

Lexical variation and change in SASL: a case study of a Western Cape school-lect

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*Thesis presented in partial fulfilment of the requirements for the degree
Masters in General Linguistics at the University of Stellenbosch*



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April, 2022

DECLARATION

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ABSTRACT

Lexical variation is common in most sign languages and is often related to regional identity specifically connected to a specific school for the Deaf. This study examined lexical variation and change in South African Sign Language (SASL) within a particular Western Cape “school-lect”. The latter refers to the transmission of particular varieties of sign language in schools for Deaf children and to the extent of their retention by adult native signers in the community. In this study, a picture-based elicitation task, incorporating some English/Afrikaans words, was used to elicit signs for 65 lemmas, extracted from Woodward’s (1993) modified Swadesh list, from four age groups of signers, ranging from 8 to 68 years. The elicited signs for each lemma were described in terms of handshape, palm orientation, location and movement, and were compared with each other. Signs that did not differ were classified as identical, signs that differed in only one parameter were classified as similar, while signs that differed in more than one parameter were classified as different – such signs could in turn have similar variants. Considerable variation occurred within and across groups: The group with the most intra-variation was the 16- to 18-year-olds, while the most inter-group variation was found between the youngest group, 8- to 10- year-olds, and the two adult groups (signers older than 18 years). Focus group interviews were held with the two adult groups (23- to 29-year-olds and 42- to 68-year-olds) to identify participants’ attitudes towards lexical variation in general, and possible reasons for lexical variation within the Deaf community from their school. During the interviews, the adults gave examples of signs that had changed, and compared the new and old signs, speculating about the reasons for the new variants. Some observed that signs are influenced by the other five schools for the Deaf in the Western Cape and by the environment outside the school, from which variants are brought to the current school. Older adults felt strongly that their (older) sign variants were appropriate, and that they communicated more easily with each other. However, some signs have developed new meanings, leaving them confused. According to the older adults, children currently at the school appear to have completely different signs that look strange and/or inappropriate to the older adults. Some observed that young Deaf children and older Deaf adults do not connect with each other and that older adults do not want to learn new variants. In contrast, young adults were willing to learn other new variants from different regions to broaden their SASL and to enable them to communicate with each other better.

Young adults are able to switch variants depending on the signing community. The reason for adapting their sign lexicon was that it is important to expand one's knowledge of all the signs and varieties used in the different South African provinces. The present study is relevant, for understanding lexical variation in SASL and for the documentation of regional varieties that are under pressure to standardize.

OPSOMMING

Leksikale variasie is algemeen in die meeste gebaretaal en hou dikwels verband met streeksidentiteit gekoppel spesifiek aan die ligging van skole vir Dowe. Hierdie studie het ondersoek ingestel na leksikale variasie en verandering in Suid-Afrikaanse Gebaretaal (SASL) binne 'n bepaalde Wes-Kaapse “skoollek”. Laasgenoemde verwys na die oordrag van bepaalde gebaretaalvariëteite in skole vir Dowe kinders, en die omvang van hul behoud deur volwasse SASL-gebruikers in die gemeenskap. In hierdie studie is 'n prentgebaseerde ontlokkingsstaak, wat enkele Engelse/Afrikaanse woorde insluit, gebruik om gebare vir 65 lemmas, onttrek uit Woodward (1993) se gewysigde Swadesh-lys, by vier groepe SASL-gebruikers, van 8 tot 68 jaar, te ontlok. Die gebare vir elke lemma is vervolgens beskryf in terme van handvorm, oriëntasie, ligging en beweging, en is met mekaar vergelyk. Gebare wat nie van mekaar verskil het nie, is as identies geklassifiseer; gebare wat in slegs een parameter verskil, is as soortgelyk geklassifiseer; terwyl gebare wat in terme van meer as een parameter verskil, as verskillend geklassifiseer is – sulke gebare kon op hul beurt soortgelyke variante hê. Daar was aansienlike variasie binne en oor groepe heen in die gebruik van spesifieke gebare. Die groep met die meeste intragroepvariasie was die 16- tot 18-jariges terwyl die meeste intergroepvariasie tussen die jongste groep, 8- tot 10-jariges, en die twee volwasse groepe (gebaretaalgebruikers ouer as 18 jaar) was. Fokusgroeponderhoude is met die twee volwasse groepe (23- tot 29-jariges en 42- tot 68-jariges) gevoer om deelnemers se houdings teenoor leksikale variasie oor die algemeen en moontlike redes vir leksikale variasie binne die Dowe gemeenskap gekoppel aan hulle skool, te identifiseer. Tydens die onderhoude het die volwassenes voorbeelde gegee van gebare wat verander het, die nuwe en ou gebare vergelyk, en gespekuleer oor redes vir die nuwe variante. Sommige van hulle het waargeneem dat gebare beïnvloed word deur die ander vyf skole vir Dowe in die Wes-Kaap en deur die omgewing buite die skool, vanwaar variante na die huidige skool gebring word. Ouer volwassenes het sterk gevoel dat hulle (ouer) gebaarvariante gepas is en dat hulle makliker met mekaar kommunikeer. Sommige gebare het egter nuwe betekenis ontwikkel, wat hulle verward laat. Volgens die ouer volwassenes blyk dit dat kinders wat tans die skool bywoon, heeltemal ander gebare het wat vreemd en/of onvanpas vir die ouer volwassenes lyk. Sommige van hulle het berig dat jong kinders en ouer volwassenes nie met mekaar konnekteer nie en dat ouer volwassenes nie

nuwe variante wil aanleer nie. Daarenteen was jong volwassenes bereid om ander nuwe variante uit verskillende streke aan te leer om hulle SASL te verbreed en om hulle in staat te stel om beter met mekaar te kommunikeer. Jong volwassenes kon van variant verander na gelang van die gebaretaalgemeenskap. Hulle redes vir die aanpassing van hulle gebaarleksikon was dat dit belangrik is om 'n mens se kennis uit te brei van al die gebare en variëteite wat in die verskillende provinsies in Suid-Afrika gebruik word. Die huidige studie is relevant vir die verstaan van leksikale variasie in SASL asook vir die dokumentering van streeksvariëteite wat onder druk is om te standaardiseer.

ACKNOWLEDGEMENTS

I would like to acknowledge my supervisor, Dr Kate Huddleston. I appreciate having had the golden opportunity for further knowledge by doing this wonderful research on the topic of lexical variation and change in SASL. Thank you also to Prof Anne Baker since 2019, for providing me with guidance while doing this study. I would also like to express my special thanks to Ms. Marsanne Neethling for her incredible job as an expert SASL interpreter as well as for editing, reading and discussing together.

I would like to thank Eric Mahamba for assisting me with collecting data as a research assistant on my project and also thank you to Ms. Carmen Kuscus and Mrs. Faith Cronwright at Deaf Community of Cape Town who assisted me with the recruitment of participants. I also thank the school principal Mrs. Cindy Rutter and Mrs. Gloria Beelders from Dominican School for the Deaf, Wittebome, who assisted me with recruiting school children and communicating with their parents. I also thank Mrs. Nazereen Bhana and Ms. Mariska de Beer at eDeaf for assisting me with finding suitable young adult participants for the study.

I pay my deep sense of gratitude to my family for their support, patience and love I received while having a distance relationship for years so I can achieve my dream of attaining my MA degree.

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CHAPTER 1

Introduction

1.1 Background and rationale

As is the case in many sign languages, see for example the origin of Nicaraguan Sign Language (Senghas & Coppola 2001), the use of South African Sign Language (SASL) is tightly linked to the development of Deaf Education in South Africa. The first school for the Deaf, the Grimley Institute, was established in Cape Town in 1863 by Irish Dominican nuns, which catered for all race groups, and other schools followed in different provinces (Aarons and Akach 2002). In 1927, the school was segregated and the Dominican School for the Deaf, was established, commonly referred to as Wittebome school. This school is the site for the present study. Currently there are approximately 47 schools and units for the Deaf across all nine provinces of South Africa (Storbeck, Magongwa & Parkin 2009).

SASL is the language of the South African Deaf community. The number of users vary depending on the source consulted; ranging from a quarter of a million in the 2011 South African Census, to half a million, or even a million, according to DeafSA¹, if one includes the hard of hearing, in a total population of about 59 million.

South Africa has eleven official languages and SASL is currently under consideration to become the twelfth. It is already the case that the South African Constitution promotes South African Sign Language, and encourages its use and development. Furthermore, according to the South African Schools Act of 1996, “[a] recognised Sign Language has the status of an official language for purposes of learning at a public school”. However, SASL has not always been used in schools for the deaf, either because there are not enough teachers who are fluent in SASL, or because the schools have policies of total communication or oralism (Aarons & Akach 1998). In addition, SASL as a school subject has only recently been introduced as part of the South African Curriculum and Assessment Policy Statement (CAPS), with its completion and approval as policy

¹ DeafSA presentation to the Joint Constitutional Review Committee (van Niekerk 2020: 1).

in July 2014 (Holness 2016; Morgan, Glaser & Magongwa 2016). Lexical variation is common in many sign languages and is often related to regional identity related to the location of schools, see for example McKee and McKee (2011: 486) on New Zealand Sign Language (NZSL), Quinn (2010) and Stamp (2015) on British Sign Language (BSL), and Vanhecke & De Weerdt (2004: 27) on Flemish Sign Language (VGT). A little work has been done on variation in SASL starting with the first dictionary created by Penn and colleagues (Penn, Ogilvy-Foreman, Goldin & Anderson-Forbes 1992) up to the present day (van Niekerk, Huddleston & Baker, in prep). This last study indicates clearly that schools in the same location can still have considerable variation in their lexicon. Quinn (2010) investigated the role that “school-lects”, a term which refers to the transmission of particular varieties of sign language in schools for Deaf children, play in regional variation in BSL. He uses the term “schoolization” to describe the transmission of BSL in schools for Deaf children. Sociolinguistic research has shown that language variation typically correlates with social factors, e.g., education, age, historical situation, social class and region. Languages often change over time because different language groups often interact, especially via language contact, influential, new technology and media. In spoken language, lexical variation can be the result of the development of new words, with the old words sometimes disappearing, but in standard varieties of spoken languages these words are still listed in dictionaries or present in written texts. However, sign languages typically differ from spoken languages in that there is no written form which could retain a record of changing lexical forms. There are quite a few dictionaries but very few indicate variation.

1.2 Aim of the research

This study sets out to examine lexical variation and change in SASL, examining the extent of this variation in three generations of SASL users who all attend or attended the same school for the deaf in the Western Cape. The study also aims to elicit opinions on how these SASL users’ lexicons have changed over time and their opinions on variation in SASL. The present study is relevant, therefore, both for the understanding of lexical variation in SASL, as well as for the documentation of regional varieties. These varieties are under governmental pressure to standardize.

1.3 Outline of the thesis

This thesis consists of five chapters, of which the current chapter is the first. In Chapter 2, I present the literature review. The literature consulted for this study consists of work done on sociolinguistic variation based on social factors and research on sign language variation and the factors involved. In Chapter 3, the methodology is outlined. The study focuses on one school for the Deaf, the Dominican School for the Deaf, located in Cape Town, and commonly referred to as Wittebome. This chapter provides information on the 40 Deaf participants, who all attend/attended Wittebome school for all or part of their schooling. The data collection – which includes a picture-based elicitation task, a background sociolinguistic questionnaire and, for the two older groups, focus group interviews – is described, as well as the data analysis procedures and ethical considerations. In Chapter 4, the data analysis and results are presented. A quantitative analysis was conducted to ascertain the extent of lexical variation in young children to older adults in their school-lect. A comparison of the results shows the amount of variation across the groups. The qualitative data, collected through interviews, indicate participants' reasons for using different lexical variants and whether these are different from the school signs they used and the signs present in the current school-lect. In Chapter 5, the results of the data analysis is presented and recommendations for further research on variation in SASL are given.

CHAPTER 2

Literature review

2.1 Introduction

In this chapter, the literature consulted for this study will be discussed. This consisted of research on sign language variation and the factors involved, e.g. schools for the deaf, age, historical situation, social class, and region. The first section of this chapter, section 2.2, looks at synchronic variation in sign languages. It will firstly discuss lexical variation in sign languages related to regional variation, which occurs as a result of the geographical area where the residential schools for the deaf are located, and from deaf education as well as language policies. This will be followed by a discussion of the factors of ethnic and religious background, gender, social class, type of education and age. The second section of this chapter, section 2.3, will discuss diachronic variation in sign languages. It will discuss the historical perspective, the effects of language change and the influence of spoken language and finally contact between signed languages. Finally, in section 2.4, the research questions of the study are presented.

2.2 Synchronic variation in sign languages

Research on spoken and signed languages has shown that there are several factors that influence variation at any one time (Baker et al. 2016). Thus region and type of education have been shown to be important external variables, as well as the signer's background in terms of age, gender, ethnic and religious background and social class. These will be discussed in separate sections.

2.2.1 Region

As mentioned in Chapter 1, Quinn (2010) indicated the importance of school as a source of lexical variation in his study of BSL. This is quite plausible since deaf children often learn their sign language in the school context and appear to retain that variety. McKee and McKee (2011) confirmed this “schoolization” hypothesis for New Zealand Sign Language (NZSL). They reviewed lexical variation in sign languages and the historical context of the NZSL community before analyzing the effects of signers' age, region, gender, and ethnicity on the use of lexical

variants in NZSL. McKee and McKee (2011: 517) found that “the strongest regional contrast was found between south and north, which are geographically the farthest apart and which corresponds with the two main deaf school regions”. The degree of the variation was compared to that of spoken English dialects between the same two regions and it was found that sign language variation corresponded to “schoolization” rather than region.

