produced by farm animals to enhance the game for the children. The following are the macro episodes that made up the story event line as presented to the children:

- Macro-episode A: The story begins with the cow and the horse on two opposite ends of the box. The horse is near the water and the cow is eating grass.
- Macro-episode B: The cow goes towards the horse and knocks the horse over.
- Macro-episode C: The cow goes to the water to drink the water.
- Macro-episode D: The horse gets up and after the cow drinks water, he goes back to horse where they fight/communicate by making noises with each other.
- Macro-episode E: The horse then chases the cow back to where the grass is.

When the researcher was finished, the child was asked if they enjoyed the game and if they could tell the researcher what happened during it. Different researchers conducted the direct assessment in the two languages as the *Sesotho* task was conducted by an L1 speaker of Sesotho and the English task was conducted by an L1 speaker of English.

The children could produce any variation of the above macro-episodes which would have been considered acceptable by the researcher. On the demographic questionnaire, parents were asked what languages, if any, they speak at home. After the task was conducted in *Sesotho*, the researcher asked the child if they would be fine with playing this game with the other researcher.

When the second researcher came into the room, the exact same enactment was performed with the child but this was done in English. In the case of the participants that took part in this study, the other language that they were exposed to by their parents (directly or indirectly) was *Sesotho* and that is the reason that all direct assessments were conducted in this language. The exact same interactions that were performed in *Sesotho* were done in English with the researcher beginning by asking the child about their clothes and then proceeding to the enactment. This was done to see the extent of the child's knowledge of the other language they are exposed to. After the task was completed with each participant in both languages, the next participant was called in until all participants had completed the direct assessment.

Data analysis

To carry out an analysis of qualitative data, the researchers need to immerse themselves into the world of the participants and view the world through their eyes, in their most natural setting (Hooper, 1992). Raw data is collected in the form of taking notes during observational data collection or questions being asked by the researcher (Mthembu, 2000). These notes are then used to understand better and draw conclusions about the participants (Carter, 1990). This data is then categorised to analyse the collected data better.

All observational notes and interactions needed to be transcribed by the researcher to assess each child's vocabulary and the input that they had received. As data for this study was collected in more than one language (*Sesotho* and English), the *Sesotho* data needed to be translated into English first. This was done for both the readers and the researchers to understand. To assess the lexicon of each child accurately, notes from the observational data, interviews and elicitation tasks needed to be looked at multiple times in order to assess the contexts that each word is spoken in and what visual or verbal prompts may have encouraged the participants to produce specific lexical items. Lexical items that were produced were then sorted into their appropriate lexical categories as set out by the literature review (Mthembu, 2000).

All data from the observational notes, questionnaires, interviews and elicitation tasks were coded on Excel for analysis.

Gesture analysis

As previously mentioned, gesture and speech are intrinsically and closely related (McNeill, 1992; Kendon, 2004). Therefore, even the gestures that children produce need to be analysed as these may provide insight into the lexical development of the child. In this study, gestures that were produced by children either with speech (co-speech gestures) or in the place of speech during the interview and elicitation task were assessed. These gestures were coded and transcribed using ELAN which is an annotation tool that was developed by the Max Planck Institute (http://www.lat-mpi.eu/tools/elan/). This annotation tool allows for the multimodal analysis of both speech and gesture. By allowing the user to analyse both speech and gesture, all modalities of the data can be looked at in a concise and uniform way. This also allows for consistency during analysis across all participants.

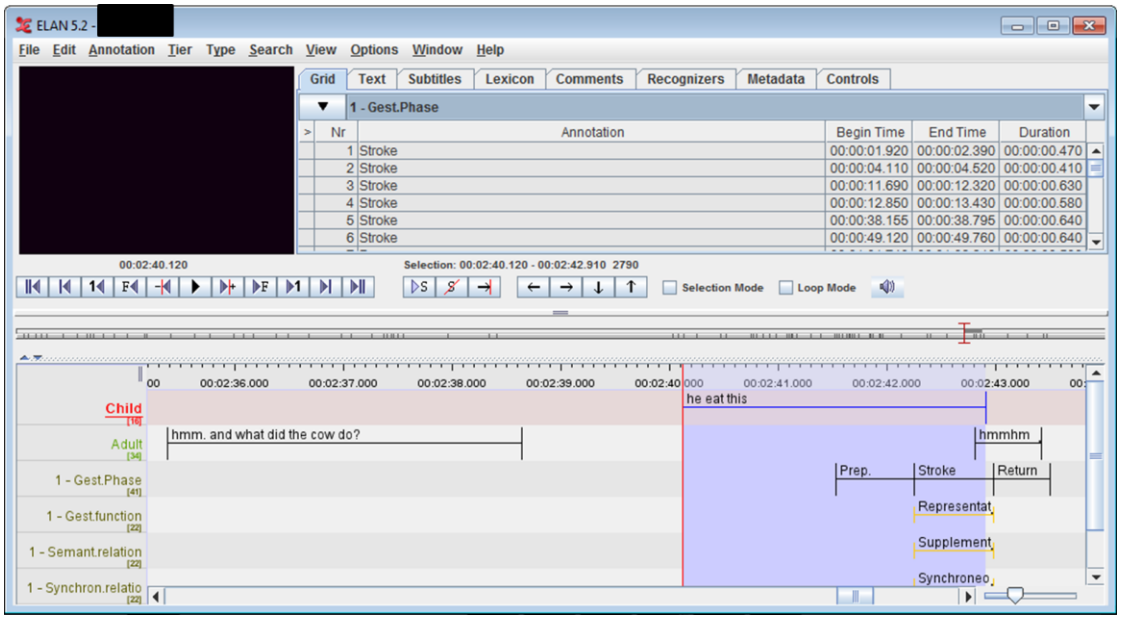

Figure 3.3: Example of the ELAN annotation software

To analyse the gestures that the children produced, the gesture annotations in the ELAN program were used to identify gesture phases, gesture functions, the semantic relationship of the gestures with the speech being produced, the synchronous relationship between the gesture and speech, as well as the gesture form. Each of these gesture annotations is explained in detail below.

Gesture Phase

The Gesture Phase identifies the gesture and the different movements that make up a gesture. The movement (if a movement is easily seen by a viewer), location (if someone is producing a gesture in front of their body) and the configuration (the exact hand movements) that make up the totality of the gesture (Colletta, Kunene, Venouil, Kaufmann & Simon, 2009). The gesture phase is made up of a possible six different values:

1. Stroke: The stroke is the movement that makes up the actual gesture. The actual gesture can be the movement of the hands and arms, head or shoulders.
2. Prep: This is the movement that occurs before the actual gesture. It is the movement from the rest position to the gesture position.
3. Return: This is the movement after the actual gesture from the gesture position back to rest.
4. Chain: This is the movement between two strokes without a return back to rest.

5. Hold: This is when the speaker holds their hands in the same position for a period of time. (Colletta, et al, 2009, pg. 23-24).

Gesture Function

The gesture function attributes a function or purpose to the gesture being produced based on the speech that is occurring at the same time as the gesture. Gesture functions may only be attributed to gesture strokes:

1. Deictic: These are pointing gestures where a speaker will use their hand or head to point at an object that is actually present in the speaker's physical surroundings.
2. Representational: These are gestures that represent an object or a characteristic of an object.
3. Performative: These are gestures which are used as Reponses, questions or requests and can reinforce the speech or be used in place of speech (such as nodding one's head for an affirmative response).
4. Framing: These are gestures that express the emotional or mental state of the speaker such as frowning or smiling during the narrative.
5. Discursive: These gestures contribute to the structure and discourse of the speech that is being produced.
6. Interactive: These are gestures that are done by the speaker to gain a response from the listener.
7. Word-searching: These are gestures produced by the speaker when they are searching for a word (such as tapping their fingers or clicking their fingers) (Colletta, et al, 2009, pg. 25-26).

Semantic relation

The semantic relation of the gesture is the meaning that the gesture carries in relation to the speech that is being produced with the gesture:

1. Reinforces: The information that is in the gesture is identical to that as the speech being produced.
2. Complements: Gesture adds necessary information to the speech as the verbal element is incomplete on its own (such as pointing somewhere and saying 'there').
3. Integrates: Gestures add more information and precision to what is being said verbally.

4. Supplements: The information in the gesture adds new information that is not present in the speech.
5. Contradicts: The gesture is not in line with what is being said verbally (such as nodding when saying 'no').
6. Substitutes: The gesture is produced in place of the verbal response and contains sufficient information so that speech is not necessarily needed (Colletta et al, 2009, pg. 27-28).

Synchroneous relation

This is the relation of the gesture to speech with regards to time:

1. Synchroneous: The gesture stroke takes place at the same time as speech that is being produced by the speaker.
2. Anticipates: The gesture stroke comes before the corresponding speech.
3. Follows: The gesture stroke comes after the corresponding speech (Colletta et al, 2009, pg. 29).

In this study, all aspects of the gesture was coded, but only the gesture strokes were quantified as these are the only phase of the gestures that have a gesture function and a semantic relation.

Reliability and Validity

Although interviews took place at the school, the actual data that was collected was done so by asking strategically developed questions to elicit specific responses from the participants. The elicitation task took place in a controlled environment for the researchers to obtain consistent data that can be controlled for.

To obtain a complete overview of the data and attempt to attain an accurate and complete sample of the participant's lexicon, observational and experimental methods are needed (Ambridge & Rowland, 2013). By combining these two designs and methods, researchers are able to obtain data that they may have missed had they only used one method and design. As an example, by only collecting observational data the researcher may obtain hours and hours of data but not all of it may be useful. By only collecting observational data in one specific context, a complete and whole picture cannot be obtained of the lexicon of participants (Ambridge & Rowland, 2013).

Reliability and validity in a qualitative study is different to a quantitative study in that there is no statistical analysis. Reliability of a qualitative study is assessed against the quality of the results produced (Golafshani, 2003). The validity of this qualitative study was measured against previous studies and statistics from the Census (Stats SA, 2011).

Ethical Considerations

All ethical considerations and permissions that had to be obtained to conduct this study are laid out in this chapter as follows: Information sheets (Appendix A) were distributed at the school with permission of the principal and parents who were interested in being a part of this study received consent forms (Appendix B) as well as a demographic questionnaire (Appendix C) for researchers to get an insight into the child's language exposure in the home environment. Once these documents were received back from parents, the researchers were able to narrow down prospective participants who fitted the exact criteria that were required. The parents of the participants needed to be of middle to upper middle working-class socio-economic status (SES).