Stamp, Schembri, Fenlon, Rentelis, Woll, & Cormier (2014) and Stamp (2015) explored lexical variation and change in BSL on a larger scale than Quinn (2010). The researchers’ goal was to investigate the development of BSL regional variation. By the nineteenth century there had been considerable migration and this resulted in 22 schools for the Deaf being established by 1870 around the country. The establishment of these schools led to regional variation in BSL, as there was little contact between these schools, and the transmission of these variants, passed from generation to generation (Stamp 2015), leading to schoolization. However, due to its more recent visibility in public spaces, Quinn (2010) argues that with the onset of more frequent exposure to TV programs using BSL, there has been a shift in the variation that is present in BSL. Furthermore, the choice of which regional variation should be used by interpreters and presenters remains a contested issue, especially in the light of how users of BSL view the variation used on TV. It’s often the perception that if it’s on TV, it’s standardized.

Regional variation has also been researched in the Netherlands, where there are five separate schools for the Deaf, of which three are in the west of the country, in Amsterdam, Rotterdam and Voorburg, one in the north, in Groningen, and one in the south, in St. Michielsgestel (Schermer 2003). As with BSL in Britain, there is regional variation in Sign Language of the Netherlands (NGT) due to little contact between deaf people from different areas prior to the 1980s (Vermeerbergen, Nijen Twilhaar & Van Herreweghe 2013). Schermer (2003) raises the question of whether the schools for the deaf in similar regions share more signs than those outside the region. When comparing schools in Rotterdam and Voorburg, which are geographically close to each other, it was found that they shared less signs with each other than they did with Amsterdam “which indicates that distance had no influence on the extent of lexical variation” (Schermer 2003: 5). However, the variation that Schermer did find was, above all, related to the age of the informants.

Research on VGT also found lexical variation with respect to five regions, related to the location of different Flemish schools for the deaf (Vanhecke & De Weerd 2004). It was found that 72.3% of the signs were similar across regions.

In South Africa a recent study was carried out in the context of a dictionary project (Van Niekerk, Huddleston & Baker, in prep). The data was collected from 50 participants from 20 schools across five provinces from West to East using a list of 173 lemmas. Considerable variation was found in the number of sign types per lemma (1-11, average 3.9), comparable to findings in other sign languages. This is a lower number than the variation reported in an earlier SASL study (Penn & Reagan 1994). Some standardization appears to have taken place in twenty-five years. The schools were compared pair-wise and it emerged that no school had a variety of SASL that stood alone from the others. The amount of overlap between schools ranged from 30% to 73%, and was not necessarily higher between all schools from the same province. The hypothesis of schoolization was supported.

2.2.2 Type of education

Education is an important factor in variation as it ties in with regional variation and schoolization. In the United States, for example, American Sign Language (ASL) was used across the country and in education. In contrast, in South Africa, the government in the time of apartheid practiced the deliberate divide of people through its policies on social, economic and education, based on race and ethnolinguistic backgrounds (Storbeck, Magongwa, & Parkin 2009). Language and language policies in education in general were used to bring about division. These same language policies affected deaf education and added racial and socioeconomic status as well as geography as part of a further divide which was brought about through separate education for black deaf children and white deaf children. Penn and Reagan (1990) comment that ironically, this division of education has perhaps benefited black deaf South Africans because, for the most part, they were allowed to use signing of any sort while white deaf learners were subjected to oralism. Penn and Reagan (1990) also mention that it was common to use a signed version of a spoken language, or a sign system. These sign systems follow the structure of a spoken language (for example, Afrikaans or English) and therefore lack the qualities and characteristics of a natural sign language as used by the deaf.

As mentioned in Chapter 1, Penn et al. (1992) compiled a dictionary of signs and described the variation they came across during the process. They noted that the “degree of linguistic diversity” was related to the status and educational experiences of the deaf community (Penn & Reagan 1994). At the time of their study little research had been done on the language and culture of the deaf community in South Africa. The differences among the deaf people were as entrenched as those among ethnic hearing groups which was informed by the apartheid regime’s policies. At the beginning of the research project different groups emphasised, their “individual group identities” and were not so keen to find common ground in signs used by other signers. However, later they noticed that the communication flow between the groups was fluent, as has been found to be the case in many other countries. Some informants of the study started to recognise the value of “common lexical usages”, yet the majority stood their ground and preferred to focus on their differences. These variations between groups were also attributed by the authors to the use of oral methods in large parts of South African deaf education (Penn & Reagan 1994). In this way, they argue, many deaf people use vocalisations while signing, therefore adding to variations because the vocalisations are based on the various home languages (Afrikaans, English, Xhosa, etc.). The same effect on variation can be seen where many initialised signs are used, along with the co-existence of the one- and two-handed alphabets. Furthermore, the influence of external groups on sign language used in South Africa also affected the variations used. Some individuals had been educated at Gallaudet University in the US and believed that ASL should be adopted in South Africa. This call proved unsuccessful, but still some ASL signs found their way into SASL – directly or indirectly – and some are still currently used by members of the deaf community (van Niekerk, Huddleston & Baker, in prep). Moreover, the Department of Education and Training (DET) mandated official signs to be used in schools. The DET was mainly responsible for serving black (African) citizens at the time and with some respondents in Penn and Reagan’s (1994) research project who came from a system that used the mandated signs, it was found that no more than 25% of the signs used by them naturally, overlapped with the signs taught in school. This clearly illustrated how DET signs were not being utilised by deaf adults, irrespective of their educational background (Penn & Reagan 1994: 323).

2.2.3 Ethnic background

Ethnicity is about where people come from, what their roots are, and in some cases their religion, which may correlate with linguistic variation. In ASL, for example, a distinction is made between Black ASL and White ASL (Lucas, Bayley, McCaskill & Hill 2015: 157). This is a result of the history of school segregation between black and white deaf children in the USA until the 1960s. Even when the law was changed, Deaf clubs and traditions continued to be separate. It is notable that a black deaf person will typically know both signs of Black ASL and White ASL but white deaf people typically only know signs of White ASL (Aramburo 1989). In BSL there does not appear to be a clear variation between black and white deaf signers. There was only a small black population in Britain until the 1950s and black deaf children went to ‘mixed’ schools for the Deaf. They were taught a general dialect of BSL. According to Sutton-Spence and Woll (1999: 27), for black British deaf people, until recently, black deaf identity was not their strong identity. They identified themselves as part of the black community or the Deaf community, but not both, however, recently, for some black deaf people their signing style has come to reflect their black identity. As noted above, in section 2.2.2, South African society was segregated along racial lines, due to Apartheid, which may have contributed to linguistic variation in SASL.

2.2.4 Gender

Lexical variation is not only the result of regional variation and/or school-lects but may also be influenced by gender. Stylistic differences have also been commented on, although Johnson (1989) questions whether a female style of signing can be described as “feminine” or a male type of signing as “masculine”.

Lexical differences related to gender have been found, for example, in Irish Sign Language (ISL) and Australian Sign Language (Auslan). Johnston and Schembri (2007) state that historically in Auslan the sign for DOFF (“greeting”) was used only by men and currently the sign HI is more often used as a greeting by men and youths than women, while the sign HELLO is more often used by women. These different lexical items are illustrated in Figure 2.1 below (Johnston & Schembri 2007:49).



Figure 2.1 *Three variants of greetings in Auslan*

Sutton-Spence and Woll (1999) discussed how in Ireland and Belgium, schools have affected lexical variation in terms of gender. Traditionally girls' and boys' education was separate; this also happened in other Roman Catholic countries. In the Republic of Ireland, there is a greater difference in signing between men and women than in Britain. ISL has completely different lexical items between girls and boys due to the segregation of residential schools in Dublin. An example of this is the lexical item GREEN (LeMaster & Dwyer, 1991: 367). The male sign for GREEN is articulated with the B handshape, the location is on the cheek, the movement downward, and the palm orientation is to the left. The female sign for GREEN is articulated with the 'handshape of Irish's fingerspelling is G in the neutral space of the location, the movement moves in circle clockwise, and the palm of orientation is to the left. See Figure 2.2 below (LeMaster & Dwyer, 1991: 367) as well as Table 2.1 which illustrates the parameter differences between the two lexical items in Figure 2.2. When the young people finish school, they both have to learn different signs from each other in order to communicate. Interestingly the girls often adopt the boys' signing (Sutton-Spence & Woll 1999).



Figure 2.2 *ISL GREEN – female and male lexical items*

Handshape	G	D
Orientation	to the left	to the left
Location	neutral signing space	Cheek
Movement	circle clockwise	Downward
NMF	NA	NA

Table 2.1 *Parameter differences between the male and female lexical items for GREEN in ISL*

According to LeMaster and Dwyer (1991), women typically adopt the male signs in public (as illustrated in Table 2.2 below), but, when alone as a group of women, they still use their female signs. Also, the findings of the study indicate that men's knowledge of female signs is much less than women's knowledge of male signs. See Table 2.3 below which illustrates the extent of differences between male and female signs (adapted from LeMaster and Dwyer, 1991: 366).

Total number of signs	153
Different female & male signs	106 (69%)
Same signs, women & men	27 (17%)
Other variation (not by sex)	20 (20%)

Table 2.2 *Extent of lexical variation between men and women in Ireland*

Signers	Producing Female Signs	Producing Male signs
Women		66% (70 signs)
Men	24% (25 signs)	

Table 2.3 Opposite sex sign production by women and men in ISL

2.2.5 Social class

Sutton-Spence and Woll (1999: 23) explain the term “class” in British English to mean the “social class labels based upon a person’s income, educational background and family background”. However, they point out that the term is problematic when applied to deaf people because they are often semi-skilled or unskilled and have a lower level of education comparable to their hearing peers. Then again, in American deaf culture there is a celebrated “social class” of deaf people who attended Gallaudet University, a national university for deaf students. Furthermore, according to Sutton-Spence and Woll (1999), the family background of a deaf person was what influenced his/her “social class” the most. Whereas some deaf people are born to deaf families and gain language skills from a young age, others are born to hearing families where their exposure to sign language is less and often later in life, which affects the linguistic proficiency of a deaf person. The deaf person born to a deaf family can be seen as part of a “linguistic elite” within the Deaf community, thus creating “social class” based on family background.

2.2.6 Age

An important factor in lexical variation is age that leads to diachronic variation (discussed in section 2.3), which is also related to school. As Stamp et al. (2014), note that many Deaf children of hearing parents learn or receive exposure to a first language late, that is once they go to a deaf school. In terms of variation in BSL, Stamp et al. (2014) found age to be the most important factor, followed by school location. Stamp et al. (2014) observed that the recent changes in the British Deaf community, with younger signers using less regionally distinct variants, could be the result of recent changes in language transmission such as schools for the Deaf being closed down (Stamp 2015: 163). Additionally, Brown and Cormier (2017) note that older Deaf adults in Britain who were Scottish, Welsh and Irish more often used fingerspelling than the English informants. This they related to changes in the regional education methods over time. However, another factor,

language family background, namely whether a deaf person's family were Deaf or not, also played an important role. As is the case in BSL, McKee and McKee (2011: 508), found that age is the most salient factor in variation in New Zealand Sign Language (NZSL).

In South Africa, Njeyiyana (2017) showed that SASL users retain some lexical items from their school-lects, but the data seems to show that this tendency is decreasing, i.e. there is more change (adaptation) than retention. One of the reasons she discusses could be that after the abolishment of apartheid there has been more contact between Deaf children and adults from different schools and communities. For example, one change that occurred in SASL is that the manual alphabet changed from a two-handed to a one-handed alphabet, however, the two-handed manual alphabet variant is still used today among older white Afrikaans speaking Deaf signers.

2.2.7 Summary

There are different levels of variation and similarities found in sign languages as there are in spoken languages. This section of the literature review focused on the synchronic variation in sign languages. Within synchronic variation, lexical variation in sign languages was explored, which was related to regional variation, in particular "schoolization", the type of education that affects variation, as well as lexical differences related to gender. Social class was discussed as well as lexical variation according to age, which is also related to schools, with recent changes in Deaf communities.

2.3 Diachronic variation in sign languages

Sign languages and spoken languages also experience diachronic change and they may be influenced by external factors and internal factors (Baker et al. 2016). This has an effect on lexical variation. This section provides a historical perspective on sign language, as well as an overview of the phenomenon of language change, where the diachronic variation in sign language can be seen in how signs change from one generation to another, an effect of age as a sociolinguistic variable. This is followed by a discussion of the influence of spoken languages and language contact between sign languages.

2.3.1 A historical perspective on sign languages

It has been hypothesized that sign languages were used before spoken languages, but the evidence is disputed. The philosopher Plato from Ancient Greece described what he saw: deaf people coming together and communicating (Baker, et.al. 2016). Pedro Ponce de León (1520 – 1584) appeared to use individual signs to try to teach the deaf in Spain. The French educator, Abbé Charles-Michel de L'Épée, during the 18th century used drawings/illustrations representing individual signs, but without any description of use in a grammatical structure. Later an educational debate ensued on the use of only spoken languages in schools for the deaf as opposed to the use of some signs, “the French Method”. The spread of this educational approach into other countries often involved the introduction of signs from French Sign Language as well, leading to variation. McKee and McKee (2011) mention that where language planning was implemented in deaf schools, regional variation of sign languages has decreased.

In many countries, especially in less developed countries, deaf people have been isolated, living in rural areas or towns with no deaf people nearby to communicate with but having to communicate with hearing family or hearing friends (Goldin-Meadow 2014). In such situations, the mode of communication is typically homesigns and/or gestures. When deaf people come together to form deaf communities, homesigns and gestures, which emerged in isolation, then develop into a full natural sign language. Schools for the deaf have been such a location where deaf children have come together for the first time. In Europe, the formation of deaf communities and the development of (national) sign languages occurred largely for the first time in the 18th century when schools for the Deaf were first established. A more modern example of this phenomenon comes from Goldin-Meadow (2014) and Senghas, Kita and Özyürek (2004)'s studies of Nicaraguan Sign Language.

2.3.2 Language change

McKee and McKee (2011) refers to the work of Eckert who discusses two ways to treat age as a sociolinguistic variable. On the one hand, there is historical change where a speech community experiences change through the passing of time. On the other, there is age grading, where an individual's speech changes along with the stages they experience through their life. Comparing this to signed languages, it was found that historical effects were mostly found to have influenced variation and could be related to schooling that created sociolinguistic divisions in deaf

communities (McKee & McKee 2011). Stamp et al. (2014) and Stamp (2015) observed that younger signers are using less regionally distinct variants of BSL. They argue that this could be the result of changes in the schooling of deaf children. Schools for the deaf are being closed down (Stamp 2015: 163) and more deaf children mainstreamed. They discuss evidence of variation in numeral signs decreasing due to the relocation of the deaf from traditional deaf schools, where transmission of signs occurred in one way, to a mainstream school.

Furthermore, technology has influenced language change where younger signers are being exposed to other signers outside their physical community, e.g. the BBC deaf community programme *See Hear* and others across social media. During the 1990s the British deaf community was introduced to more politically correct signs for “China”, “Africa”, “gay” and “India” for example, through TV programmes for the deaf and other sign language interpreted programmes. It is claimed that younger signers became aware of the stereotypical images the traditional signs were associated with, and therefore chose the more politically correct signs they saw being used by signers or sign language interpreters on TV.

Stamp et. al. (2014:11) found that with number signs, the younger signers were adopting two systems as used in the southern England area. The results from this research indicated that levelling was taking place and it was similar to that researched by McKee and McKee (2011) for NZL. McKee and McKee (2011) found that there was a significant difference in lexicon between younger and older signers, which can be traced back to the introduction of new lexicon through Total Communication in 1979 for that specific deaf community. However, there is also individual differences in adopting new lexicon. In their study half of the older signers had adopted more current variants of lexicon, while the other half retained the variation they were familiar with throughout their lives. As such, it indicates that synchronic variation had become evident within and between age-groups, in addition to the diachronic variation which was a result of new education methods. It was also found in their dataset that levelling of lexicon occurred more in the youngest generation which was also reflected in their pilot study where younger northern signers were more consistent in their use of number signs.

As discussed earlier, Quinn (2010:499) suggested that “schoolization may have been the foremost process in the acquisition of BSL by British Deaf people”. However, with the closing of many

residential schools for the deaf, the children have been moved into mainstream education settings which changes the transmission and acquisition of BSL. The schools may or may not have fluent BSL users and the “implications of these major sociological shifts and their effects on the language used by future generations remain to be seen.” (Quinn 2010: 499). Further to Quinn’s observations, Adam (2012) writes about “language death” of a community among a new generation. When you consider minority languages, such as signed languages, and the extensive use of borrowing, code switching and code blending, due to the influence of a dominant spoken language, the influence of such a dominant language over time could lead to the loss of linguistic features as the users of the minority language lean more towards the changes/influence of the dominant language, as happens generally between spoken languages. The result is that these features then get lost in transmission to a new generation, and permanently changes the use of that minority language by the next generation. They ultimately become “semi-speakers” of the minority language because of these changes. Research by Eichmann and Rosenstock (2014), conducted in Germany, focused on three schools for the Deaf distributed across Saxony and the regional variations experienced in German Sign Language (Deutsche Gebärdensprache, DGS). All three schools use sign language as a last resort: only if a spoken language as a means of communication seems to have failed. With DGS not being taught as a subject or always used as the medium of instruction, the children seem to still acquire it through informal interaction with their peers in social and sport activities, thus non-academic interactions. Eichmann and Rosenstock (2014) state that while the playground has been the space where non-structured sign language was acquired, there are new factors indicating that this space will be lost. The changing landscape of the schools that rather focus on inclusion and mainstreaming significantly threatens the transmission processes of DGS from one generation to the next which will have an effect on the language itself.

In South Africa, the recent study of lexical variation (van Niekerk, Huddleston & Baker, in prep) has shown that there is considerable variation across schools currently but this appears to be somewhat less than was found in the study by Penn and Reagan (1994). Apparently lexical variation has reduced in the last twenty five years. There could be several reasons for this change. the Department of Basic Education (DBE) has championed the introduction of standard signs to be used for learning and teaching material of SASL since 2012 (Morgan, Glaser and Magongwa

2016). Also the increase in the exposure of SASL via television and social media may be contributing.

2.3.3 Influence of spoken language

When two (or more) languages exist together at the same time in a particular community, either spoken languages or spoken and sign languages, they influence each other through language contact (McBurney 2012). For example, many languages have similar features as a result of influence from one language to the other. Baker et al. (2016) describes how sign languages may change over a period of time as a result of the influence of spoken language. For example, ASL's basic word order used to be Subject – Object – Predicate (SOV), which correlated with French Sign Language (LSF), one of the main historical influences on ASL. Today, ASL's modern grammar is predominately Subject – Predicate – Object (SVO), now sharing the same word order used in spoken American English, as a result of the influence of spoken English. Another example comes from research on NGT, which found that the language had changed under the influence of spoken language through the use of Signed Dutch to help hearing parents communicate with their deaf children (Schermer 2003). Van Herreweghe and Vermeerbergen (2010) state that the spoken language(s) used by the surrounding hearing community has an impact on any sign language.

In South Africa there are eleven official spoken languages, but also more being used. It is possible that these spoken languages may have influenced SASL in the form of simultaneous communication, i.e. a combination of spoken language and signs, at some point. However, there have been no studies in South Africa on the influence of spoken language structures on sign language structures or on the influence of the use of “signed spoken languages”, but it can be assumed that this influence exists.

Another way that languages influence each other is through code-switching and code-blending. The difference between code-switching and code-blending is explained by Baker et al. (2016), in that code-switching often occurs in spoken languages where the speaker switches between two or more languages in one sentence. In signed languages though, the same occurs, but because spoken and sign languages are used in different modes, it is possible to use the sign and the spoken word at the same time, thus becoming a blend of the two modes (code-blending).

2.3.4 Contact between sign languages

Conducting research about contact between sign languages is challenging because there has been very little documented about historical forms of sign languages, making it difficult to do comparative studies. This also made it difficult for researchers to establish which signs were borrowed and which were related from “genetic decent” and because of this multi-layered language contact it also becomes difficult to make “traditional family tree classifications”. (McBurney 2012: 934). Research has however shown that historical connections between sign languages can be credited to, among others, world politics and education systems brought to local deaf communities, often in the context of missionary work. For example, BSL has had a strong influence on sign languages used throughout the former British Empire, when deaf education was introduced using BSL and when deaf adults immigrated to the colonies. This was the case in Australia, for example, (Johnston & Schembri 2007). ,

In South Africa, recent research has shown the influence of several European sign languages on SASL (van Niekerk 2020). The highest percentage of borrowings was from BSL (15.9%), while ASL had 12.6% and VGT 11.7%. In total 65% of all the variants researched in the study had been influence to some degree by foreign sign languages or the Paget Gorman Sign System.

2.3.5 Summary

Sign languages experience diachronic change, as do all languages, in deaf communities that over time may be influenced by external and internal factors. We considered how age can be seen as a sociolinguistic variable. The influence of spoken languages and contact with other sign languages was also discussed. The influence of education policies and the introduction of deaf education was a common theme in these discussions.

2.4 Research Questions

We have seen from the previous sections that age is an important factor in explaining variation. This study will examine the extent of lexical variation in three generations of SASL users from one school in order to characterise the extent of synchronic and diachronic change in the context of one school.

The main research question is as follows:

To what extent is lexical variation present in three generations of SASL users who attend/attended the same school in the Western Cape?

This main research question can be broken down into three sub-questions:

1. To what extent is there lexical variation present in the current school-lect?
2. To what extent does the lexicon of learners currently in school differ from the lexicons of older SASL users of the same school-lect?
3. To what extent do the SASL users in the older two groups feel that their lexicon has changed from when they were at school and why?

In the following chapter, the methodology used to collect and analyse the data will be described.

CHAPTER 3

Methodology

3.1 Introduction

This chapter presents an outline of the research methodology, including a description of the participants and participant recruitment (in section 3.2), the elicitation materials used (in section 3.3), the process of data collection (in section 3.4), the data analysis tools (in section 3.5), the data analysis procedures (quantitative and qualitative) (in section 3.6) as well as the ethical considerations (in section 3.7).

3.2 Participants

There were 40 Deaf participants in the study who all attend or attended the Dominican School for the Deaf (Wittebome) in Cape Town, South Africa, for (almost) all of their schooling. In order to be able to study the effects of generation (see Chapter 2), the participants were divided into four different groups: 8 Grade 4 learners (Group 1), 12 Grade 11/12 learners (Group 2), 6 young adults between the ages of 23 and 29 years old (Group 3), and 14 older participants between the ages of 42 and 68 years old (Group 4) who have lived in the Western Cape for their whole life. Data were collected from Groups 1 and 2 at Dominican School for the Deaf, Wittebome, while the participants in Groups 3 and 4 were invited to participate through the Deaf Community of Cape Town (DCCT) and eDeaf. Data collection then took place at the DCCT and eDeaf respectively at different times and dates at the location convenient for the participants.

Unfortunately, the distribution of the participants across the four groups was not equal, due to difficulties with recruitment. In terms of schooling, participants in Groups 1, 2 and 4 attended or had attended Wittebome for all of their schooling. But four participants in Group 3, the young adults, indicated that they had first attended either another school for the deaf, a school for the hard of hearing or a hearing school. Nonetheless the four participants had spent their last years of schooling at Wittebome, and said that they were now part of the Deaf community around the Wittebome school.

Background information was collected from all participants, but for the young participants at the school, this information was provided by their parents/guardians (see Appendix 1). The background information included the participants' age and gender, whether they were born deaf, at what age they became deaf, their race, region, and school. Table 3.1 provides a summary of this information.

	Group 1 (n=8)	Group 2 (n=12)	Group 3 (n=6)	Group 4 (n=14)
<i>Age</i>	8 - 10	16 - 18	23 - 29	42 - 68
<i>Gender</i>	8 female	11 female, 1 male	5 female, 1 male	8 male, 6 female
<i>Born deaf*</i>	1		1	5
<i>Deaf at age*</i>	2;6, 3 (n=2), 4	0;11, 2 (n=2), 3	(not specified)	1, 4 (n=4), 5
<i>Hard of hearing*</i>	1	3	2	3
<i>Race*</i>	6 African, 2 Coloured	10 African, 2 Coloured	3 African, 1 Muslim, 2 Coloured	12 Coloured, 2 African
<i>Region</i>	Western Cape	Western Cape	Western Cape	Western Cape
<i>School(s) attended</i>	Wittebome	Wittebome	Mary Kihn, Observatory De la Bat, Worcester Unknown Hearing school Noluthando, Khayelitsha Wittebome	Wittebome

**Information for some participants was incomplete*

Table 3.1 Summary of participants' background information

3.3 Elicitation materials

A picture-based elicitation task was used based on Woodward's (1993) adaptation, for use with sign languages, of the Swadesh list, a list of 100 lemmas list typically used in lexicostatistics to compare linguistic varieties. A total of 65 lemmas were selected from this list for the purposes of this study (see Table 3.2) because it is difficult to use a single sign for some lemmas, as it depends on the context, or because pictures of the concept were not available. The elicitation material (see Figure 3.1) used illustrations adapted from child language studies and also incorporated some English/Afrikaans words. This was because in some cases the images were hard to identify or it was difficult to illustrate a word with an image, as in the case of abstract concepts. Both English (from the inception of the school in 1897) and Afrikaans (introduced in the 1960s) were used as languages of instruction at Wittebome until 2014 when Afrikaans was gradually phased out and South African Sign Language became the medium of instruction. Participants were asked to look

at the pictures (with or without English/Afrikaans words), presented as a slideshow, and provide the sign for those concepts.