The participants that were required to take part in this study are considered a vulnerable population owing to their extremely young age. An ethics clearance certificate (Protocol number: H17/05/03) for this study was obtained from the University of the Witwatersrand, Johannesburg Ethics Board (Appendix D).

Permission from the school was also obtained as data collection took place on school property. Permission to collect data was then obtained from the parents and consent forms (Appendix B) were required from the parents for a child to be a participant in this study.

If the child expressed any discomfort during the assessment or for any reason refused to take part further as a result of fatigue or restlessness, the assessment was stopped immediately and resumed at a later time. The identity and safety of the participants are a priority and if a child chose not to take part in the study or wished to withdraw at any point, those wishes were respected. Pseudonyms replace any identifying features in the transcripts of the recorded data and all audio and mention of any name, address or telephone number in the video is obliterated. Pictures that are used in this dissertation have the participants' face blurred in line with ethical considerations.

Chapter 4: Data Analysis

Introduction

In this chapter, I will be focusing on presenting the findings in relation to the research questions based on the data that was collected. The aim of this study is to assess if language attrition is present in the Black middle-class population of South Africa and, if so, if there is a language shift occurring during early acquisition of 'born free' South African children with regards to lexical development. In summary, the research questions this study seeks to answer are:

1. What is the role of language shift in language attrition of South Africa's Gauteng Black middle class population?
2. What is the lexical development of this South African 'born free' generation during early language acquisition?
    a. What linguistic strategies do children employ in early language development?

To address the research questions of this study, several data sets were collected and analysed. The following chapter presents the findings.

Research question 1: What is the role of language shift in language attrition of South Africa's Gauteng Black middle class population?

To answer the above research question, the researcher looked at the language input that children received from their parents or caregivers as well as the educational input that children received from their teachers at school. The children's language production was also assessed to see what language they are most likely to speak. The selected participating school – which is an English-medium institution - is in the Bedfordview area of Johannesburg, Gauteng. All the participants were in the same class at school. The teachers and teaching assistants are bilingual L1 *Sesotho* and L2 English speakers. However, in the classroom all interactions between the teacher or teaching assistants and the children are mostly in English (in line with the school's medium of instruction), with the exception of a few isolated incidents which will be discussed later in this chapter.

Findings from parental/caregiver input

To answer research question 1, different types of data were collected. A total of seven consent forms were completed by parents or caregivers that fit the research criteria of being bi/multilingual and from the target population of Black middle-class families. Of the seven

consent forms only five parents or caregivers agreed to allow their children to participate in the study and completed the demographic questionnaire.

	Female/ Partner caregiver language	Father/ Partner caregiver	# children in household
Household 1	Sesotho and English	Sesotho and English	3
Household 2	Sesotho and English	Sesotho and English	2
Household 3	Sesotho and English	English	1
Household 4	IsiZulu and English	IsiZulu and English	Unknown
Household 5	IsiZulu and English	IsiZulu and English	Unknown

Table 4.1: Languages spoken in home environment

Table 4.1 above shows which languages are spoken in each household and how many children are in the household including the participants. In some cases, parents did not specify the number of children in the household. Based on the demographic questionnaires, participants were exposed to: 1) English, 2) *Sesotho* and 3) *isiZulu*.

Table 4.2 provides a summary of the languages that the children are exposed to in the home environment. By virtue of parents speaking more than one language in the home, children are exposed to these languages. Their proficiency in each language was later assessed to see if exposure to these languages results in fluency of the stated languages.

	English	Sesotho	isiZulu	Total # Languages
Participant 1	X	X		2
Participant 2	X	X		2
Participant 3	X	X		2
Participant 4	X		X	2
Participant 5	X		X	2

Table 4.2: Child Participant language exposure

The information is based on parental or caregiver demographic questionnaires that the parents had filled out and returned to the researchers. Based on this information, it can be assumed that children, who are exposed to more than one language as stated by the parents/caregivers,

will be able to speak or show understanding of more than one language. All caregivers indicated that their children spent more time at school where English is the main medium of communication. It is worth noting that none of the families allowed for any observation to take place in the home environment. They preferred for the study only to take place at school. However, when the children interacted with their parents at school, it was done so in English.

Educational input

From the observational data collected within the school environment, teachers and teaching assistants communicate mostly in English with all the children. In the crèche environment, children were only exposed to English even though the teacher and the teaching assistants are L1 *Sesotho* speakers and L2 English speakers. As this is an English medium school, it was expected that children were only exposed to English in the classroom. Children were also introduced to new, English lexical items by the teacher which increased their lexicon.

The observational data was not video recorded but notes were made during class time when the entire class was together. A lot of the interactions that took place in this setting were collective interactions, such as when the teacher asked the class a question and the entire class would answer simultaneously.

During class time, the children spoke to the teacher as well as to the teaching assistant. Children also communicated with each other on the playground during break. Researchers collected observational data over the entire day, three times a week, and the researchers collected this data over the course of a month. During this time, the researchers were able to interact with the children and take note of the exchanges that the children had between themselves as well as between them and the teachers. The interactions that children had with the researchers were also noted. All notes from the three researchers were analysed.

During the observation phase of the data collection, it was noted that the teachers would sometimes code-switch between *Sesotho* and English when communicating between themselves. When children were playing on the playground or while the children were eating or carrying out their activity for the day, the teacher and the teaching assistants would communicate with each other in *Sesotho*.

During the course of the observational data collection, written notes were made regarding interactions between the teacher and the children. This allowed the researcher some insight

into the educational input that children received. Researchers were allowed to sit in the class and take notes during the lessons.

The observational data collection took place during November 2017. During this time, the topics of discussion were 'rivers' and 'Christmas'. In the mornings, the teacher would have a discussion with the children about the particular topic and during the activity time of the day the children's activity would be based on the theme or topic of discussion. A particular topic would be discussed by the class for approximately two or three weeks. Different elements would be unpacked with the children. For example, during the first two weeks of observation in the classroom, the topic of discussion was 'rivers' under a broader theme of Water which was taught throughout the year. Each day, different characteristic of the river was taught. On the first day of the data collection, the speed of river water was discussed; on the second day, the river bank and everything that can be found on the river bank (flowers, trees, mud, etc.) was discussed.

In the morning, during the 15-minute discussion time the teacher would talk about various elements and features of a river. In doing so, the teacher would introduce the children to new words. The teacher would then reinforce and reiterate what was taught by asking the children if they remember what was spoken about the previous day. The teacher would also reinforce what was discussed during the activity time of the day by asking children to paint, draw or stick coloured paper on a larger A3 or A4 cardboard (as a project) to form an image of a river. During the demonstration of the activity, the teacher would ask the children questions about their discussion from the morning.

Examples of what the teacher said or asked the children in class about the river theme are:

Example 1:

- "What is a river made of?"
- "A river can move fast."
- "What do we find in a river?"
- "Where does the river end? The river ends at the ocean."
- "What is found next to a river? Flowers, trees and sand. We call this a river bank."

The teacher taught the children certain features of the river, such as the fact that rivers move very quickly. She introduced the children to new lexical items such as 'river bank' and also

explained what this is. The teacher also continuously repeats or asks the class what is found next to a river to make sure that they remember the new term they were introduced to as well as their meaning.

After completing the river topic with the entire class, the teacher moved on to the Christmas topic as it was nearing the end of the year and it was getting close to December holidays and Christmas itself. During this topic, the teacher taught the children many new lexical items. The following example illustrates how the teacher taught new concepts:

Example 2:

- "Do you know who Father Christmas/Santa is?"
- "Father Christmas has reindeers and elves."
- "There is snow when it is Christmas time and snow is very cold."
- "Santa carries a big bag filled with gifts."

As can be seen in the examples above, the teacher introduced the topic and theme of Christmas. All activities that the children performed in class were related to the Christmas theme. They painted Christmas stockings and made Christmas bells out of polystyrene cups. The teacher would show the children flash cards with different Christmas-related objects on them and ask the children what these were. In cases where the children did not know or recognise the objects, the teacher would identify these for the class. In the case of 'reindeers', 'elves' and 'snow' the children did not recognise these objects, therefore the teacher would explain the concept to the class.

During play time and story time, children would ask the teacher what certain objects were if they could not recognise or identify the object. In some cases, teachers would associate objects with another to explain to the child what it was:

Example 3: In order to explain to the children what an elephant's trunk is, the teacher would say, "The trunk is the elephant's nose."

Example 4: During play time, while playing with different toys a child held up a toy vegetable and asked the teacher what it was. The teacher responded by saying, "That is celery. It is a vegetable that you eat."

Example 5: During story time, the teacher was reading a book about animals and there was a dog in its kennel. In order to explain the term 'kennel' to the class, the teacher said: "A dog's house is a kennel."

The teachers would also assess each child's colour recognition, shape recognition and their counting ability during weekly assessments that the teacher administered with each child in the form of a game:

Example 6: "Show me blue."

Example 7: "Show me the red chair."

In the above instances, the children would run and try to identify these objects as quickly as possible thus making it like a game for the child who is carrying out the task as well as his or her class mates who are watching.

Example 8: The teacher would instruct the entire class to count to 10 using their fingers.

In a class of 16 students, children generally spoke in English during the period of observation. However, one instance was noted of a child speaking in *isiZulu* to her friend. This instance occurred during break and the child who spoke in *isiZulu* was one of the children whose parents had given consent to take part in this study (Participant 4):

Example 9: Participant 4: "Uyabo, uyaphusha."

English translation: "You see, you are pushing."

There was an incident where the teacher spoke to Participant 4 in *isiZulu* as the teacher knew that she was able to speak and understand the language:

Example 10: Teacher: "Woza uzoma la phambili."

English translation: "Come and wait here in front."

In another incident, the teacher spoke to a different child in *isiZulu* as well because the teacher knew that the child would understand what was being said.

Example 11: Teacher: "Nizokhuluma kahle."

English translation: "You will speak well."

However, it is important to note that there were very few incidences where the teacher spoke in an indigenous language to the children.

Child language production

Participants were then directly assessed to test their proficiency in the languages that they were expected to speak based on the languages that the parents said they were exposed to. Of the five participants who returned their consent forms and demographic questionnaires, only three participants were present on the day that the direct assessment took place. Participants were absent owing to illness.

Of the participants in Table 4.1 above, participants 1, 2 and 3 took part in the interviews and elicitation task. According to the parents/caregivers, these three participants were exposed to both English and *Sesotho* in their home environment therefore all participants were assessed first in *Sesotho* and then in English. This was done so as to avoid any priming by performing the English assessment first.

In this task, the researcher initially asked simple questions to make the participant at ease. The researcher used colloquial language as would be used in any social interaction that one would expect a child - that speaks that language – to be exposed to. During the *Sesotho* interview, no participant provided any responses to the researcher. For example, with Participant 1 (participant names were replaced with participant numbers):

Example 12: Researcher speaking in *Sesotho*: "Osharp? Mmm [P1] okae sesi? Opila ne, kana ke wena mang?"

English Translation: "Are you good? Mmm [P1] how are you little girl? You are very pretty okay, what is your name again?"

Participant 1: Child does not respond.

Another example with Participant 2:

Example 13: Researcher speaking in *Sesotho*: " [P2] okae, papa?"

English Translation: "[P2] how are you, boy?"

Participant 2: Child does not respond.

The participants did not respond to the questions that were asked by the researcher. The children were unable to produce any *Sesotho* words and only answered (in English) after several prompts from the researcher directly pointing to an object.

Lastly, with Participant 3, none of the *Sesotho* questions were understood or answered. The child repeated what the researcher said, which led the researcher to believe that the child thought it was onomatopoeia as this happened while the child was manipulating the toys that were used during the elicitation task:

Example 14: Researcher speaking in *Sesotho*: "Keng… keng e?"

English Translation: "What…what is this?"

Participant 3: "Keng e?"

English Translation : "What is this?"

Researcher: "Okay and then e keng e?"

English Translation : "Okay and then this what is this?"

Participant 3: "E keng e, can I touch it?"

English Translation : "this what is this? Can I touch it?"

In other instances, participants showed passive bilingualism because when the researcher asked the question in *Sesotho* during the elicitation task, the child responded in English. For example;

Example 15: Researcher : O bone? No go iragalang sesi? Nxoxele no go iragalang, o bone? Keng e? Keng e?

English Translation: Did you see? What happened, little girl? Tell me what happened, what did you see? What is this? What is this?

Participant 1: "A cow."

Example 16: Researcher: "O bone? Nxoxele no go iragalang papa, o bone eng?"

English Translation: Did you see? Tell me what happened, what did you see?

Participant 2: "A cow and a horsie."

Researcher: “Ooooh okay and then?”

Participant 2: “A house.”

Based on the data above, only one of the three participants showed no understanding of Sesotho. The other two showed comprehension but responded in English; they did not produce any Sesotho despite what the parents had stated in the language demographic questionnaire. Instead, all their responses were in English. However, they did show an element of passive bilingualism because, as examples 15 and 16 illustrate, they tried to respond correctly even though it was in English.

Based on the interview questions and the elicitation task, the research question produced an unconfirmed result in terms of bilingualism of these young participants. A trend was shown towards these children being monolingual English speakers with an element of passive bilingualism. This is despite the fact that, according to their parents/caregivers, they are exposed to both English and *Sesotho* in their household. Parents or caregivers had stated that within the household, children were exposed to more than one language and were therefore expected by the researcher to have some extent of production and comprehension of those particular languages. However, even though children did not produce any words in *Sesotho*, it was interesting to find that they still tried to answer certain questions with gesture to the best of their ability.

The gesture responses of the children in the sample show signs of passive bilingualism. This is also effectively done which shows that language and communication is seen as multimodal. The gestures that children produce during their interviews and the elicitation task provide an insight into their language development and a more holistic view of their responses.

	Interview			Elicitation Task		
	Performative	Representational	Deictic	Performative	Representational	Deictic
P1	6	0	0	3	0	0
P2	1	0	0	1	0	2
P3	2	0	0	0	0	3

Table 4.3: Participant gesture production during Sesotho task

As previously mentioned, children had difficulty with the *Sesotho* part of their direct assessment. While they did try to answer as many questions as possible with gesture and speech, it was also noted that they did not answer a large number of questions (more than

50% of questions were not answered). Rather than ignoring the question, they chose not to answer owing to a lack of understanding. It can therefore be seen that by them responding at all, even only with gesture, shows some understanding. Looking at Table 4.3 above, it is clear to see that during the interview stages of the *Sesotho* assessment, children only produced performative gestures. The interview stage only consisted of questions and the children's responses are to the questions. All of their gestures were performative gestures such as nodding their head. All of these gestures were substituted for speech.

Example 17: Researcher in *Sesotho*: "Osharp?"

English translation: "Are you good?"

Participant 1: *nods head*

Example 18: Researcher in *Sesotho*: "So retlo dlala motsameko, akere?"

English translation: "So we are going to play a game, ok?"

Participant 2: *nods head*

These examples show that these children are at a stage of development where they depend on gestures to answer certain questions, especially if they are nervous.

Even though children would answer with gestures in some cases, their gestures were not always correct. Children would answer with a nod of the head, showing that they understood that a question was being asked of them, however the gesture response was not correct or appropriate to the question being asked:

Example 19: Researcher in *Sesotho*: "Mmm, [P1] okae sesi?"

English translation: "Mmm, [P1] how are you, little girl?"

Participant 1: *nods head*

Example 20: Researcher in *Sesotho*: "Kana ke wena mang?"

English translation: "What is your name again?"

Participant 1: {no response}

In this response it can be seen that the gesture did not answer the question. However, the child was aware that a question was being asked. This shows that the child may have recognised question markers in what the researcher had said. In Example 20 it can be seen that the participant did not understand what was being asked and therefore chose not to answer at all.

Deictic gestures, which are pointing gestures, played an important role during the elicitation task. The children would point at objects and name them in English which provided supplementary information with the gesture to the co-occurring speech. They also named all items correctly. Children did not produce a narrative and only began naming objects in English following the gestural prompts of the researcher. The children would only name objects when the researcher pointed at an object and asking in *Sesotho* what the object was. Children therefore took prompts from the gestures of the researcher in order to identify objects. The child knew that they answered questions correctly by the positive response from the researcher which resulted in them continuing to name objects.

Although the children did not produce many answers or gestures during the *Sesotho* task, it can be seen that there is not a significant understanding of the *Sesotho* language but they still produced responses to the interactions with the researcher. This leads to the belief that these children are developing with passive bilingualism.

Research question 2: What is the lexical development of this South African 'born free' generation during early language acquisition?

This research question was answered using the data collected from the observational data, the interview and the elicitation task. The lexical items produced by the children were the focus of this research question. Only the English data collected form the direct assessments (interview and elicitation task) were analysed as the children did not produce any *Sesotho* responses.

Observational data

When collecting observational data, free speech that was produced by the children was noted during class time, class activities, play time and break. This allowed the researcher to note a large number of lexical items that the children produced and learned in the time that the researcher was present in the class. During the observational data collection, the phonological and syntactic aspect of the children's language could not be ignored.

It was found that, at this age (30-40 months) this particular population had difficulties and lags with the harder phonological elements in some words in that they could not accurately produce these sounds. Children showed an acquisition trend in certain sounds such as liquids and sonorants as these sounds seemed to be acquired at a later developmental stage. Children had difficulties with the /r/ sound and often replaced this sound with a /w/ or a /l/ sound. For example:

Example 21a: Target: ‘t/r/uck’ (truck) - produced: ‘t/w/uck’ (twuck)

21b: Target: ‘zeb/r/a’ (zebra) – produced: ‘zeb/w/a’ (zebwa)

21c: Target: ‘g/r/een’ (green) – produced: ‘g/w/een’ (gween)

21d: Target: ‘/r/aining’ (raining) – produced: ‘/w/aining’ (waining)

As can be seen in Example 21a-d above, the liquid trill sound /r/ gets replaced with the approximant /w/ sound. This is seen often in almost all positions of the sound (word initial, word medial and word final) that /r/ gets replaced with /w/. Possible reasoning for this could be that both the /r/ sound and the /w/ sound are sonorants. However, in first language acquisition, children are expected to acquire the /w/ sound earlier at 1.5 years of age and they are only expected to acquire the /r/ sound after three years of age (which is the age group that children were approaching). Children are therefore most likely to replace a harder sound with an easier related sound.

Children also showed a lag with /sh/ [ʃ] sound as in the following example:

Example 22: Target: ‘/ʃ /arks’ (sharks) –produced: ‘/s/arks’ (sarks)

This is a complicated sound as the structure of the / ʃ/ is more complex than the /s/ sound because even though they are both voiceless fricatives, the place of articulation is different: for the /s/ sound it is at the alveolar ridge which is more accessible than the / ʃ/ sound which is articulated at the post alveolar and is therefore more difficult for children. They therefore replace the harder sound with an easier sound that is closely related structurally to the target sound. The /s/ sound is learned at 3 years of age whereas the /ʃ/ sound is learned much later.

Children at this age also had difficulty with irregular past tense words. Although in the English language verbs carry tense and not the noun, this is a feature of lexical development that cannot be ignored. For example, on several occasions, children would say things such as:

Example 23: Target: ‘fell’ –produced: ‘felled/falled’

Target: “he broke it” –produced: “he did break it”

Target: ‘found’ –produced: ‘find’ when talking in past tense

Irregular verbs are acquired later as they require memorisation which implies the development of memory storage capability.

The syntactic skills of children at this age are still developing as well. Children would very often make syntactic errors: the infinitive verb in the word context, verb tense errors and incorrect tense agreement. Examples of syntactic errors are:

Example 24: **a.** Participant 2: “I finish to drink.”

b. Participant 1: “Daddy have a car.”

c. Participant 1: “Morning is wake up.”

In the above example (24c), the child makes an error with tense agreement and the infinitive verb. Once again, these errors are verb related at the syntactic level.

Children produced full sentences when speaking during the observational data collected. The highest frequency of lexical items that children were taught and produced was that of the noun category.

All the lexical items produced during the observation phase of data collection were classified under the categories in Table 4.3. These lexical items were produced during the class setting by participants of this study and, in some cases, words were produced collectively by the entire class as a response to the teacher or saying a nursery rhyme. Although lexical items were grouped into the categories below, this is by no means a complete representation of this particular sample group’s lexicon. The researcher classified the nouns that children produced into distinct categories, in line with literature on early language acquisition (Hart and Risley, 1999).