1. all*	26. grass	51. other*	76. warm*
2. animal	27. green	52. person	77. water
3. bad	28. heavy*	53. play	78. wet
4. because*	29. how	54. rain	79. what
5. bird	30. look for*	55. red	80. when
6. black	31. husband*	56. correct*	81. where
7. blood	32. ice*	57. river	82. white
8. child*	33. if*	58. bug*	83. who
9. count*	34. kill*	59. salt	84. wide*
10. day	35. laugh	60. sea	85. wife
11. die	36. leaf	61. sharp*	86. wind
12. dirty	37. lie	62. short	87. with*
13. dog	38. live*	63. sing	88. woman
14. dry	39. long	64. sit	89. wood
15. boring*	40. string*	65. smooth*	90. worm
16. dust*	41. man*	66. snake	91. year
17. earth*	42. meat*	67. snow*	92. yellow
18. egg	43. mother	68. stand	93. full*
19. grease*	44. mountain*	69. star	94. moon
20. father	45. name*	70. stone*	95. brother
21. feather*	46. narrow*	71. sun	96. cat*
22. fire	47. new	72. tail	97. dance
23. fish	48. night	73. thin	98. pig
24. flower	49. not*	74. tree	99. sister
25. good	50. old	75. vomit*	100. work

Table 3.2 Woodward's (1993) adapted Swadesh list²

² Words with an asterisk were left out of the picture elicitation task as used in this study.

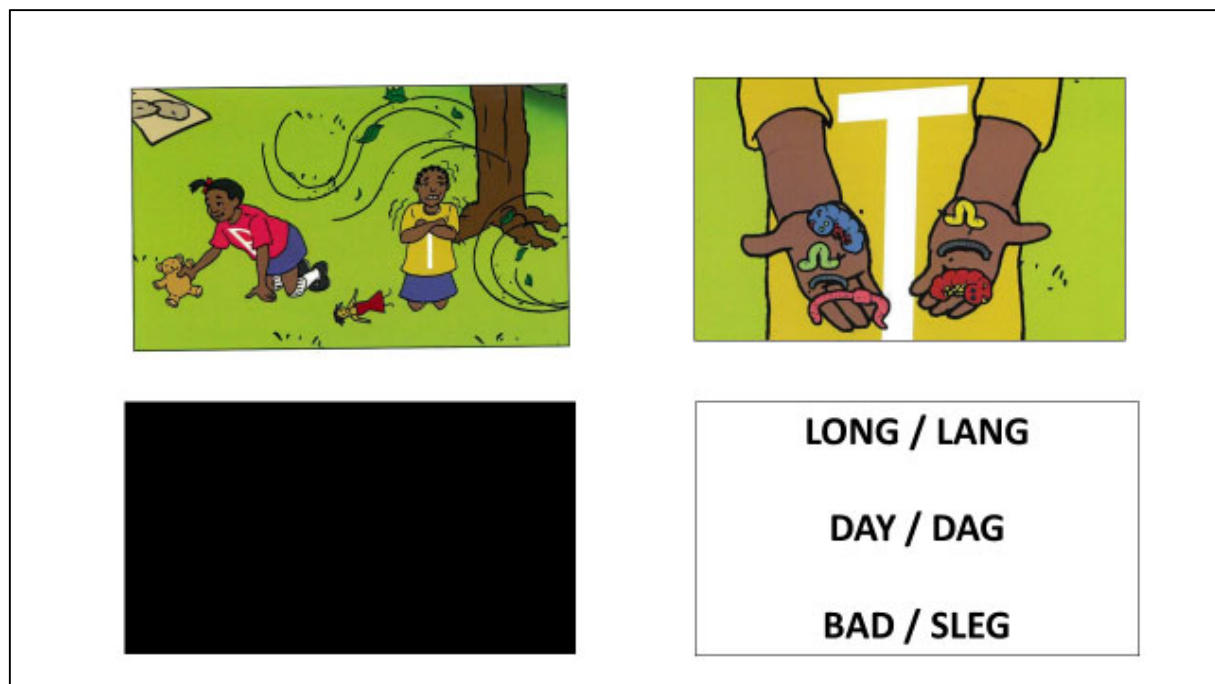


Figure 3.1 Examples of elicitation materials including pictures adapted from Southwood and van Dulm (2012)

During the picture-based elicitation task administered to Group 1, a research assistant helped to facilitate the elicitation from the young children by providing a description of the lemma so that they could provide the sign for that lemma without having to read the words accompanying the pictures. This was unnecessary for Groups 2, 3 and 4 as they were able to read the words accompanying the images, as well as those without accompanying images. However, the research assistant still facilitated the sessions for each group because some of the images looked similar. For example, one slide showed the image of a woman singing with a microphone and dancing and some participants provided the incorrect sign: rather than eliciting the sign for SING, the picture elicited the sign for DANCE. Another slide showed the image of a man dancing and listening to a song on the radio and some participants, instead of providing the sign for DANCE, provided the sign for SING or LOUD-MUSIC. Another example was an image with trees along a river, so that the participants referred, incorrectly, to the image provided as TREE. However, the research assistant intervened in these cases and pointed to the image for the group again to make sure that they focused on a specific part of the image and thus provided, for example, the correct sign when eliciting the sign RIVER.

In addition to the picture-based elicitation task, focus group interviews with groups 3 and 4 were conducted in order to obtain insight into the participants' views on lexical change (see Chapter 2). These interviews incorporated general questions to elicit opinions on how participants' lexicons have changed over time. Two group interviews were conducted with the older participants, one of which also included two young adults, and one group interview was conducted with the young adult participants. These interviews were video recorded. The information collected in these interviews, where participants discussed signs they used before, was relevant to answering the research questions. The question schedule used during the interviews is provided in Appendix 2. The questions asked during the interviews were related to three themes, namely the reasons for signs changing, generations of Deaf family, and opinions on variation in SASL. The interviews took place after the picture-based elicitation task was completed.

3.4 Data collection

The data were collected by means of a picture-based elicitation task, discussed in section 3.3, administered by a research assistant, a background sociolinguistic questionnaire and, for the two older groups, focus group interviews. As noted above, a research assistant, a Deaf adult from the Wittebome community, assisted with data collection because an SASL teaching assistant at the school or the researcher might have influenced the participants to assimilate to their variety of SASL. Furthermore the signing of the learners might have been inhibited if they felt that the person is their teacher so they must sign "correctly" rather than naturally. The researcher conducted the interviews, together with the research assistant, because it did not matter whether the group assimilated to the researcher's variant of SASL during the interviews.

The criteria for the selection of the research assistant was that they had to be an unfamiliar person so that the learners would accommodate less to their signing, i.e. someone the learners did not know well and had not been taught by before. The research assistant also had to be approachable, that is someone who could be asked questions, could make sure a learner understood the questions and who expected learners to respond. This research assistant was not a participant but only helped with data collection from the learners and the older participants.

For data collection from Groups 1 and 2, equipment and resources were transported to the school, namely two video cameras, tripods, pictures, questionnaires, consent forms and two memory cards

for the two video cameras. The data collection sessions were held at the school during classroom time and used an available projector. The principal and one of the teachers assisted us to bring participants together. The chairs were set up in horseshoe shape so that everyone could see each other in front of the research assistant when eliciting the signs using the pictures and words in English/Afrikaans that were displayed on the slideshow.

Data collection also took place at the Deaf Community of Cape Town (DCCT) after the Sunday church service, with older Deaf people, who were members of the congregation. The Deaf female leader explained to the Deaf congregation after the service about the variation in SASL research. The female leader and one of her staff, who was also a participant, and who typically serves the older Deaf clients at DCCT assisted us. Unfortunately, very few young Deaf people attended the service and only two young adult participants, aged 24 and 29, could be found. They were therefore put into a group with five participants aged between 42 and 48, which was administered as Group 3/4. A further ten participants age 50+ were recruited. However one of them had to withdraw from the group. Data collection took place in the staff offices and, as with data collection at the school, the chairs were set up in a horseshoe shape for video recording. These participants were divided into two groups to be recorded with two cameras at the same time. The research assistant elicited signs using pictures and words displayed on the PowerPoint overhead on the white wall in front of each group.

The most difficult problem was finding young Deaf people aged 23 to 29 at the DCCT, as it is possible that young Deaf people do not frequently socialise with older people or are not interested in visiting the DCCT. It was important to include young Deaf people to discover if their lexicon differed from the other generations of SASL users from Wittebome. Fortunately, an organisation known as eDeaf gave agreement to assist and recruit young Deaf adults who were students at college doing learnerships (practical placements). Therefore five young adult participants were recruited, one of whom was a 29 year old male. Interestingly, an orthodox Muslim Deaf female, covered with a black niqab (a veil that covers the face, showing only the eyes) joined the group. I felt that it was important that the participant should feel included in the group, because the participant often felt left out by deaf students who do not communicate with her. As a deaf person it is difficult to understand what a person is saying without showing facial expressions, which is the case with people who cover their face. Sign languages commonly use non-manual markers,

including facial expressions, to convey grammatical meaning. The participant agreed to take part, which meant removing her niqab, and therefore felt included in the group. However, my research assistant could not facilitate the data collection with the group because he is male and one of participants, also a male, needed to withdraw from that group. The researcher took over the role of the research assistant to elicit the data and the interview took place in a private room with the four Deaf female participants, aged 23 to 26, administered as Group 3. Fortunately, the participants all knew the words in English/Afrikaans that were used in the picture elicitation task and were able to contribute each sign without me explaining what it meant. During the data elicitation the researcher attempted not to get very involved with the group in order to avoid them assimilating to the researcher's variety of SASL, as previously mentioned.

The interviews took place after the picture-based elicitation task was completed. In the interviews the participants discussed the signs they had used in the elicitation part. A question schedule was used (Appendix 2). The questions were related to three themes, namely the reasons for signs changing, generations of Deaf family, and opinions on variation in SASL.

3.5 Data analysis tools

In this section, the transcription methodology will be outlined. Firstly, section 3.5.1 describes the nature of the data, namely video recordings of the data elicitation sessions. Secondly, in section 3.5.2 the phonological descriptions of the SASL signs, focusing on the manual parameters and their description, are provided. This data informs the quantitative analysis which began with Group 1's first variant, the signs elicited from all participants for the sixty-five lemmas. These variants were compared to the variants elicited from the other groups to see if any changes occurred.

3.5.1 Video recordings

The data consisted of video recordings where either one or, in some instances, two cameras were used per session. When using two cameras per session, each camera was placed in such a way to cover half the participants in the room and the other camera to record the other half. The two cameras would record simultaneously and would ensure that a clear image of each participant was available for visual data analysis. The participants were divided into smaller groups as follows:

- Group 1 = 8 participants (two groups of 4, using one camera to record the data)
- Group 2 = 12 participants (two groups of 6, using two cameras to record the data)
- Group 3 = 6 participants (one group of 4 and the other two joined the session of group 4 for logistical reasons, using one camera to record the data)
- Group 4 = 13 participants (one group of 9 and a second group of 4 participants, joined by two participants from group 3, using two cameras to record each session)

I initially transcribed the signs elicited for each lemma by typing while watching the first video of four participants, aged 8 to 10 years old, and then watching the other four participants of the same age group. The twelve participants in group 2, aged 16 to 18 years old, were divided into two groups of six each and recorded, with a camera focused on three participants in each session, as I was unable to divide the group of 12 into 3 groups due to time constraints. I therefore transcribed four videos from group 3. Four participants, aged 23 to 26 years old were recorded in one video recording session, resulting in a single video for transcription. A group of six participants, two aged 24 and 29 years old, respectively, together with four aged 42 to 48 years old were divided into two groups of three each, each recorded with one camera. There were therefore two videos to transcribe. The nine participants aged 50+ years were divided into two groups of five and six, respectively, with two cameras in each session. This resulted in four videos requiring transcription. The finer details of the parameter transcription is described below.

3.5.2 Sign transcription

Each sign was analysed in terms of the four main parameters, namely handshape, orientation, location and type of movement. The non-manual features were not included as these were not determined to be significant for the study. Examples of non-manual features include mouthings from the spoken language, mouth gestures, movement of the head (e.g. nodding), movement of torso, cheeks and tongue in-out, eyebrow raise, or eyebrow furrow. For transcription purposes, I primarily used the handshape font developed by the Centre for Sign Linguistics and Deaf Studies (CSLDS), from the Chinese University of Hong Kong for representing the handshapes in the text. I used handshape font illustrations in my transcription table to analyse each sign. Each handshape illustration was rotated and adjusted to indicate both handshape and palm orientation. It was therefore clear in the transcription sheet, from the orientation of the handshape illustration, what

the palm orientation of the sign was. I used New Zealand Sign Language (NZSL) and Danish Sign Language (DSL) handshape illustrations rather than the CSLDS font in the transcription table because the font could not be rotated or adjusted. The CSLDS font was used in the text to explain the analysis and description of the different signs elicited for a particular lemma. I adapted the Berkeley Transcription System (BTS), developed by Slobin et al. (2001), to describe the movement parameter in finer detail.

3.5.2.1 *Handshape and orientation*

A spoken language, such as English, follows a pattern of word formation and where the English sound system normally doesn't use combinations of consonants like *srb-* or *ptl-*, another language would. The same can be said for signed languages where "not all possible combinations of formational features occur" across signed languages, for example, signers don't seem to use every conceivable "combinations of handshapes, locations and movements that can be produced by the body" and even though the handshapes, location and movements might be similar to that used in other signed languages, they might not be combined in the same way (Johnston & Schembri 2007: 100-101).

The handshape of a sign is typically identified based on the initial shape of the hand, while orientation refers to the orientation of the palm and fingers. According to Baker et al. (2016) not much is known of the phonology of sign languages but from those languages that have been studied, it has been noted that the number of distinctive handshapes differs per sign language. Even though some of the studies have identified frequently used handshapes, there is still a need for allophones to be studied. Almost no research on the phonology of SASL is available, with only one small study on syllable codas having been done (Köhlo, Siebörger & Bennett 2017). I opted to use the font created by CSLDS, CUHK³, as illustrated in Figure 3.2, in combination with handshape images from the Danish Sign Language dictionary⁴ and the New Zealand Sign Language dictionary⁵, to transcribe the SASL handshapes and palm orientation.