Noun categories
People
Food
Body parts

Clothing
Animals
Toys and objects
Household objects
Vehicles
Outside
Colours and shapes
Personal and social words

Table 4.4: Categories of Noun Lexical items that children produced in class

The noun category with the highest frequency was that of animals. Children were able to recognise, identify and talk about animals successfully with the highest frequency during class time and play time. Throughout class time, when interacting with the teacher, or during story time when the teacher would read animal books to the class, the children would be able to recognise the majority of the animals that the teacher asked them about. As an example:

Example 25: Teacher: "What animal is this?" (The teacher is reading a book to the class and a picture of a bear is on the front cover.)

Children: "A bear." (Children collectively respond to identify the animal.)

Example 26: Participant 2: "This is a caterpillar. Here it is a butterfly."

While paging through a book before story time, Participant 2 was showing the researcher a picture from his book. At this age, children are unable to read therefore they just look at the pictures in the book and sometimes create a story of their own. In this case, the child was pointing out the animals in the book to the researcher.

During play time, children also enjoyed playing with toy animals that vary from farm animal - such as cows, sheep, horses and pigs - to wild animals such as lions, tigers, sharks and giraffes. When playing with these toys, researchers asked the child what that the specific animal was and the child was able to correctly identify the toy animal that they were playing with.

The noun categories with the second-highest frequency were: household objects, personal and social words. When looking at household objects, children could identify or talk about

household objects that are directly used by them such as the toilet, bed, plate or cup. They were also able to identify household objects that are toys that they can manipulate or play with such as an iron which they played with during play time, or toy brooms that they would play with and pretend that they are sweeping with. Personal and social words were used by the children. Social words involved terms such as "please" and "thank you" which are constantly reinforced by the teacher and teaching assistant. Children also used personal words which involve pronouns. Pronouns were used with high frequency in all contexts such as "I, you, he/she, and me when talking to each other during play time. They used pronouns more frequently than proper names when referring to their classmates.

Interview

There were approximately 16 nouns that were expected from participants that the researcher specifically prompted the children for (see Table 4.4 below). Children were expected to produce these nouns during the interview as the questions that the researcher asked each participant involved items of clothing, age, parents or caregivers who assisted children in their morning routine and the like. It was expected that participants knew all the words for the interview task as these were lexical items that the children were familiar with. In other words, these were words that the children had used in class and with the teachers.

	Prompted nouns
1	dress
2	t-shirt/top/jersey
3	Trouser/pants
4	shoes
5	food
6	breakfast
7	mommy
8	daddy
9	brother
10	sister
11	animals/dinosaur
12	car

13	school
14	teacher
15	today
16	years

Table 4.4: Nouns expected from participants

These were the nouns that the researcher expected the participants to produce (Table 4.4). The table below (Table 4.5) shows the number of prompted nouns that were actually produced by the participants.

	#Prompted Nouns Produced	Prompted Nouns Produced
Participant 1	1	Mommy
Participant 2	4	Dinosaur, mom, dad and today
Participant 3	3	Mom, jersey and teacher

Table 4.5: Actual number of expected nouns produced during interview

Of the approximately 16 noun words that the researchers expected the participants to produce during the interview, it can be seen in Table 4.5 above that Participant 1 produced 1 of the expected noun items, Participant 2 produced four of the expected noun items and Participant 3 produced three of the expected noun items. Children did not answer in full sentences and answered using gestures where applicable, therefore although children did not produce all of the approximate 16 expected nouns, does not mean that their lexical ability is lacking. For example, Participant 3 produced an unexpected noun item:

Example 27: Participant 3: "There's a caterpillar."

The above example was unexpected as during the interview, there was a consistent exchange between the researcher and the participant. During the interview, an image of a caterpillar caught the attention of the participant and out of the conversational context, the participant mentioned the caterpillar. This was therefore not in response to a question.

When children were interviewed in English, all questions were answered correctly in English. As an example:

Example 28: Researcher: "And what colours are on your dress?"

Participant 1: “White and blue.”

Example 29: Researcher: “…and who helped you get dressed to look so pretty this morning?”

Participant 1: “Mommy.”

Example 30: Researcher: “And can you tell me how old you are?”

Participant 1: *holds up 3 fingers*

Researcher: “And what number is that? Can you tell me what number that is? What number is it?”

Participant 1: “Three.”

A similar trend can be seen with Participant 2 when the child was interviewed in English, he answered all the questions. As an example:

Example 31: Researcher: “And what’s that on your top [P2]?”

Participant 2: “Dinosaur.”

Example 32: Researcher: “And who helped you put all those cool clothes on this morning?”

Participant 2: “My mom put it.”

Based on the above examples, it can be seen that the noun lexical inventory of children during the interviews does not vary much from the words they produced in class. Participant 2 used animals, pronouns and people which were the categories that contained the highest frequency of words during the observational data collection.

During the interview it was found that Participant 3 was able to produce noun words that the researcher was expecting. As an example:

Example 33: Researcher: “Who dressed you? You have such cool clothes on, who dressed you this morning?”

Participant 3: “Mom *Kate was take my jersey.”

*not actual name

Example 34: Participant 3: "There's a caterpillar."

Here it can be seen that through the interview, the child produced noun lexical items that were expected such as stating items of clothing and identifying people who had helped the child get dressed in the morning. The child also pointed out objects in the room such as the caterpillar which was not a word that the researcher expected but was rather an insight into the child noun lexical inventory. This was an unprompted word – in other words it was unexpected or not purposefully elicited by the researcher - but contributed the lexical inventory of the child. It was a not a part of the elicitation task and the child mentioned it outside of the narrative of the task and as a side note. It was somewhat out of the context of the elicitation task.

Therefore, from the interview it can be seen that when tested in English all children were able to answer the questions in the interview correctly. Even when children produced gestural answers, they could be prompted by the researcher to produce verbal answers. All answers that the children produced during the English interviews were in English and the children answered all the questions that were asked of them.

Elicitation task

As mentioned in the Chapter 3 (methodology chapter) of this paper, the elicitation task was used to elicit a narrative from the participant. The task was wordless but extremely structured which therefore meant that the narrative that should have been produced would have been extremely structured. As the wordless elicitation task was structured, there were specific lexical items or narrative sentences that the researcher expected the participants to produce.

The researchers anticipated the participants would produce certain lexical items which were the objects that were present in the wordless elicitation task and the actions that these objects carried out as well as the positions of each objects to name a few. The nouns that participants were expected to produce during the elicitation task are seen below in Table 4.6.

	Expected nouns
1	cow
2	grass
3	horse
4	food

5	water
6	food
7	grass
8	flower
9	plants
10	house
11	roof
12	tree
13	ground
14	game
15	sand/stones
16	box
17	paper
18	mouth
19	legs
20	tail

Table 4.6: Expected nouns from children in elicitation task

In the elicitation task, children were expected to produce any of the 20 nouns including 'cow' and 'horse' which were the main characters in the elicitation task. Other objects that were required included terms such as 'food', 'water', 'grass', 'house' and 'flower'.

	#Expected Nouns Produced	Expected Nouns Produced
Participant 1	2	Horsie, cow
Participant 2	5	Horsie, cow, water, house, flower
Participant 3	2	Horse/horsie, cow

Table 4.7: Actual number of expected nouns produced during Elicitation task

From the nouns that were expected from the participants, the two that were produced most consistently from all participants were 'cow' and 'horse'. In some cases, children would call the horse a 'horsie'. This was still counted by researchers as this is a variation of the correct word that was expected to be produced. Once again, as with the observation data, it is seen that animals have the highest frequency within the lexical inventory of young children. Participant 2 was able to mention more expected items than the other participants after he was prompted by the researcher. Participant 3 produced more noun lexical items, however,

only half of the lexical items that he produced were expected nouns. Of the four nouns that participant 3 produced, two were unexpected nouns. However, the child still produced these lexical items within the elicitation task. As an example:

Example 35: Researcher: "What was it eating?"

Participant 3: "It's eating meat."

Within the elicitation task, the child was able to see, based on the prompt from the researcher, that the cow was eating. The prompted question and expected response was the referent cow was eating grass; however, the child chose to give a different lexical item that is not incorrect as it is a part of the food category.

Example 36: Participant 3: "I got green shoes."

Researcher: "Who's got green shoes?"

Participant 3: "Me. It's green and black."

The child began taking about his shoes while still answering the prompts from the researcher about the actual elicitation task. However, the colours that were present in the elicitation task were the colours that the child began speaking about. The grass on the elicitation task box was green thus providing a colour prompt to the child.

By the children producing unprompted and unexpected noun items that were not directly a part of the elicitation task (animals or items present on the cardboard box), one can see that the children's lexical abilities go far beyond that of what the researchers expected.

Research question 2a: What linguistic strategies do children employ in early language development?

Children produced a substantially higher number of responses during the English interview and elicitation task. This section focuses on the English interview and elicitation task.

As expected in early language acquisition, the children produced co-speech gestures with their speech when answering questions during the interview and responding to the elicitation task. When children played with or manipulated toys, these movements were not counted as gestures because they did not have referential content linked to speech.

During the personal narrative and elicitation task that was conducted in English, the researcher asked the children questions to elicit a verbal response from the children. The

children answered all of these questions and left no questions unanswered during the English interview and elicitation task.

Children responded with one- or two-word responses or with a point of the finger or a nod of the head. In many cases, the children responded only with gesture, either by nodding their head or pointing with a finger. Table 4.8 presents the number of referential gestures that children produced during the two tasks. Each gesture stroke was counted as an individual gesture, therefore more than one gesture might occur during a single interaction between the child and researcher:

	Interview				Elicitation task			
	performative	representational	deictic	total	performative	representational	deictic	total
P1	3	2	1	6	4	0	0	4
P2	6	0	2	8	3	5	3	11
P3	5	4	2	11	4	6	3	13

Table 4.8: Gestures produced by children during Interview and Elicitation tasks

During the interview task, children were directly asked questions about themselves, their attire and their trip to school that morning. The interview consisted only of questions. The aim of the interview was to gain a personal narrative from participants but questions were asked in a simplistic way in that one-word answers were sufficient enough to answer the questions so as to accommodate the young age of participants. Questions were therefore answered verbally, gesturally or using both speech and gestures. However, overall the children opted to respond to questions using gestures.

The following examples (37 – 39) illustrate how children used both speech and gesture:

Example 37: Researcher: “Can you tell me what kind of dress you have on?”

Participant 1: *nods head* (the gesture function is a performative gesture, the semantic relation of the gesture in relation to speech is a substitution)

Researcher: “What dress?”

Participant 1: “This one *pulls on dress*” (representational gesture, with a supplementing semantic function)

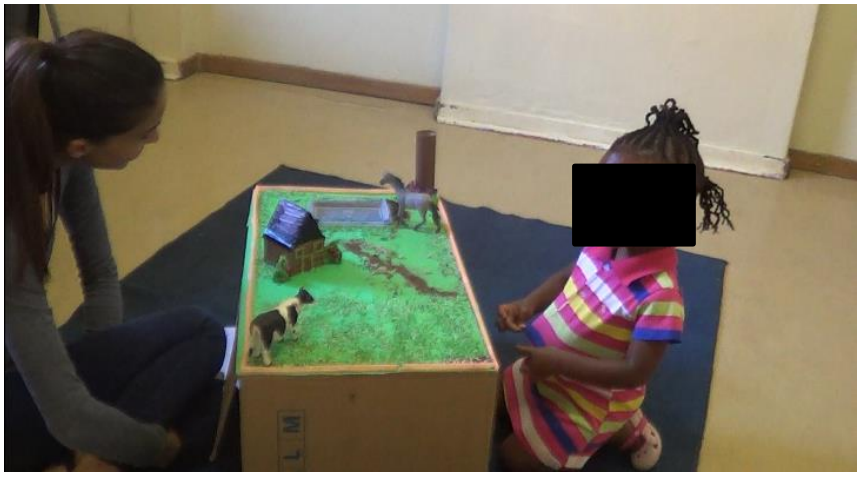

Figure 4.1: Image of Example 37

In this interaction, it can be seen that the child starts off by responding non-verbally only and when re-prompted, the child responded with speech as well as co-speech gesture (see Figure 4.1). The child first uses a performative gesture that substitutes for speech by nodding her head. The child produces an affirmative response in the place of speech and therefore uses gesture in place of speech. After being re-prompted, the child responds with speech and a co-speech gesture. The child responds by saying "this one" which indicates exactly which dress she is wearing while also pulling on the dress with her thumbs and middle finger. This is therefore a representational gesture as the child is not explicitly naming the object that she is bringing attention to. This example highlights the difference between deictic gestures which names the object that is being pointed at in the physical environment, and representational gestures. She also added a supplementary semantic function as the pointing gesture adds information to and identifies the object that is not explicitly named.

Example 38: Researcher: "Was it yummy? Did you enjoy it?" [talking about what participant had for breakfast]

Participant 2: *nods head* (Performative gesture, substituting gesture function)

Researcher: "And what's that on your top [P2]?"

Participant 2: “Dinosaur.”

In this interaction, the child begins responding with gestures only, by nodding his head and then begins responding verbally when gestures can no longer answer the question being asked by the researcher. The nodding of the head is a performative gesture and it performs a substituting gesture. This is because the gesture fulfils and replaces the linguistic aspect of the answer and the gesture provides sufficient information to answer the question without a verbal response.

Example 39: Researcher: “Hi [P3]. How are you? Are you ok?”

Participant 3: *nods head* (performative gesture, substituting gesture function)

Researcher: “What are you wearing today? Do you know what you’re wearing today?”

Participant 3: *nods head* (performative gesture, substituting gesture function)

Researcher: “Who dressed you? You have such cool clothes on, who dressed you this morning?”

Participant 3: “Mom *Kate was take my jersey.”

These examples show that children are able to identify what questions can be answered with gesture only and what questions can be answered with speech. Simple ‘yes’ or ‘no’ questions can be answered with a shake or a nod of the head, however, for some questions that were asked, a verbal response was required from the children. Children were able to determine correctly which questions could be answered with gesture only and which questions needed a verbal response. Simpler questions can be answered with gesture only but more complex questions - which may even require an explanation (as seen in Example 39 above) - were answered verbally by children. In these cases, gesture is seen as a strategy that is employed by children when answering specific questions. The children’s language and cognitive

abilities have also developed far enough for them to differentiate correctly when gesture is sufficient enough for a response and when added, verbal information is required. Children are therefore able to employ appropriate responses when needed.

As seen in Table 4.8 above, the majority of the gestures during the interview, that have been produced by the children, were performative. These involved the nodding or the shaking of the head. However, it is not easy, nor simple, to depict such gestures. Therefore, the following examples are the representational and deictic gestures that the children produced. Each example will have the gesture, the co-speech that went with the gesture, the gesture function and the semantic relation. Deictic gestures and representational gestures will be shown pictorially.

Example 40: Researcher: "And what colours are on your dress?"

Participant 1: "White and blue." *points thumb at white stripe on dress* (deictic gesture function, contradictory semantic relation)

Figure 4.2: Image of Example 40

In Example 40, the participant uses a deictic gesture to point out the colours on her dress. The participant uses her right thumb to point at the colours while holding the dress in her hands. This gesture performs a deictic function as she is naming the colours white and blue while she is pointing to these. However, the semantic function of the gesture contradicts what is being said by the participant as the participant points at the white stripe on her dress and the exact co-speech that occurs with that gesture is "and blue". The gesture

therefore contradicts the speech as she points to the white colour when she mentions the blue colour. This, however, is not seen as an error as the participant's thumb could not reach the correct colour with her thumb as she was holding the dress in her hands. This contradictory semantic function is purely because the participant could not reach the correct colour and not because she is unaware of colours.

Example 42: Researcher: "And can you tell me how old you are?"

Participant 1: *holds up three fingers* (representational gesture that adds a supplementing semantic relation)

Researcher: "And what number is that? Can you tell me what number that is?"

Participant 1: *nods head*

Researcher: "What number is it?"

Participant 1: "Three."

Figure 4.3: image for Example 41

In Example 41, it can be seen that the child produces a representational gesture and the child does so without producing any co-speech. The gesture therefore supplements the speech as the gesture provides the information that is missing in the speech. The representational gesture that the child produces is to show the number 3. This therefore provides information that has been omitted verbally. However, upon being prompted further the child then verbally states that she is three years old and does so without any accompanying gesture.

Example 42: Researcher: “And what colour is your t-shirt? What colour is your dinosaur?”

Participant 2: *points with right hand to dinosaur on t-shirt* “Green.” (Deictic gesture that anticipates and then synchronises with speech.)

Figure 4.4: Image of Example 42

In Example 42, the child is asked what the colour is of the dinosaur on his t-shirt. The child begins by gesturing to the dinosaur before answering verbally. He therefore points at the dinosaur and makes a deictic gesture function to the dinosaur and serves a reinforcing semantic relation as he is pointing out the object that the researcher is explicitly asking about that is present in their surroundings. However, this gesture anticipates the participant’s speech as the deictic gesture occurs before the speech. The child then moves his hand slightly around the dinosaur on his t-shirt and then continues to point at the dinosaur on his t-shirt while responding that the dinosaur is green in colour. The child is then still producing a deictic gesture which serves a reinforcing semantic relation as his co-speech is the colour that he is pointing to.

Example 43: Participant 3: “There’s a caterpillar.” (pointing first with right hand and then bringing the left hand up and pointing with both hands) *deictic gesture, with reinforcing semantic relations*

Researcher: “Ja, that’s a caterpillar.”

Figure 4.5: Image for Example 43

Figure 4.6: Image for Example 43

As can be seen in Example 43 above, the child produces a deictic gesture that reinforces the child’s speech. The child begins pointing with his left hand when he starts speaking. When he concludes his sentence, his left hand has joined the pointing gesture. Both pointing gestures are therefore synchronous with speech. The gesture reinforces the speech as the gestural and verbal information is exactly the same. The child is pointing out and talking about an object that is present in their surroundings.

Example 44: Participant 3: “It jumps.”

Researcher: “It jumps?”

Participant 3: “Yes, like this” *lifts up either arm to make jumping action with arms* (Representational gesture, supplementing semantic relation)

Participant 3: “It jumps like this” *does jumping action with entire body* (Representational gesture, supplementing semantic relation)

Figure 4.7: Image for Example 44 (jumping action with hands)

Figure 4.8: Image for Example 44 (doing jumping action with entire body)

In both instances the child produces a representational gesture that supplements the speech that the child is producing. In both instances, the gesture follows the speech as the child states that it is jumping and the proceeds to show how the jumping is taking place. The gesture is therefore adding more information that is not encoded in the speech. In the first

instance, the child may have thought that the gesture did not provide sufficient information. The child then goes on to repeat what he had already said and produce a more precise gesture to depict the jumping action as he visualises it.

Participants' gesture answers fell into the categories as seen in the Table 4.8 above. During the interview task, children produced mainly performative gestures which occurred in the form of nodding when answering the interview questions. These gestures or nodding gestures performed a supplementary function in that it added information to the child's lack of speech as they would nod in response to questions and not provide a verbal response. Overall, children answered mostly only with gestures or speech and when children did use co-speech gesture, it was as a supplementary function to point at the object that was being named or spoken about. Children used their fingers to help them count as this is what they were taught to do in class by their teacher. The majority of the interview responses were gestures as children relied heavily on this form of communication. It was noted that all the participants started off answering questions only with gestures, especially for questions which needed a yes or no answer. As the researcher prompted for answers, the children began answering verbally.

The elicitation task was meant to elicit a narrative. However, in this study children did not produce a full narrative as they were of a young age. As they did not produce a full narrative, the researchers eventually began pointing out objects that were used in the elicitation task and asked them to name the objects.

During the elicitation task, there were objects present that the children could touch and manipulate. There were many items for them to be interactive with. Unlike with the interview, there was a physical and visual factor that was added into the elicitation task which was not only verbal and did not just consist of questions. They produced numerous deictic gestures where they pointed to the objects and toys that were around them and named the objects as they were pointing to them. Also, participants at this age are unable to produce full narratives which resulted in a lack of co-speech gestures that would occur during a narrative. The majority of the gestures that were produced were deictic or performative gestures in the form of nodding.

Example 45: Researcher: "And what else happened in the game?"