³ <http://www.cslds.org/v3/resources.php?id=1>

⁴ <http://www.tegnsprog.dk>

⁵ <https://www.nzsl.nz/>

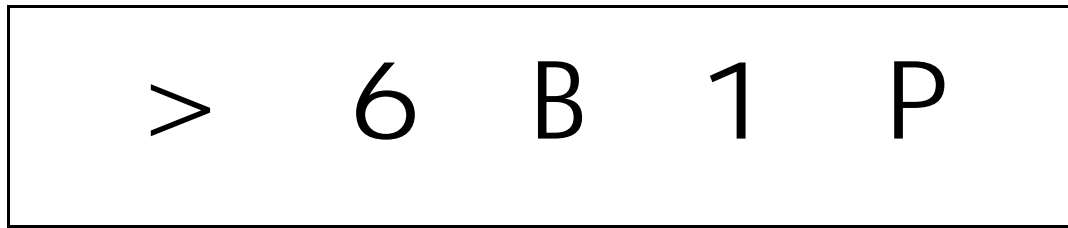


Figure 3.2 Examples of SASL handshapes from the CSLDS font

3.5.2.2 Location

Location refers to the area in space or on the body where the sign is produced. There are four primary locations where signs are articulated, the head, the upper body, the non-dominant hand, and the neutral space (Baker et al., 2016). Figures 3.3 and 3.4 provide an illustration of the locations of particular signs. These drawings were extracted from the Danish Sign Language dictionary and are appropriate for use in analysing signs from SASL.

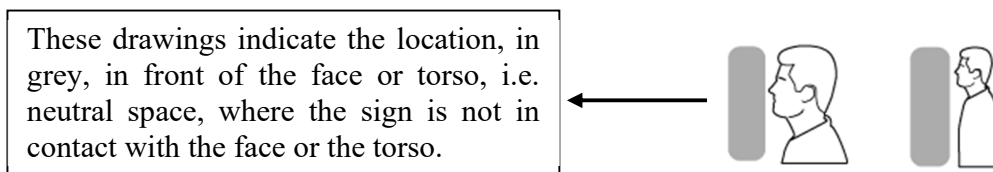


Figure 3.3 Illustration of neutral space locations

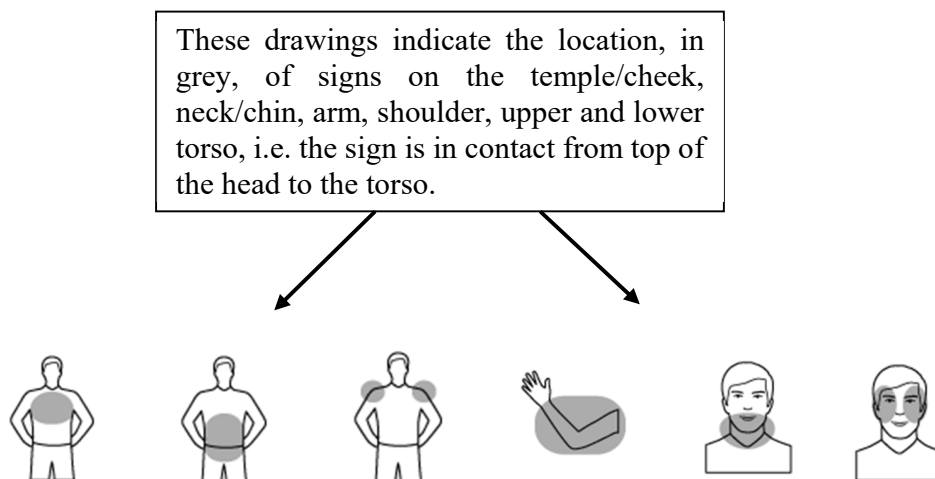


Figure 3.4 Illustration of locations in sign languages (with contact)

3.5.2.3 *Movement*

I adapted the Berkeley Transcription System (BTS), developed by Slobin et al. (2001), to describe the movement parameter. The movement of the hands were transcribed on the basis of movement path direction, movement path shape, movement pattern and internal movement. The movement path shape and the direction were only transcribed if the location of the sign changed. The movement pattern describes the internal movement of the hands, fingers and palm. See Table 3.3 below for transcriptions adapted from the BTS.

Movement path direction → up, down, down and up, up and down, left to the right, right to the left, forward and backward
Movement path shape → straight line, arc, circle, wandering, zig-zag and rotating
Movement pattern → wiggle, bounce, shake, wave, closing, jab, long, bending, change of orientation, wandering and alternating.

Table 3.3 *BTS Annotations*

For example, there are two sign variants of SASL PLAY in young signers and older signers, see Figure 3.5 below. The movement of the hands for these two variants were transcribed on the basis of all types of movement. The movement path direction illustrated in Figure 3.5 (a) can be described as the movement of the hands are moving up and down. The movement path direction illustrated in Figure 3.5 (b) can be described as the movement of the dominant hand is moving forward repeatedly. The movement path shape for both variants is that they are moving in a straight line path shape. Both variants have different movement patterns, with the variant illustrated in Figure 3.5 (a) described as moving with an alternating - side to side – movement pattern, while in the variant illustrated in Figure 3.5 (b) the index finger taps and moves onto the index finger of the non-dominant hand. The variant illustrated in Figure 3.5 (a) has a hand-internal movement in both hands with the wrists bent and alternating moving on each side.



Figure 3.5 (a) *PLAY₁* (Group 1)



Figure 3.5 (b) *PLAY₂* (Group 4)

3.6 Data analysis procedures

In this section, the data analysis procedures will be outlined. Firstly, in section 3.6.1, I explain the use of MS Excel to create a transcription spreadsheet to determine how many different variants each lemma elicited – whether each sign produced by participants was identical, similar or different within four different groups – and to tabulate the different variants in order to determine their distribution across the four groups. Then I discuss the qualitative data analysis procedure for the interview data, in section 3.6.2.

3.6.1 Quantitative data analysis

I analysed the signs regarding how to identify the nature of the variation and the difference between phonological variation (one parameter difference, meaning the signs are similar), and lexical variation (two or more parameter difference, meaning the signs are classified as different). I categorized the sign type based on how many parameter differences between the two or more signs were observed. I distinguished three sign types, namely identical, similar or different as follows:

→ An identical type denotes two signs that have no different parameters.

- A similar type denotes two or more signs which have a small difference, in that one parameter may be different, for example two signs may have identical place of articulation, type of movement and orientation but show a difference in handshape or location.
- Different denotes two signs which have two or more parameters that differ.

Following common practice (e.g., McKee and Kennedy, 2000; Johnston, 2003), signs that were identical or similar, i.e. the signs differed in only one phonological parameter, were counted as a single variant, while signs that were different were counted as different variants. Table 3.4 illustrates the transcription of the signs elicited for the lemma *work*.









Group	Participant	Age	Lemma	Handshape	Location	Movement path direction	Movement pattern	Movement internal	Movement path shape	Type	Identical	Similar	Different
1	P1	10	WORK			Up and down	opening/tap	0	0	1	same	0	0
1	P2	8	WORK			Up and down	opening/tap	0	0	1	same	0	0
2	P10	18	WORK			Up and down	alternating front to back	internal	circle	2	0	0	different
2	P11	16	WORK			Up and down	alternating front to back	internal	circle	2	0	0	different

Table 3.4 Extract from MS Excel transcription sheet

The first four columns in Table 3.4 correspond to the group number, i.e. Group 1, Group 2, Group 3, and Group 4, the participant number, e.g. P1 up to P8 for young children in Group 1, the age of the participant, and the lemma, represented by a gloss. While watching the video recordings, I allocated the first variant as Type 1 to the first, most frequent, variant elicited from P1-P8 and the second variant, Type 2, to the first different sign elicited, either from Group 1, or the most frequent, different sign elicited from Group 2, and so on for all the observed variants. This was because the youngest group, Group 1, was taken as the base-line for comparison, as representative of the current school-lect, and the most frequent variant in that group was taken as the main variant, or first variant. Each row of the MS Excel transcription, illustrated in Table 3.4, corresponded to a token elicited for a particular lemma. For example if each participant in each age group provided one sign, then there were forty tokens for the same lemma, which may, in turn, show phonological

or lexical variation. In the example above in Table 3.4, the four tokens for the lemma *work* show two lexical variants, in other words, two different signs.

I examined the signs elicited from the 65 lemmas and categorised each sign as either identical, similar (one parameter difference), or different to the other variants. The first listed variant in the data generally refers to newer signs, (although some signs are older, e.g. the sign for YEAR which is used by all participants), while the second variant, is one that has typically been in use for a long time, and is used more by older participants, e.g. LIE has three different variants, however the third variant is influenced by another school and can be seen as an example of regional variation. Therefore, some participants in the four groups use the second or third variants, however the children in groups 1 and 2 use the first variant. Moreover, the fourth variant is typically the oldest sign and mostly used by participants 50+ years of age in group 4.

Once all the variants had been identified, each variant – Type 1, Type 2, Type 3 and Type 4 – was given a numerical value of 1 and entered onto a separate MS Excel sheet, as Variant 1, 2, 3 and 4, as illustrated in Table 3.5 (see Appendix 5 for the full dataset). This enabled me to identify all the lexical items elicited and see what amount of variation occurred in each group, as well as to compare the variation across groups, and ultimately see any patterns to indicate language change across age groups. I then analysed the similarities and differences in the lexicon of the different age groups and focused on the extent of change which is possible on the basis of phonological or lexical variation.

Group 2					
	Lemma	Variant 1	Variant 2	Variant 3	Variant 4
1	SHORT	1	1	1	1
1	SUN	1	0		
1	TREE	1	0		
1	PIG	1	1	1	0
1	WHO	1	1	1	0
1	BIRD	1	0		
1	BLACK	1	0		
1	BLOOD	1	0		
1	DIRTY	1	1	1	
1	DOG	1	1		
1	EGG	1	0		
1	SNAKE	1	0		
1	WIND	1	0		
1	YEAR	1	0		
1	FIRE	1	0		
1	NEW	1	0		
1	LONG	1	0		
1	RAIN	1	0		
1	RIVER	1	0		
1	STAND	1	0		
1	STAR	1	0		
1	TAIL	1	0		
1	WORM	1	0		
1	FISH	1	0		
1	GOOD	1	0		
1	WIFE	1	1		
1	PERSON	1	0		
Total		Variant 1	Variant 2	Variant 3	Variant 4
65	Signs	64	42	24	6
		98%	65%	37%	9%

Table 3.5 Extract from MS Excel quantitative data sheet (Group 2)

For the quantitative analysis each column shows a number “1” where signs were produced by the group for that particular lemma and variant. Colours in the variant row correspond with colours in the first column, indicating how many variants for that lemma were elicited. The blocks with no colour/light colour indicate that all participants in each group used this variant. The different colours of blocks in each group (yellow in Table 3.5) indicate that only some of the participants used that particular variant. The blocks with dark grey and a zero indicate that lemmas have no additional variants in the data as a whole. With the data placed in this format, I was able to interpret

the data and establish what the amount of variation is that occurs over time by comparing the groups with each other. This data was derived from the video recordings of sessions with participants as described above.

Furthermore, some lemmas in the first column are coloured red to indicate that for those variants, all the signs produced in that group were identical, but those lemmas highlighted with a light blue colour in column 2 refer to variants that included similar signs (phonological variation). This data allowed me to determine how many variants of the same or different type could be identified, as well as the specific percentages of each variant. From the percentages at the bottom of the table, I was able to see a clear picture of the amount of variation and how/if it differs between the age groups.

3.6.2 Qualitative data analysis (interview data)

For the qualitative data analysis, I watched the recordings of the interviews conducted in groups as described in section 3.4, and transcribed the SASL content in English (see Appendix 6 for the transcriptions of the interview data). The aim of the interviews was to answer the research question on participants' views on lexical variation and change (see Chapter 2, section 2.4). That is, what are the possible causes for how language change has occurred over time and how language contact, which increased as a result of the end of apartheid in 1994, has impacted any language change, while considering some traditional signs that are still passed down from one generation to the next and are still in use. I also looked at the participants' attitudes, behaviours and routines that frequently occur in each age group towards their integration at the residential school or in the Deaf community. Another theme I looked for was the impact of a more social and informal influences on language change and general attitudes towards such changes and differences between groups.

I used a qualitative analysis to observe the respondents with regard to lexical variation. I categorised the information according to common attitudes towards lexical variation, specifically regarding new and old signs. This will help me interpret and better understand the factors that might have influenced the preference of certain variants by some groups, based on the data.

3.7 Ethical considerations

I applied for and received ethical clearance from Stellenbosch University's Humanities Research Ethics Committee to conduct this research (GENL-2019-9098). With regards to the participants' rights, I explained my research to all the participants and then asked for participants' consent, or, in the case of minors, assent, to participate in this research (see Appendix 3 for the Participant Consent Form and Participant Assent Form). The participants who were grade 4 and grade 11/12 learners had asked permission from their parents or guardians to take part in my research project (see Appendix 4 for the Parental Consent Form). I translated the consent and assent forms into SASL (video recorded) and the participants watched these videos before they were asked to sign the hard copy version of the consent/assent form. Note that I am a Deaf researcher and that I am fluent in SASL.