Participant 2: “There’s a water.” *points to the water on the elicitation game* (Deictic gesture, reinforcing semantic relation)

Figure 4.9: Image for Example 45

In this example, the child explicitly names the water he points at. His gesture and speech are synchroneous. This is therefore a deictic gesture that adds a reinforcing semantic relation to the speech that was produced. All of the gestures produced by Participant 2 during the elicitation task were performative (nodding of the heard) or pointing gestures which fell either under the deictic gesture function (where the child would explicitly name the object he is referring to) or the representational gesture function (where the child would point at an object and not explicitly name it or point at an object and say ‘this’ or ‘that’).

Example 46: Researcher: “Is that what happened in the game?”

Participant 3: “Yes. A horse must eat meat there.” *points at grass on the enactment board* (Deictic gesture adding a complementing semantic relation)

Researcher: “Ok, show me how the horsie eats meat.”

Participant 3: *makes eating sounds and performs the action of how the horse should eat*

Figure 4.10: Image for Example 46

In Example 46, the participant produces a representational gesture that was synchroneous with the onomatopoeia - that the child produced - of a horse eating. The child's representational gesture adds an integrating semantic relation as the child shows and depicts exactly how the child is eating.

During the elicitation task, children also produced a high number of representational gestures as can be seen by Participants 2 and 3 in the table above because the children would physically act out what they saw or they would point at objects without explicitly naming them. This added a complementing semantic relation to their deictic gesture.

At this stage of development, children are still quite reliant on gesture and theory states that children combine gesture and speech during early development to create a more holistic answer and to communicate more effectively during the early stages of language acquisition (Volterra, Caselli, Caprici & Pizzuto, 2005). Even though the main focus of this particular study is not on gesture, all gestures that the children produced cannot be ignored. It can therefore be seen that children employed multiple linguistics strategies in their interactions, thus answering research question two (what linguistic strategies do children employ in early language development). Children employ both gestures and speech and they use a modality which best suits the question being asked. Performative gestures were used to substitute speech in most cases and deictic gestures were used to supplement speech.

Summary

In summary, this chapter presents the findings of the data in line with the research questions. For the first research question which looked at language attrition in this particular population,

the researchers analysed the responses from the parental survey/questionnaire which shows that children come from bilingual/multilingual households. However, when answering the subsequent research questions it becomes clear that children were not producing any words in *Sesotho* or *isiZulu* save for a few exceptions. The children show a very balanced and typical trajectory of lexical development in line with monolingual English-speaking children. Their English language development is age appropriate (Waxman & Kosowski, 1990). The phonological lags and syntactic errors they commit are quite typical in all English-speaking children. At this stage in their linguistic development, children still depend highly on gestures. Children resort to answering questions with gestures and only use speech when the question cannot be answered gesturally.

Chapter 5: Discussion and Conclusion

This study set out to achieve numerous goals and answer research questions by collecting and analysing specific data. The aim of this study is to look at the lexical development of young, 'born free', South African children living in Gauteng. This study aimed to assess if there is a current language shift taking place in the context of the Black, upper middle-class, South African Gauteng population at the early stages of development. In addition, the researcher intended to assess what is the lexical development of young children from this specific demographic population and if their development, which has not been assessed before, follows the trends of universal acquisition and development. Lastly, this investigation also sought to see what linguistic strategies young children employ in early language development and how they use these strategies. While language attrition has not been looked at during the acquisition stage or early stages of language development, it cannot be known which universal theories of language development this particular population follows.

The aim of this study was to look at language attrition, lexical development and linguistic strategies that are employed by young children in this specific population group. There are three research questions: 1) Is there language attrition occurring in South Africa's Gauteng Black middle class population? 2) What is the lexical development of this 'born free' child population? 2a) What linguistic strategies do children employ in early language development? Overall, the research questions were answered using different methodologies such as, demographic questionnaires, observational data and a direct assessment of children's lexicon in the form of an interview and elicitation task. Of these methods, all produced results that allowed for the research questions to be answered. It's important to note that attrition is the loss of a language caused by lack of use. Children who do not acquire a language completely have incomplete acquisition.

In this chapter, the research questions are answered using the data that was collected by the researcher. The overall findings of this study show that, firstly, there is a noticeable language shift that is taking place in the Black, South African Gauteng, middle-class population from the early stages of language acquisition. It is at these crucial years that children should be acquiring all the languages that they are exposed to. However, these children have no linguistic knowledge of any language other than English. One can deduce that exposure to other languages is kept to a minimum as parents opt for their children to be primarily exposed

to English. Secondly, with regards to lexical development, it can be seen that this particular population group, which is a growing group in the South African context given the current language shift that is taking place, follows the same stages of language development that is universally accepted for monolingual children. Lastly, it was seen that children use gesture as a means of answering questions and they are able to use speech and gesture in the appropriate contexts to answer questions effectively. These strategies were successfully executed by the participants at this young age.

Overview of findings

To assess if there is language attrition or a language shift taking place, the researcher needed to look at the linguistic input that children receive and the language production of the child. This provides and insight into the linguistic knowledge of the child. The input that they receive shows the researcher what languages the children are exposed to and what language the investigators could expect them to speak, communicate in or understand, even if the children only had a passive knowledge of the language or a basic knowledge of it. The researcher can therefore assess their proficiency in the languages that they are exposed to.

Based on the questionnaires, it was found that, in the home environment, most of the participants in this study were exposed to more than one language based on the languages that their parents speak. This allowed the researchers to believe that exposure to the parents' L1 would result in the children being bilingual, at the least, as they are exposed to these languages. By children being exposed to more than one language (in the case of this study, the children were exposed to two languages) especially at the critical period of language acquisition and second language acquisition, the researchers expected that these children would be bilingual speakers to some extent or even passive bilinguals. These expectations arose from the demographic questionnaires which were all the information that could be collected on parental input. This was therefore the only insight that the researchers had into parental input. Based solely off the questionnaires, it was established that children should have some knowledge of English and their parents' first language (for some children it was *isiZulu* and for others, it was *Sesotho*).

Observational data was then collected in the educational context during class times and break to assess the educational input that children received. This could be directly assessed during the observational data collection, during social interactions in the class room and informal interactions between the teacher and the children. All interactions in the classroom were

found to be in English. This therefore allowed the researchers to believe that children should be fluent speakers of English as all educational input that they received was in English. As this is an English medium school, it was not surprising that all interactions took place in English. However, during the observational data collection at the school, there was one observed incident where one child was heard speaking *isiZulu*. It was therefore concluded that this participant was a bilingual speaker to some extent. Other participants and children in the class spoke only in English in the school context.

Children needed to be assessed directly after noting the input they received. This allowed the researchers to assess the language production of the children and it allowed the main researcher to assess what languages the children could speak and what was the children's proficiency in those languages. It was expected that children should be able to speak English as this was the input that the researchers observed during class time (educational input) and was one of the languages that parents stated in the demographic questionnaires that their children could speak in addition to *isiZulu*/*Sesotho*. Upon direct assessment, it was found that none of the participants were able to speak any other language aside from English. Even though the parents of these participants were bilingual speaker, according to the questionnaires, the children themselves showed no inclination to being bilingual aside from some signs of passive bilingualism in two participants. This showed that of all three participants who took part in this study were expected to be bilingual speakers however all were monolingual English speakers or passive bilinguals, except for one child who was observed speaking *isiZulu* during the observational data collection.

By these participants growing up as monolingual English speakers or passive bilinguals as seen by their speech and gestures, it can be seen that South Africa has already been seeing a language shift, thus giving rise to a new generation of individuals who have bilingual parents but who are developing as monolingual English speaker or speakers who know very little about their mother tongue. Therefore it can be seen that indigenous African languages may be dying at a rapid rate. Keeping this in mind, it is unknown how the language of this new population will develop. A sample of a population was investigated who was expected to be bilingual but are growing up as monolingual and passive bilingual speakers. This study aimed to assess the lexical development of this population to assess if these children follow universal theories of monolingual English development considering that they are raised by bilingual speakers.

From the children's speech during the observational data and the two direct assessments that were administered to participants, insight was provided on their lexical development. The direct assessment was more structured and therefore slightly more limited as only a small part of the child's lexical ability can be assessed from an elicitation task and interview. However, during the observational data collection the researcher had more insight into the lexical development of the children. Phonological and syntactical features of their language could be assessed. This study found that participants of this study who are between 30 and 40 months of age and are born of bilingual, Black, middle-class parents are developing as monolingual English speakers, they have a phonological lag with harder sounds and tend to replace harder sounds that they have not fully acquired as yet with easier sounds which are consistent with monolingual English development. The children also had difficulty with irregular verbs and those with well-developed nouns could name objects in their immediate environment. The child participants could thus follow expected universalities of monolingual English development. Their delays with verb acquisition in comparison to noun acquisition showed that the noun is established before the verb.

Lastly, the findings of this study showed us that children employ both verbal and gestural strategies during early language development. It has been found that gestures play an important role in lexical development (Iverson and Goldin-Meadow, 2005). Considering the young age of the participants of this study, it was found that children relied heavily on gestural responses especially upon initial interaction with the researchers. Children employed gestures as a means of answering questions (specifically nodding or shaking their head for yes/no questions) and pointing at objects that they were naming. At this young age of development it is expected for children to use gestures (Colletta et al, 2015). It was interesting to note, however, that children answered only the appropriate questions with gestures. Children would not answer questions which needed verbal answers with gestures. They were therefore able to differentiate and appropriately answer questions using both words and gestures. At this age, children are also highly reliant on gesture. Literature states that children are more likely to produce gesture-and-word combinations before they produce two-word combinations. It can therefore be seen that children are dependent on gesture for a fuller picture that adds information to their verbal aspect such as with pointing and naming an object (Colletta et al, 2015).

Relationship to previous research

The major themes that emerged in this study was that language attrition is taking place among Black, middle-class South Africans, and that there is a current language shift which is taking place that is resulting in monolingual development which can even be seen in young children, as their parents are primarily focused on the child's English acquisition. Unfortunately conclusions cannot be drawn on the language input that the child receives at home, but based on the results of this study and the lexical abilities of the children in Sesotho, it seems to be minimal. These findings are broadly in line with previous findings in studies conducted by Kamwangamalu (2003), De Klerk (1999) and Msila (2014). Language attrition is also seen as a precursor to a language shift (Ecke, 2004). However, many previous studies have looked at different socio-economic groups to the one examined in this study (Dyers, 2008), or at language attrition in adults whose L2 is more predominant than the L1. The study under discussion looks at attrition occurring from the acquisition stage thus proving that a language shift has already taken place as children do not even acquire the indigenous African languages spoken by their parents.

Child-directed speech is vitally important when a child is acquiring speech and the language that is spoken around children, but most importantly to children, is the language they are most likely to acquire. In this study it is seen that in one of the environments the children spend majority of their time, which is school, all child-directed speech is in English. Considering that the findings of this study showed that all children except one were monolingual English speakers or passive bilinguals, the language input in the home environment stands to question. Parents are seen to make linguistic decisions for their children as they are the ones who choose to send them to English-medium schools and, if they so choose, they may only speak in English to their children. Kamwangamalu (2003) stated that, because of the prestige that is associated with English economically and internationally, a conscious effort is made by parents to speak to their children only in English. Therefore children will acquire the language that they are exposed to. (Gentner & Boroditsky, 2001)

Looking at the lexical development in relation to research question 2, the findings in this study were in harmony with previous studies as the researcher found that children have phonological lags with regards to specific sounds and they have difficulties with irregular verbs. Looking firstly at the phonological development, it is seen that some sounds are more difficult to acquire than others (Gleason & Ratner, 2005). It is an accepted universal theory

that while some phonological aspects of a language are acquired during infancy, other sounds are harder to produce and are only acquired when a child has already begun primary school. In this particular study it was found that children had difficulties with the liquid trill sound /r/. Children could not produce this sound as at the age of 30 - 40 months, the liquid trill /r/ sound has not been acquired yet. It was found that children would then replace the /r/ sound with an easier sound, the /w/ sound. Both these are sonorants therefore the child has the ability to replace one sound with an easier and already acquired sound. The liquid sound is replaced with a glide sound which is easier and acquired much earlier (/w/ sounds are acquired at approximately 1.5 years of age and /r/ sounds are acquired at three years of age). Children also had difficulties with the / ʃ / sound and would replace it with the easier /s/ sound. Both sounds are fricatives, however, children replaced a harder sound with an easier sound that is acquired earlier. These participants therefore follow developmental trends of English monolingual speakers with regard to phonological development (Gleason & Ratner, 2005).

Looking at irregular verb forms, it was found that children had difficulties acquiring irregular verbs which are an expected developmental trend among monolingual English speakers. The past tense of irregular verbs are difficult as children tend to overgeneralise the past regular verb inflections on to irregular verbs (Kuczaj II, 1977). It is found that the morpheme '-ed' in English - which is a past-tense marker - is usually transferred onto irregular verbs. As can be seen in this particular study, as an example, participants said words such as 'falled'. However, it is universally known that irregular verbs are extremely difficult not only for children to acquire but also for researchers to study because there are so many variations (Bybee & Slobin, 1982). This therefore increases learning difficulties and the overgeneralisations of the '-ed' past tense morpheme even in the incorrect contexts. Children also had difficulties with words such as 'find' and 'break', which are yet more variations of irregular verbs.

When assessing the lexical development of the participants, it was found that their lexical knowledge was extremely extensive especially with regards to nouns. It is universal theory that nouns are acquired before verbs (Gentner, 1978; Macnamara, 1972; Nelson, 1973). This is true as it was seen that children could name numerous noun items in the environment surrounding them and, as seen above, children have not yet acquired irregular verb forms, thus showing that nouns are acquired before verbs. The development of these children therefore follows expected trends that have been seen in previous studies and can be

considered monolingual development in both verbal and non-verbal communication (Carroll, 2008; Iverson & Goldin-Meadow, 2005; De Houwer, 2007 and Scheele et al., 2010). This shows that children are at the stage of development that still requires gesture.

Limitations and problems arising during research

This study used a pilot method as a means to collect the data that was needed to answer the research questions. However, there were limitations to this study. The first was that this study had very few participants (3 participants in a class size of 15 children). It is therefore extremely difficult to make generalisations about language development. The findings from this study cannot be used to generalise to the entire Black middle-class population of South Africa. A problem that arose during this study was that illness and absenteeism could occur at any point throughout the data collection. Given the already small sample group, some participants were unable to take part in the direct assessment as they were absent from school on the days that the direct assessment took place. This resulted in having even fewer participants than originally planned.

In addition, of the five participants only three took part in the direct assessment as the other two were not at school on the day that the direct assessment took place. Researchers cannot control for individual variation and absenteeism and, therefore, having more participants will allow for more data to be drawn. The findings of this study cannot be taken as evidence for lack of bilingualism as this is not a complete sample of these children's lexicon. For the complete lexicon of a child to be assessed, the child would need to be observed continuously and for a long period of time. Only a fraction of each child's linguistic ability was thus investigated. Also, bilingualism cannot be assessed only on the quantity or number of words that an individual produces in a particular language. In this study, it cannot be concluded that the participants are not bilingual as they produced zero words in a language other than English. This study can therefore not be taken as evidence for lack of bilingualism but rather that, in this specific context, children showed monolingual development and no signs of speaking any other language but English. It cannot be said that children are not acquiring other languages.

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Upon assessment of the data collected by the demographic questionnaires, it was seen that these documents did not provide enough insight into the child's home environment with regards to language. The questionnaire was very limiting in that it did not allow parents to provide insight on the language exposure that children received from other adults and family members with whom the children interact. Questionnaires needed to allow parents to provide researchers with detailed information on the linguistic exposure and input that children receive from all family members. This cannot be limited to parents and siblings. It needs to be extended to other family members who the children may interact with outside of their household.

The elicitation task that was used to obtain a structured narrative from the participants was adequate for the elicitation of speech from the children as they saw this task as a game or an imitation task. They did not entirely understand what was expected of them and began playing a 'game' with the researcher rather than giving a narrative of the events that they had seen happen. Children only produced lexical items, pointed at objects and named them when the researcher promoted them to do so. Also, narrative development occurs between the ages of three and four years old (Stadler & Ward, 2005). These participants may be considered too young to produce a full narrative as certain cognitive requirements to produce such may have not been met yet (Paul et al, 1996).

This opens the door to future studies as language development from child directed speech in both the home environment and educational environment can be assessed in this emerging population of 'born-free' monolingual, Black, South African children.

Recommendations

A recommendation for future studies is for an investigation to take place with a longer observational period. While the longitudinal observation data was collected over a month, a more extensive period could result in further data and allow the researchers to see additional development of the children's lexicon. Another avenue for further research is to examine the home input that children receive. For researchers to assess the lexicon of children in a more holistic way, children need to be observed in their home environment. This will allow researchers to assess the input directly that children receive from their parents or caregivers

and it will allow a greater insight into the lexicon of the child. This will provide more insight into the language exposure that children receive not only from their parents but from members of their extended family. Researchers will then be able to see if children are being exposed to more than one language, if parents and family members are opting for only English child directed speech, if children are passive bilinguals, or if children are bilingual and speak a different language in their intimate and home contexts.

Contributions to research

This research agrees with previous studies and confirms that there is a growing population of South African children who have bilingual parents and are growing up as monolingual English speakers. These children are following all the universalities of monolingual development. The study shows that there is language attrition taking place amongst children who are only exposed to English at day care and, to a large extent, a language shift to acquiring and using spoken English only while retaining comprehension of Sesotho to a different degree. This is in line with South African statistics that show there is a decline of indigenous African languages that are being used. Children are leaning towards English development, and this particular sample proves to agree with these statistics.

This work makes a contribution to research on bilingual acquisition and development in the South African context by showing the importance of educational input in early childhood development (ECD). It shows that educational input, even during the acquisition stages, is vital to the language development of young children. In this particular study, the educational input that the children received constituted the building blocks of their entire lexicon. This therefore opens the doors to further studies with specific regard to educational input and the role that it plays in ECD.

Conclusion

This study aimed to assess if language attrition is present in the Black middle-class population of South Africa and if language attrition can be seen at the early stages of language development. This study also aimed to assess the lexicon of this particular population - known as ‘born-free’ South Africans - and to assess the strategies employed by children during this current stage of language development. The data that was collected successfully answered the research questions set out by this study and met the aims initially set out. It was found that language attrition is a reality that South Africans are facing and the country is in the middle of a language shift as at the acquisition and early stages of language

development, children are showing lexical developmental trends that are the same as that of monolingual English speakers. The particular population that took part in this study is a population that has never been assessed before. The reason is that this particular generation of Black middle class South African children that are growing up as monolingual English speakers even though they have bilingual parents whose second language is English.

Overall, it is required that more studies be conducted to track the conceptual and analytical skills children develop in multilingual and/or a monolingual society which is showing language attrition. This study forms a good foundation for future studies on lexical development of this particular population group within the South African context.

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Appendix A: Information sheet

PARTICIPANT INFORMATION SHEET

Project title: Linguistic analysis of early language acquisition: a case study of the Black Middle-Class South African, 'born-free' generation in Gauteng

Dear Parent/Guardian

1. **What is the purpose of the study?**
   My name is Theresa Bhowan, under the academic supervision of Dr Ramona Kunene-Nicolas, from the Department of Linguistics at the University of the Witwatersrand. I am conducting research on how children, who are brought up in a bilingual household, acquire language and how their language develops.

   The main aims of the research are:
   a) To test the level of proficiency with specific regard on comprehension and production in both English and the other languages that they are exposed to.
   b) What kind of input does the child receive in this particular context (in the schooling context).
   c) To look at the lexical development of young children.

2. **Who will participate?**
   Four children between the ages of 30-40 months with parents are bilingual speakers. These families will be from various suburbs in the Gauteng province.

3. **Procedure(s):**
   Participation in this study is completely voluntary. If you choose to participate in this study, we would first ask you as a parent/primary caregiver to do the following;
   - Sign the consent form for your own participation in the study
   - During an informal conversation with the researcher, answer questions relating to your child's language background and daily activities.
   - Sign a form whereby you give permission for your child to participate in this study.

   Once all the documentation has been completed, observational data will be collected during class time at the school and then a narrative elicitation task will be administered on the school premises whereby the participant will be video recorded while they provide a narrative on a wordless enactment that they have been shown.
4. **What are the possible benefits of taking part in the study?**

Whilst there may be no personal benefits to your participation in the study, the data gathered can contribute towards a better understanding of how children in South Africa acquire and develop their language skills.