In order to conduct the research at Wittebome School, I asked for, and received, permission from the Western Cape Education Department to conduct the research. I also asked, and received, the Principal's permission and the teachers' permission to administer the picture-based elicitation task in class time, or in the hostel after school. I also asked the school to distribute the parental consent form to the parents/guardians. Participants have the right to know that this research will be published. They also have to know all the different contexts in which the data may possibly be used, and who will be able to access the final research report. I asked permission to use video clips/stills that include images of their faces but I made it clear to them that they can choose whether or not they find this in order. Once I had determined that the participants understood the data collection procedure and what I would be doing with the data and my findings, I proceeded with the data collection process.

In the following chapter, the results of the data analysis will be presented.

CHAPTER 4

Data analysis and results

4.1 Introduction

This chapter consists of two main sections, a quantitative and a qualitative analysis. Firstly, in section 4.2, I will provide quantitative data from the elicited signs, indicating the variation in the four groups of participants. Specifically, the lexical variation in the newer school-lect, used by young children (primary school) and youth (high school), the school-lect used by young adults, which features new and old signs, and the school-lect used by the older adults. I will then discuss the extent of lexical variation, specifying the percentages of variation within the different groups. I will determine how many lemmas elicit one variant, two variants, three variants or four variants. This will enable me to answer research sub-question one, namely, “to what extent is there lexical variation present in the current school-lect?”.

I will then compare each age group's school-lect to determine whether each group has a higher or lower percentage of variants, meaning that the variants indicate change or retention of lexical items. Moreover, the examination of this school-lect will show possible overlap variants between young children and older deaf adults, and/or the effect on each other's lexical variation. I will compare the groups to see whether the variants produced by participants in Groups 1 and 2 differ from the variants produced by participants in Groups 3 and 4, which will enable me to answer research sub-question two, namely, “to what extent does the lexicon of learners currently in school differ from the lexicons of older SASL users of the same school-lect?”.

Secondly, in section 4.3, I will discuss the data that came out of the focus group interviews and conduct a qualitative analysis. There are three themes identified, based on the reasons given for signs that may have changed, attitudes towards variation and language transmission in Deaf families, and the effect of generational Deaf families. In this section I will outline the participants' attitudes towards lexical variation, regarding newer and older signs, enabling me to answer research sub-question three, namely “to what extent do the SASL users in the older two groups feel that their lexicon has changed from when they were at school and why?”.

4.2 Quantitative Analysis

Sixty-five lemmas were used to elicit signs from the different age groups and the different variants were tabulated in MS Excel, as described in Chapter 3. As an example, many signs in each group, especially Group 2, showed a great deal of variation. By comparing the variants used in the older groups and younger groups it is possible to analyse the process of language change with respect to the lemmas used.

4.2.1 Group 1

Signs for a total of 65 lemmas were elicited from Group 1 (see Appendix 5 for the full dataset). At first glance, the data show that all the children produced the same variant for every lemma. This variant, as discussed in Chapter 3, is referred to as the first variant across all the groups. Thirty lemmas, or 46%, also elicited a second variant, used by some or all of the Group 1 participants, in addition to the first variant. Of these lemmas, seven lemmas, or 11%, also elicited a third variant, used in addition to the first and second variants. So twenty-three lemmas elicited two variants, while seven lemmas elicited three variants. No lemma elicited a fourth variant among the younger children. Thirty-five lemmas therefore elicited only one variant, that is 54% of the lemmas elicited the same sign only. Of the 30 lemmas which elicited a second variant, 20 of these, or 31%, are only used by some participants. This means that ten lemmas elicited a second variant from all the participants. Of the seven lemmas which elicited a third variant, five of these third variants are used by only some of the participants. This means that two lemmas elicited a third variant used by all the participants. Figure 4.1 below provides an indication of the number of different variants elicited for all the lemmas, and whether they were produced by all the participants, or only some of the participants.

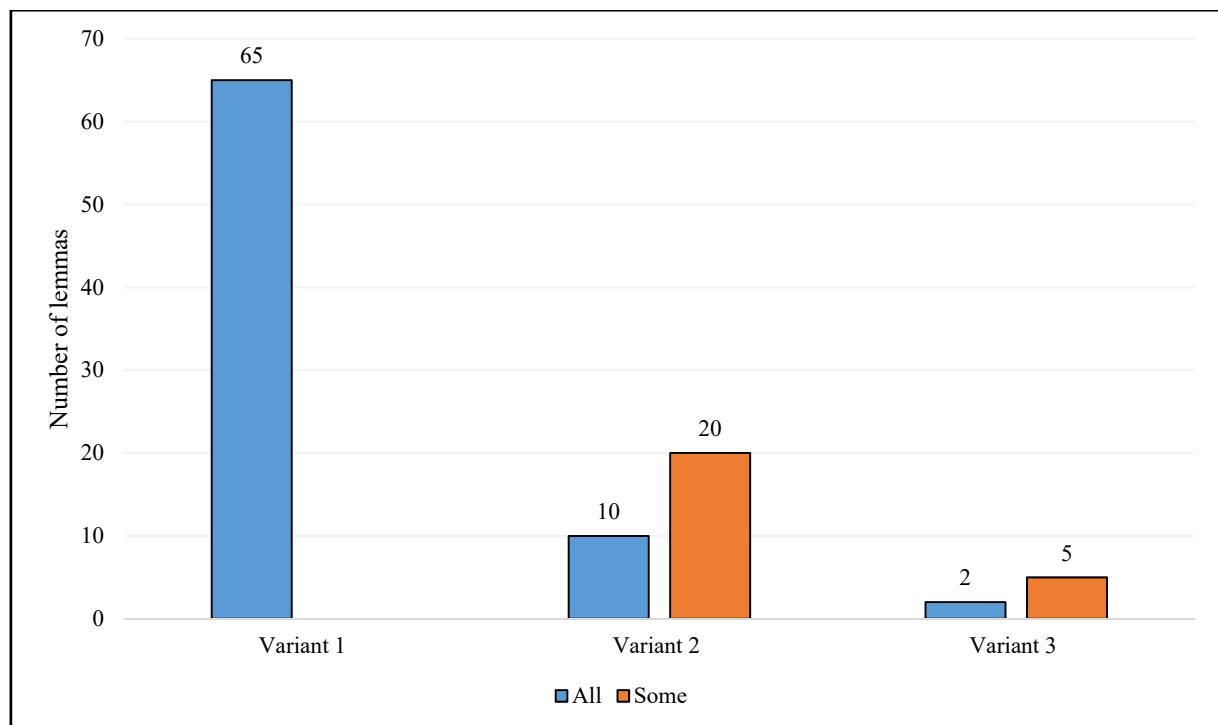


Figure 4.1 Number of variants elicited in Group 1

As mentioned above, 35 lemmas elicited only one variant. Of these signs, 28, or 43%, were identical, i.e., did not differ phonologically. Remember, as outlined in the methodology, signs that were the same with respect to all four parameters and signs that were similar (i.e., differed in only one parameter) were grouped together as one variant. Seven, or 11%, of the elicited signs were phonologically similar (differed in only one parameter).

4.2.2 Group 2

The high school children produced the same sign as the young children for 64 of the lemmas, so 98% (see Appendix 5 for the full dataset). Only one lemma, *wood*, did not elicit the same, first variant used by the young children. Additionally, 42 lemmas, or 65%, also elicited a second variant, used by participants, in addition to the first variant, with the exception of one sign where the second variant was used instead of the first variant, namely *WOOD₂*. Another 24 lemmas, or 37%, elicited a third variant, used in addition to the first and/or second variants. Finally, 6 lemmas, or 9%, elicited a fourth variant, used in addition to the first, and/or second, and/or third variants. In total, 19 lemmas (29%) elicited two sign variants, 20 lemmas (31%) elicited three sign variants

and four lemmas (6%) elicited four sign variants. Twenty-two lemmas elicited only one variant, that is 34% of the lemmas elicited the same sign only across all participants. Of these, 21 were the same as the first variant produced by the young children, while one, WOOD₂, was the same as the sign produced by Group 3 and 4. Three lemmas, or 5%, elicited a first variant for only some of the participants (*green*, *white* and *woman*). Of the 42 lemmas which elicited a second variant, 16 of these, or 25%, were only used by some participants. This means that 26 lemmas elicited a second variant from all the participants. Of the 24 lemmas which elicited a third variant, 20 of these, or 31%, elicited a third variant from only some of the participants. This means that four lemmas elicited a third variant from all the participants. Of the six lemmas (9%) which elicited a fourth variant, all of these elicited a fourth variant from only some participants. This means none of the lemmas elicited a fourth variant from all the participants. Figure 4.2 below provides an indication the number of different variants elicited for all the lemmas, and whether they were produced by all the participants, or only some of the participants.

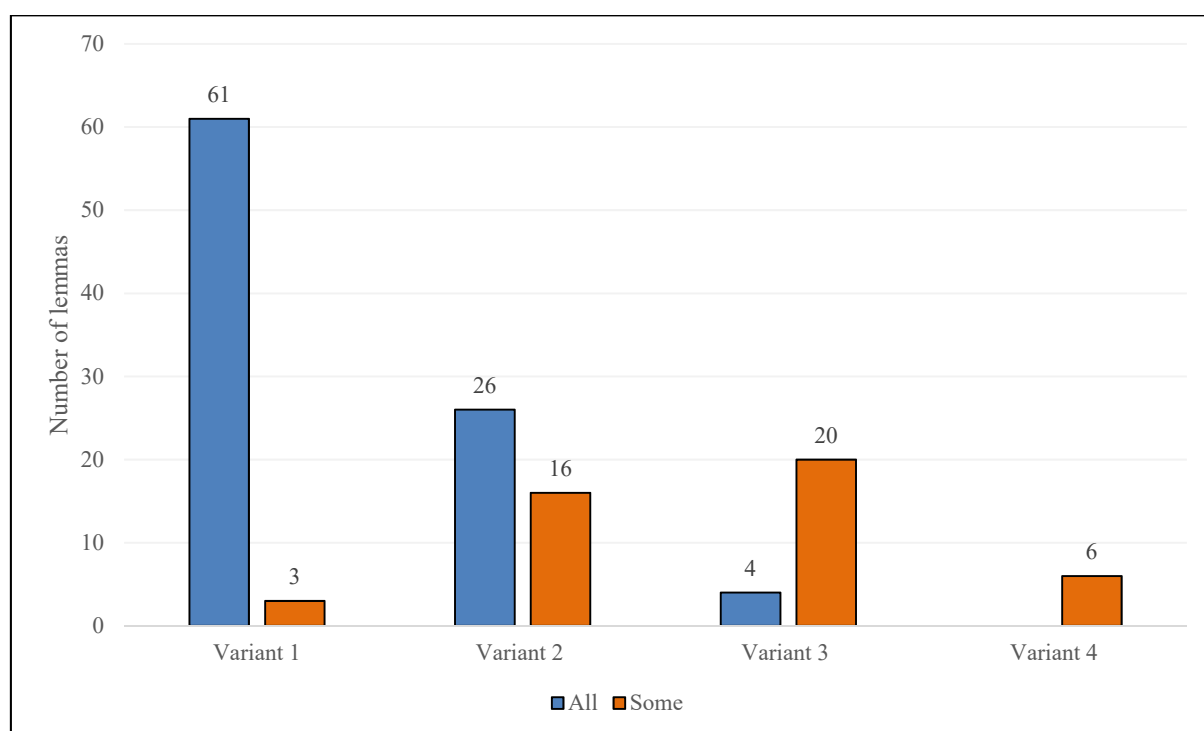


Figure 4.2 Number of variants elicited in Group 2

As mentioned above, 21 lemmas elicited only one variant. Of these elicited signs, eleven, or 17%, were identical, i.e. did not differ phonologically at all, while ten, or 15%, of these elicited signs were phonologically similar (differed in one parameter).

4.2.3 Group 3

Group 3 consisted of recent school leavers, young adults, who are students and study at eDeaf, learning different training skills. These young adults had all attended the same school, Wittebome, however, some of the participants had not attended that school from grade one. The participants produced the same first variant as Group 1 and 2 for only 56 of the 65 lemmas, or 86% (see Appendix 5 for the full dataset). For this group, 34 lemmas, or 52%, elicited a second variant, used by participants in addition to, or instead of, the first variant. Additionally, another 9 lemmas, or 14%, elicited a third variant used in addition to the first and/or second variant. Finally, 3 lemmas, or 5%, elicited a fourth variant, used in addition to the first and/or second and/or third variant. In total, 23 lemmas (35%) elicited two sign variants, only 7 lemmas (11%) elicited three sign variants, while no lemma elicited four sign variants, a pattern that is similar to the variation in Group 1, just with a different distribution of sign variants. Thirty-five lemmas elicited only one variant, that is 54% of the lemmas elicited the same sign across all participants. Of these, 29 lemmas elicited the first variant only, that is 45% of lemmas. Eleven lemmas, or 17%, elicited the first variant from only some of the participants. This means that nine lemmas, or 14%, did not elicit the first variant as an option. Of the 34 lemmas which elicited a second variant, 13 of these, or 20%, were only produced by some participants. This means that 21 lemmas elicited a second variant from all the participants, of which six elicited only one (identical) sign, namely, FLOWER₂, MOTHER₂, PLAY₂, WHITE₂, WOMAN₂, and WOOD₂. Of the nine lemmas which elicited a third variant, seven of these, or 11%, elicited a third variant from only some of the participants. This means that only two lemmas elicited a third variant from all the participants. Three lemmas, or 5%, elicited a fourth variant from some of Group 3's participants. This means none of the lemmas elicited a fourth variant from all the participants. Figure 4.3 below provides an indication of the number of different variants elicited for all the lemmas, and whether they were produced by all the participants, or only some of the participants.

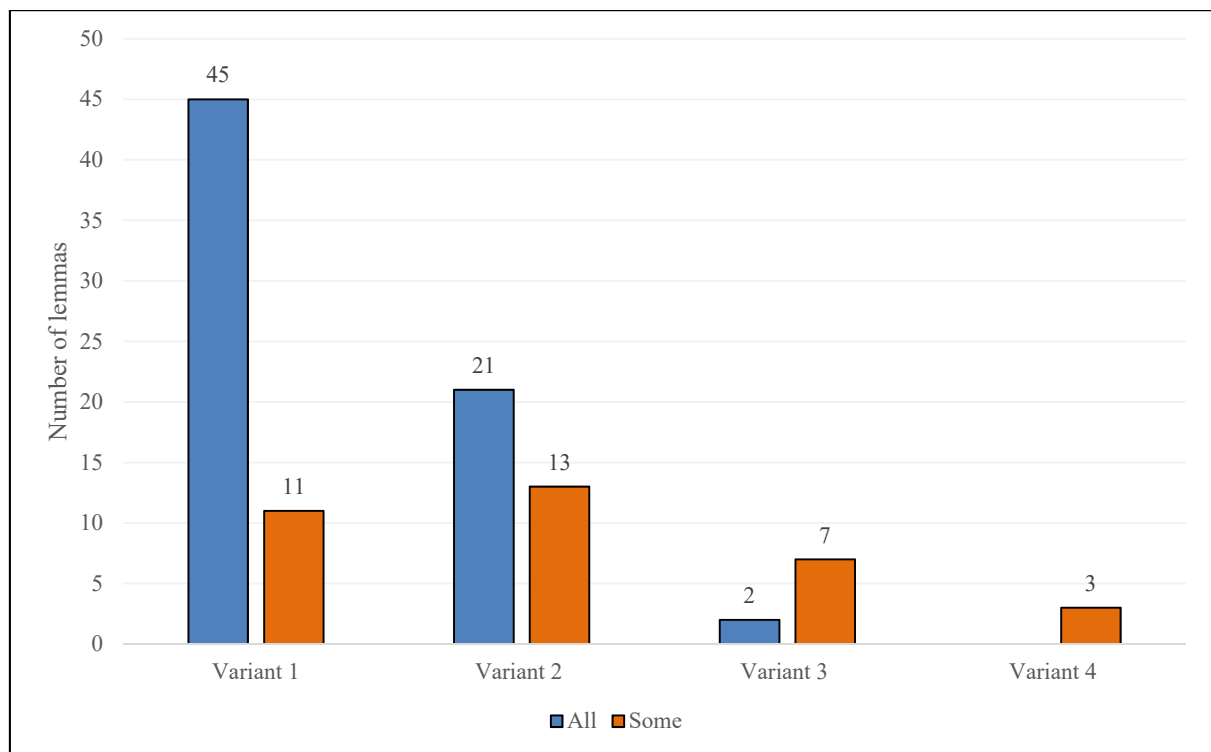


Figure 4.3 *Number of variants elicited in Group 3*

As noted above, 29 lemmas elicited only the first variant. Of these signs, twenty-three, or 35%, were identical, i.e. did not differ phonologically at all, while six, or 9%, of the first variant were phonologically similar (differed in one parameter).

4.2.4 Group 4

The deaf adults who comprised Group 4, were either employed at the same school as a teaching assistant, employed at Deaf community of Cape Town (DCCT), or were pensioners who had attended the same school. The data shows that these older adults produced the same, first, variant for only 45 lemmas, or 69% (see Appendix 5 for the full dataset). However, 33 lemmas, or 51%, also elicited a second variant, used by participants, in addition to the first variant. Additionally, another 11 lemmas, or 17%, elicited a third variant, used in addition to the first and/or second variant. Finally, 5 lemmas, or 8%, elicited a fourth variant, used in addition to the first, and/or second, and/or third variant. In total, 16 lemmas (25%) elicited two sign variants, five lemmas (8%) elicited three sign variants and one lemma (2%) elicited four sign variants. Forty-three lemmas, therefore, elicited only one variant, that is 66% of the lemmas elicited the same sign only

across all participants. However, of these 43 lemmas, only twenty-six lemmas, or 40%, elicited the first variant, and of these lemmas, 12, or 18%, elicited a first variant from only some of the participants. This means that 31%, or 20 lemmas, did not elicit the first variant as an option. Of the 33 lemmas which elicited the second variant, two of these, or 3%, are only used by some participants. This means that 31 lemmas elicited a second variant from all the participants. Of the 11 lemmas (17%) which elicited a third variant, only one of these was produced by only some of the participants. This means that ten lemmas elicited a third variant from all the participants. Of the five lemmas which elicited a fourth variant, two of these, or 3% elicited a fourth variant from only some participants. Figure 4.4 below provides an indication of the number of different variants elicited for all the lemmas, and whether they were produced by all the participants, or only some of the participants.

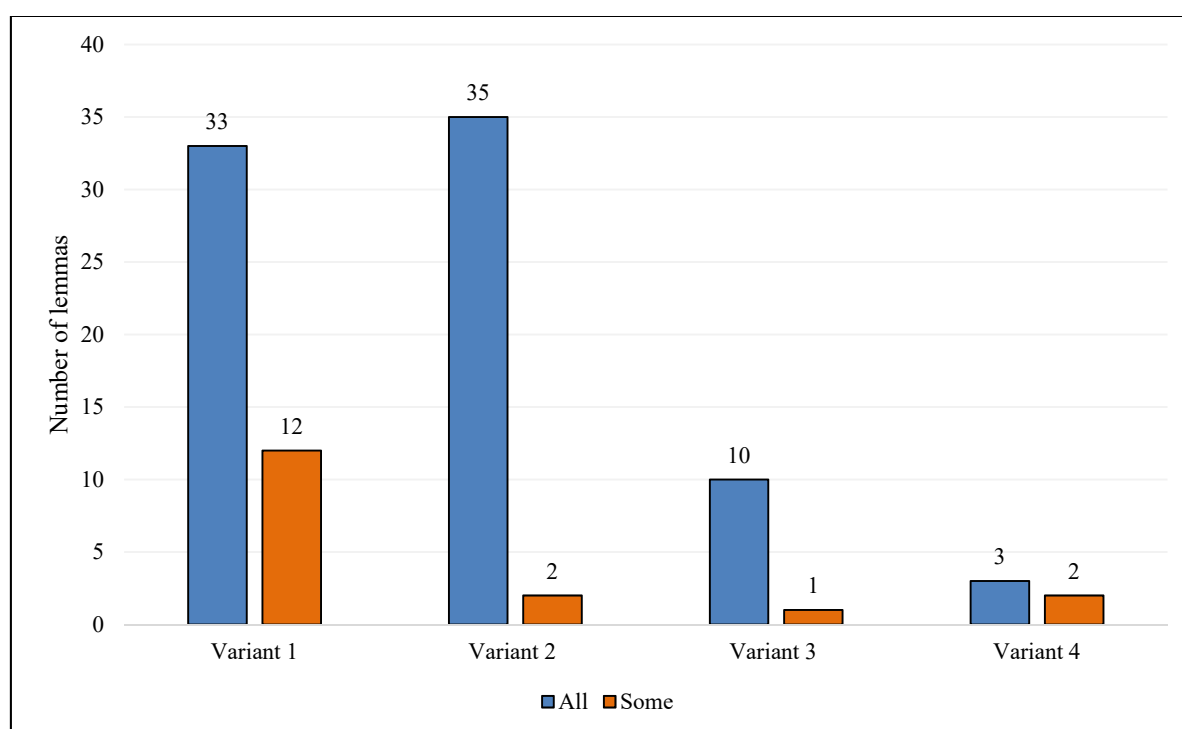


Figure 4.4 *Number of variants elicited in Group 4*

Of the 26 lemmas that elicited the first variant only, 18, or 28%, were identical, i.e. did not differ phonologically at all, while eight, or 12%, of the elicited signs were phonologically similar. In the next section, section 4.3, the results from the four groups will be compared to determine whether there has been a shift in language use, about lexical variation.

4.2.5 Comparing the groups

In order to compare the groups, the data analysis began with Group 1's first variant, the most frequent signs elicited from all the youngest participants for the 65 lemmas. These variants were compared to the variants elicited from the other groups to see if these variants were present in the other groups' lexicons or not. This first variant is described as a new sign, however, many of these first variants overlap with the variants signed by the older groups. For example, the sign YEAR has only one variant in SASL⁶ and this means that the sign is still used today by all age groups. The second variant produced by some or all of Group 1, or the most frequent, different variant produced by Group 2, etc., was labelled the second variant, for example MOTHER₂, and so on.



Figure 4.5 (a) MOTHER₁ (Group 1)



Figure 4.5 (b) MOTHER₂ (Group 4)

Taking the example of MOTHER, we can see from Figure 4.5 that young children in Group 1 use the first variant, MOTHER₁ in their school-lect (Figure 4.5 (a)), while participants in Group 4 use an older sign, MOTHER₂ only (Figure 4.5 (b)). However, the young children use the second variant, MOTHER₂, as well. It is feasible that the apartheid-era Department of Education and Training (DET), which tried to impose standard signs (see Chapter 2), is responsible for the adoption of the sign in Figure 4.5 (a) in place of the sign in Figure 4.5 (b). Some in Group 4 used both signs,

⁶ See the NID online SASL dictionary which includes variation across schools: <https://nid.org.za/dictionary/app>

because some of the deaf adults work at the school, teaching SASL as a school subject. It may be the case that the older signs have existed ever since the school was established by the Irish Dominican nuns. This may also be the case for Group 2, where the older children use both MOTHER₁ and MOTHER₂. However, Group 3 did not use MOTHER₁ at all as they have left school and joined the deaf adults in the community and may have abandoned the newer sign and rather continue to use the older sign where it still exists.

4.2.5.1 Variation across groups

In order to examine the variation across the groups, let us first look at the distribution of variants per lemma. The young children in Group 1 all provided the same sign, the first variant, for the entire total of 65 lemmas, compared to Group 2 who produced the first variant for 64 lemmas (98%). Group 3 produced the first variant for 56 of the lemmas (86%), while Group 4 produced the first variant for 45 lemmas (69%) which is somewhat lower. This shows a difference between the newer and the older school-lects. Interestingly, some participants in Group 4 produced the first variant, possibly because they are employed as teaching assistants at the school (for twelve of the lemmas). Figure 4.5 illustrates the distribution of variants across the four groups.

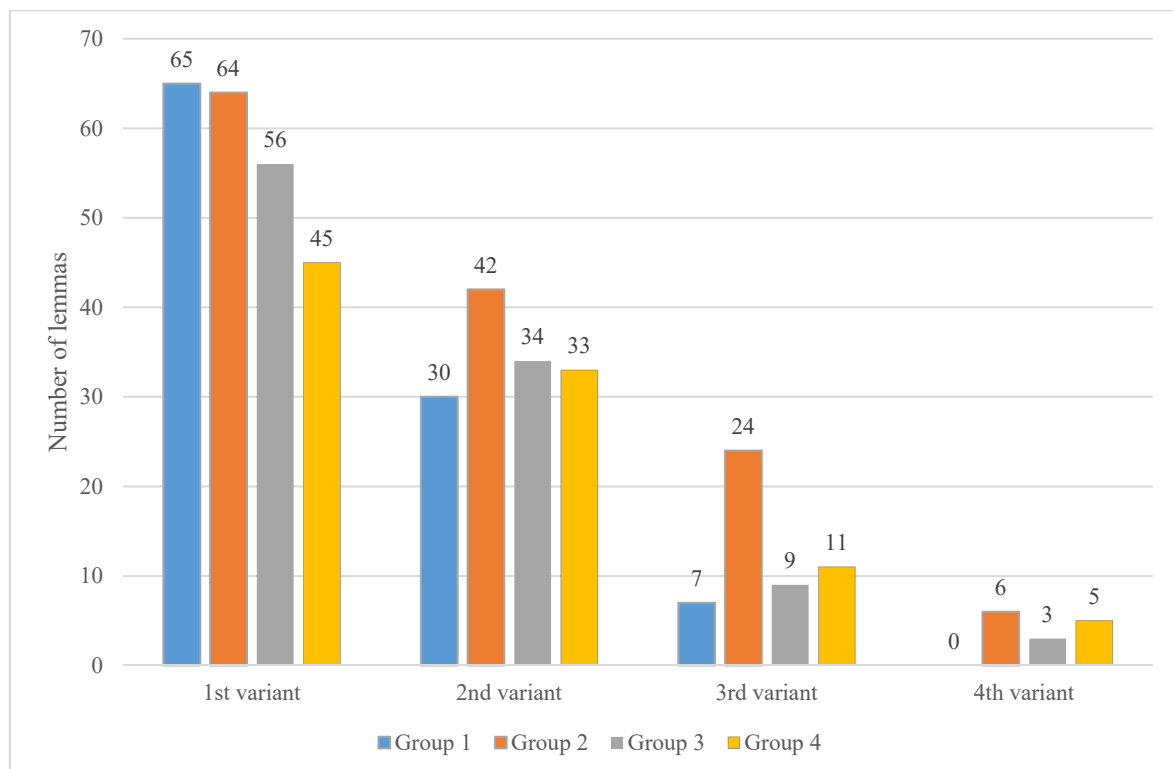


Figure 4.6 *Distribution of variants across groups*

Here we can also see that Group 1 produced a second variant for 30 lemmas (46%), Group 2 produced a second variant for 42 lemmas (65%). In Group 3 the participants produced a second variant for 34 lemmas (52%) and Group 4 produced a second variant for 33 lemmas (51%). Between groups 3 and 4 there is a very slight difference of only one, while Group 2 has the highest occurrence of a second variant and Group 1 the lowest.

Let us consider the example of LAUGH, illustrated in Figure 4.7 below. Both Group 1 and Group 2 used the signs in Figure 4.7 (a) and (b) (LAUGH₁ and LAUGH₂) at school. Some of participants in Group 3 used LAUGH₁ and some used LAUGH₂, while some participants in Group 4 who work as teaching assistants indicated that they also use LAUGH₁. However, these Group 4 participants use the variant LAUGH₂ when they communicate with other deaf adults. Some participants in Group 4 (age 50+) only use LAUGH₂.



Figure 4.7 (a) *LAUGH₁* (Group 1)



Figure 4.7 (b) *LAUGH₂* (Group 2)

The occurrence of third and fourth variants was much lower than for first and second variants. Group 1 produced a third variant for only seven lemmas (11%), and no fourth variants. Group 2 produced a third variant for 24 lemmas (37%) and a fourth variant for 6 lemmas (9%), the highest number of both. In Group 3 the participants produced a third variant for 9 lemmas (14%) and a fourth variant for 2 lemmas (3%), while Group 4 produced a third variant for 11 lemmas (17%) and a fourth variant for 5 lemmas (8%). However, just because these groups produced third and fourth variants, doesn't mean that participants produced three or four signs for those particular lemmas. In many cases the third or fourth variant was produced instead of a first (or even second) variant.

In order to determine to what extent identical signs, specifically the only variant elicited for each lemma, are used by young children compared to the other groups, I looked at which lemmas elicited only one variant in each group. I explored the question of whether the young children's signs would be the same variant as the other groups, or whether there would be more than one variant, like other groups, or whether the young children within the group all used only the first variant or whether only some use it, like other groups. I examined the 35 lemmas (54%) which elicited one identical sign from Group 1 and attempted to compare these to the other groups. Consequently, the number of first and only variants elicited from each group declined from the

initial 35. Group 3 produced one first variant for 29 lemmas (45%), compared to Group 4 who produced one first variant for 26 lemmas (40%), while Group 2 produced one first variant for only 21 lemmas (32%). This is illustrated in Figure 4.8 below.

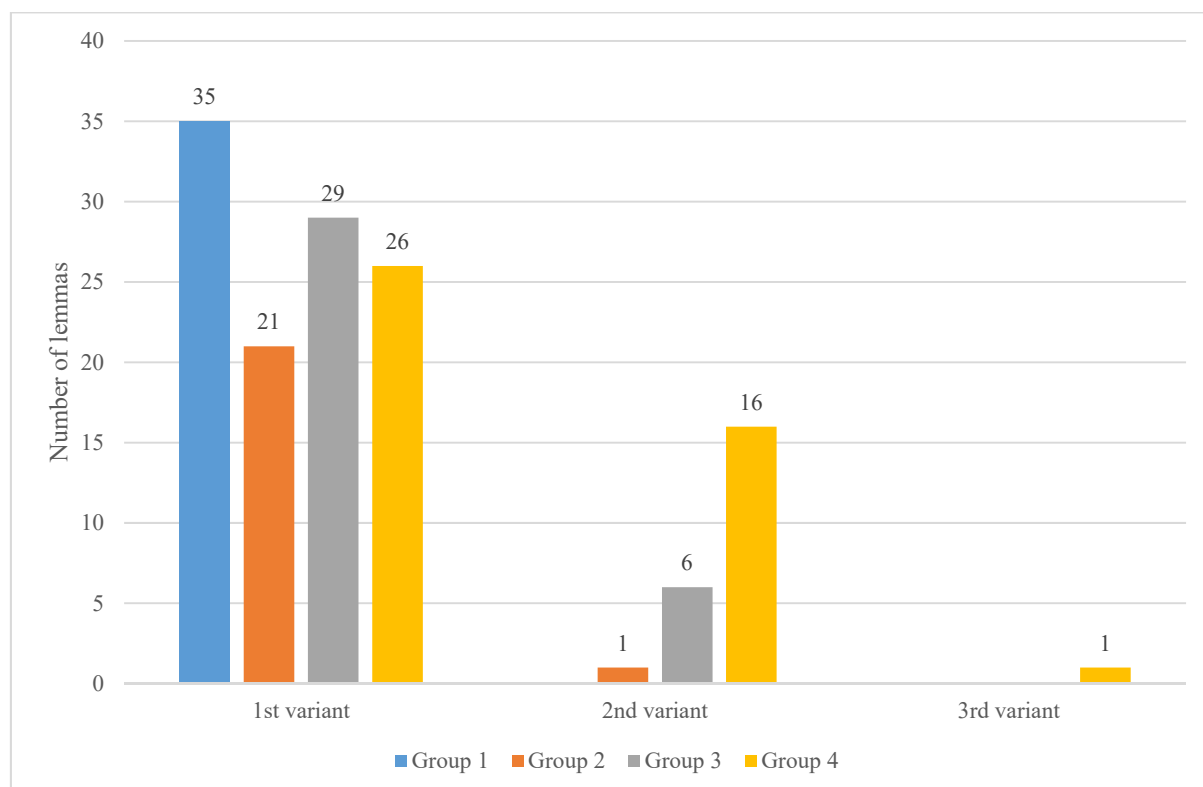


Figure 4.8 Only elicited variant per group

Looking at the other variants, it is clear that, with the exception of the second variants elicited for one lemma from Group 2, six lemmas from Group 3, and 16 lemmas from Group 4, and the third variant elicited for one lemma from Group 4, these variants are not the primary variant elicited from each group.

It is also important, however, to determine how many lemmas elicited the same variants from all participants and/or all groups, or only some participants/groups. In Figure 4.9 below, an indication of the presence of variants for each lemma in terms of participants/groups is given.

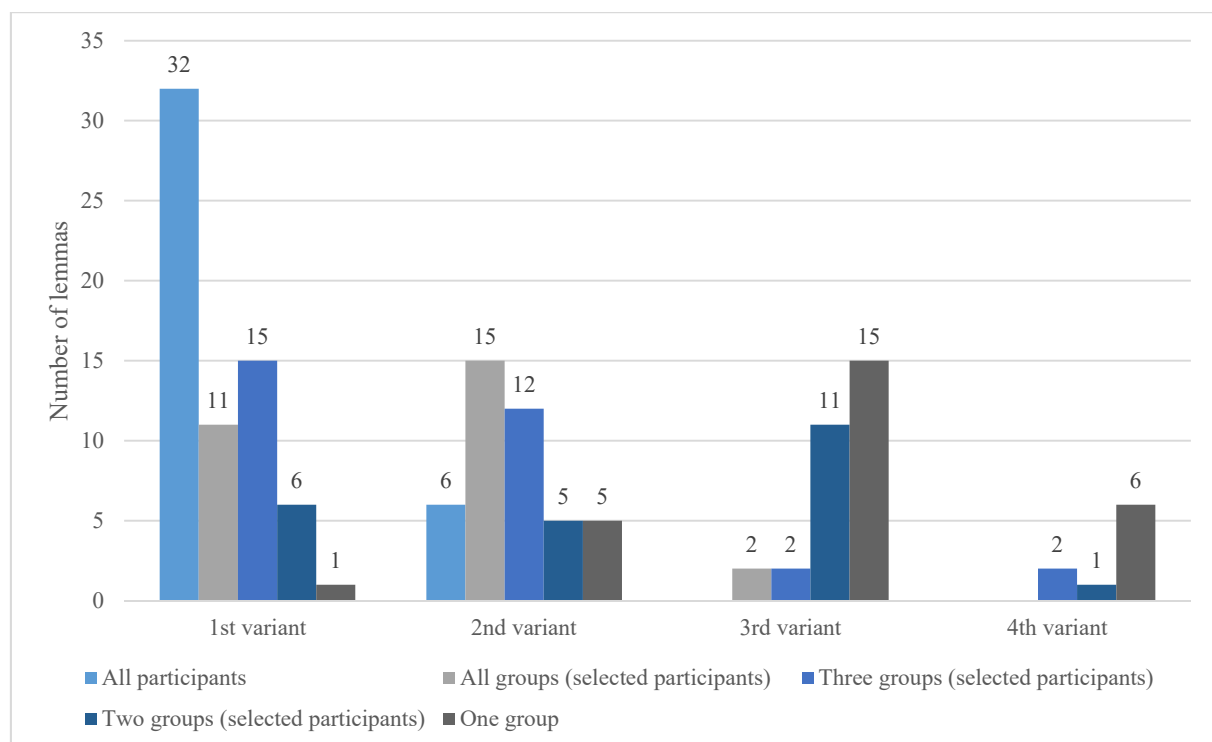


Figure 4.9 *Presence of variants per lemma*

From Figure 4.9 we can see that 32 lemmas elicited the same first variant from all participants in all four groups (49%), and a further 11 lemmas elicited this variant from all groups, although not necessarily from all participants. This means that a total of 43 lemmas elicited the same first variant from all four groups (66%). In terms of the second variant, 6 lemmas elicited the same sign from all participants (9%) and a further 15 lemmas elicited this variant from all groups, meaning that 21 lemmas elicited the same second variant for all groups (32%). These figures indicate that there is considerable overlap between sign variants across the four groups, although there is still notable variation present.

If we look at the first variant elicited as the only sign from all participants, eight of these were identical (no phonological variation). These single, identical signs across all groups were BIRD, BLACK, GOOD, LONG, NEW, PERSON, STAND, and YEAR. The fact that YEAR only has one variant in SASL in general has been mentioned above. This is also the case for BIRD, BLACK, NEW, STAND and GOOD. The sign GOOD, for example, has gestural roots in ancient Rome. On the other hand, the SASL signs BIRD, STAND and LONG are highly iconic (Van Niekerk 2020: 52). In addition, all

signers used the following ten similar first variant signs (i.e. they differed in one parameter in some instances): BLOOD, EGG, FIRE, FISH, RAIN, RIVER, SNAKE, TAIL and WORM. These are also largely iconic signs, with RAIN and FISH specifically showing either “no variation, or very minor variation, when compared with multiple other sign languages” (Van Niekerk 2020: 52). Table 4.1 provides a list of the rest of the first variants which were produced by all the groups. Note, however, that some groups provided a second (or further) variant for these lemmas, while other groups only used the one variant, and not all participants produced these variants, however, the point is that all groups at least shared this one same variant.

BAD ₁	LAUGH ₁	PIG ₁	SIT ₁	WET ₁
BROTHER ₁	LEAF ₁	SALT ₁	STAR ₁	WHERE ₁
DANCE ₁	LIE ₁	SEA ₁	SUN ₁	WHO ₁
DIRTY ₁	MOON ₁	SHORT ₁	THIN ₁	WIFE ₁
DOG ₁	NIGHT ₁	SISTER ₁	TREE ₁	WORK ₁

Table 4.1 Same first variant elicited from all groups

When looking at the second variant, the younger children (Group 1) produced a second variant for 30 lemmas (see Figure 4.8), although only ten were produced by all the children: MOTHER₂, PLAY₂, WORK₂, RED₂, WHITE₂, LAUGH₂, THIN₂, TALL₂, SHORT₂, and DIRTY₂. These second variants are established SASL signs that are used in addition to the first variant which in some instances are newer signs. The older children (Group 2) produced a second variant for 42 lemmas, although only 26 were produced by all the children, which is more than in Group 1, thus already showing more variation. In Group 3, the participants produced a second variant for 34 lemmas, of which all participants produced a second variant for only six lemmas (no first variant). While 15 lemmas elicited a first and second variant from the whole group, leaving 13 lemmas with a second variant that was produced by only some participants. The six lemmas where only a second variant was produced by everyone in the group (no first variant) were: FLOWER₂, PLAY₂, WHITE₂, WOMAN₂, WOOD₂ and MOTHER₂. Group 3 is far more complicated in its composition of variants used when compared to Group 1 and 2. For Group 4 a second variant was produced for 33 lemmas, where all participants produced only a second variant for 16 of those lemmas (no first variant) and 15 lemmas produced a first and second variant, leaving 2 lemmas with a second variant that was produced by only some participants. Looking at Group 1 and Group 2, participants produced a first variant for each lemma with a second variant or sometimes no second variant. Whereas Group 3 and Group

4 did not produce a first variant for each and every lemma and a second variant was offered as the most used variant. This indicates that some of the signs used by Group 1 and Group 2 are not being used by the older participants in Group 3 and Group 4.

When comparing across the four groups, to establish which lemmas elicited a third variant from all the groups, only two lemmas elicited the same sign from all groups, namely DANCE₃ and WATER₃. Group 1 produced a third variant for seven lemmas (11%), and Group 2 provided a third variant for 24 lemmas (37%). Group 3 gave a third variant