5. **What are potential risks and/or discomforts?**
   Participation in the study does not hold any risk for the participants and will not cause them any discomfort.

6. **Confidentiality:**
   The data that will be collected are video recordings (with an approximate duration of an hour) with accompanying audio. The transcripts of this data use pseudonyms and replace any information that may lead to the identification of participants. The video and audiotape to be presented (in the form of very short excerpts not exceeding a minute) will be beeped at the mention of a name, an address or a telephone number identified. For technical reasons, the research team can not commit to anonymize video but agrees to not distribute extracts comprising of people filmed. If a picture of the video data is to be published in an academic paper, they will blur the face in the picture. At academic research conferences, no video material will be shown. The data collected will be stored in a locked cabinet in the researcher's office and electronic data will be stored in a folder on the researcher's password-protected computer and later archived on secure departmental computers.

7. **What will happen to the results of the study?**
   The study is to form the basis of my dissertation that will be submitted in fulfilment of the MA degree in Linguistics. As such, the results of the study will be published in the form of a dissertation and possibly, at a later stage, also in the form of articles in scientific and academic journals. If parents are interested in the outcome of the investigation, results will be provided on request.

8. **Participation and withdrawal:**
   Participation in the study is completely voluntary. Participants may withdraw at any time without consequences of any kind and without providing reasons for their withdrawal.

9. **Identification and contact details of investigators**
   Should you have any questions or desire more information, please feel free to contact –

The researcher:
Theresa Bhowan
083-468-9856
theresa.bhowan@yahoo.com

Research Supervisor:
Dr Ramona Kunene Nicolas
011-717-4183
ramona.kunenenicolas@wits.ac.za

Appendix B: Consent form

DST-NRF Centre of Excellence in Human Development
Individual and Society

science & technology
Department: Science and Technology
REPUBLIC OF SOUTH AFRICA

NRF National Research Foundation

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

PARENTAL CONSENT FORM FOR CHILD PARTICIPATION IN RESEARCH STUDY

Study on: Linguistic analysis of early language acquisition: a case study of the Black Middle-Class South African, 'born-free' generation in Gauteng

Dear Parent or Guardian

My name is Theresa Bhowan, under the academic supervision of Dr Ramona Kunene Nicolas, from the Department of Linguistics at the University of the Witwatersrand, and you are receiving this letter because your child might be a suitable participant for the research project mentioned above. The research is to be conducted by myself. The study is to form the basis of my dissertation that will be submitted in fulfilment of the Master's degree in Linguistics. As such, the results of the study will be published in the form of a dissertation and possibly, at a later stage, also in the form of articles in scientific and academic journals.

The study requires infant participants aged 30-40 months who are currently being exposed to English and an indigenous South African on a regular basis. The researcher will also need to ask each child's parent or primary caregiver and any other caregiver some questions about the languages that the child hears and uses in their daily lives, as information regarding the participant's language background is needed.

If you are willing to speak to the researcher and allow your child to participate in the study, please read the information sheet attached to this letter as well as complete the attached consent form.

***

The undersigned (Your name) ……..

Parent of/Legal guardian/Legal representative of

Your child's name ……..

We allow the researcher to conduct observational research with our child at the school, where we will record daily interactions between the above mentioned child and their caregivers/teacher, over the observational time period of October 2017 until November 2017.

We allow the researcher to record both audio and visual information provided by the above mentioned child. The interview conducted, by competent persons, will take place between October 2017 and November 2017, at the school.

We allow the use of the audio and video data only for the purpose of scientific research (database with restricted access to scientific staff involved in the research project, thesis, articles, books and scientific papers) and for the purpose of university education (courses and seminars).

We take note for all these scientific uses the recorded data will be anonymized, i.e.:

a) The transcripts of this data use pseudonyms and replace any information that may lead to the identification of participants;
b) The audiotape to be presented (in the form of very short excerpts not exceeding a minute) will be beeped at the mention of a name, an address or a telephone number identified;
c) For technical reasons, the research team can not commit to anonymize video but agrees to not distribute extracts comprising people filmed. If a picture of the video data is to be published in an academic paper, they will blur the face in the picture. At academic research conferences they may show a short clip of video data, however, no video material will be released into the public domain.

☐ Please tick the following box if you do not consent to any video recordings to be made available at conferences

Once you have granted consent for your child's participation in the study, please indicate whether or not you allow your child to be video recorded for this project by checking one of the statements below, by signing your name and returning it to me.

☐ I do allow my child to be video recorded during his/her participation in the study.

☐ I do not allow my child to be video recorded during his/her participation in the study.

We take note that we can request to see the content of pictures and video clips at any time to ensure that content that is rated, or explicit, controversial, or violent in nature is not shown to my child.

We also note that our child will have a choice not to participate or to change their mind during the research task at any point despite our written permission.

We call for the following additional constraints to be satisfied:

……..……..……..……
……..……..……..……..…..
……..……..……..……

We acknowledge that the researcher has described to me all information in the participation sheet. I was given the opportunity to ask questions and these questions were answered to my satisfaction. I hereby consent that my child may voluntarily participate in this study. I have been given a copy of this form.

Date: ……..

Signature of the Participant/Parents/Guardian/Legal Representatives: ……

Appendix C: Questionnaire

FAMILY DEMOGRAPHIC QUESTIONNAIRE FOR PROSPECTIVE CHILD PARTICIPANTS

PERSONAL DETAILS OF CHILD

Full name of prospective child participant

……...

Date of Birth (verified)

……...

Suburb …….. **Post Code** ……..

Telephone ……..

Number of children living in the household ……

Who does she/he spend most of her/his time with during the day?

- ☐ Mother/female guardian/female caregiver
- ☐ Father/male guardian/male caregiver
- ☐ Older female sibling/relative
- ☐ Older male sibling/relative
- ☐ Grandmother
- ☐ Grandfather
- ☐ Crèche teacher
- ☐ Babysitter/nanny
- ☐ Other …… (Please specify)

CONTACT WITH OTHER LANGUAGES

Which South African languages are spoken in the household?

- ☐ Afrikaans
- ☐ English
- ☐ isiNdebele
- ☐ isiXhosa
- ☐ isiZulu
- ☐ Sepedi
- ☐ Sesotho
- ☐ Setswana
- ☐ Siswati
- ☐ Tshivenda
- ☐ Xitsonga
- ☐ SASL (South African Sign Language)
- ☐ Other …… (Please specify)

Which South African languages does the female guardian/mother speak most of the time?

- ☐ N/A
- ☐ Afrikaans
- ☐ English
- ☐ isiNdebele
- ☐ isiXhosa
- ☐ isiZulu
- ☐ Sepedi
- ☐ Sesotho
- ☐ Setswana
- ☐ Siswati
- ☐ Tshivenda
- ☐ Xitsonga
- ☐ SASL (South African Sign Language)
- ☐ Other …… (Please specify)

Please specify what the female guardian/mother's first language is
……

Which South African languages does the male guardian/father speak most of the time?

- ☐ N/A
- ☐ Afrikaans
- ☐ English
- ☐ isiNdebele
- ☐ isiXhosa
- ☐ isiZulu
- ☐ Sepedi
- ☐ Sesotho
- ☐ Setswana
- ☐ Siswati
- ☐ Tshivenda
- ☐ Xitsonga
- ☐ SASL (South African Sign Language)
- ☐ Other …… (Please specify)

Please specify what the male guardian/father's first language is
……...

Which South African languages does the other caregiver speak (e.g. au-pair, day mother, babysitter, other family member who look after the child during the day)?

- ☐ N/A
- ☐ Afrikaans
- ☐ English
- ☐ isiNdebele
- ☐ isiXhosa
- ☐ isiZulu
- ☐ Sepedi
- ☐ Sesotho
- ☐ Setswana
- ☐ Siswati
- ☐ Tshivenda
- ☐ Xitsonga
- ☐ SASL (South African Sign Language)
- ☐ Other …… (Please specify)

Please specify what their first language is ……

INFORMATION ON HEALTH

Was the child born full-term (37-43 weeks)?

- ☐ Yes
- ☐ No

Did the child have in the past (or has now) specific health/auditory or language problems?

- ☐ Yes
- ☐ No

If yes, describe which one?

……

Does the child suffer now or has he suffered in the past from otitis/ear infection (more than four times a year)?

- ☐ Yes
- ☐ No

EMPLOYMENT

MOTHER/FEMALE CAREGIVER: Occupation……..
FATHER/MALE CAREGIVER: Occupation ……

Using STATS-SA financial categories, where does your household fall under per month?

☐ Between R0 – R967
☐ Between R968 – R4 083
☐ Between R4 084 – R9 083
☐ Between R9 084 – R19 500
☐ Between R19 501 – R31 500
☐ Between R31 501 – R65 250
☐ Between R65 251 – R141 083
☐ R141 084+

EDUCATION

Please indicate the highest qualification achieved

MOTHER/FEMALE CAREGIVER:

☐ Primary School
☐ High School
☐ Tertiary
    ☐ Technikon/Diploma
    ☐ Degree
    ☐ Masters
    ☐ PhD
    ☐ Above PhD

FATHER/MALE CAREGIVER:

☐ Primary School
☐ High School
☐ Tertiary
    ☐ Technikon/Diploma
    ☐ Degree
    ☐ Masters
    ☐ PhD
    ☐ Above PhD

Is there anything else you would like us to be aware of with regards to your child's language abilities?

……
……
……
……
……
……

THANK YOU FOR YOUR TIME!

NAME: ……
RELATIONSHIP TO CHILD: ……
SIGNATURE: ……
DATE: ……

Appendix D: Ethics

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Bhowan

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H17/05/03**
PROJECT TITLE	The role of input on noun lexical development of children born of SA bilingual parents: a case of IsiZulu/English language combinations
INVESTIGATOR(S)	Ms T Bhowan
SCHOOL/DEPARTMENT	Literature, Language and Media Studies/
DATE CONSIDERED	19 May 2017
DECISION OF THE COMMITTEE	Approved Permission letters are required before data collection can commence
EXPIRY DATE	10 July 2020

DATE 11 July 2017 **CHAIRPERSON** (Professor J Knight)

cc: Supervisor : Dr R Kurlene Nicolas

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature _____ Date ____/____/____

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES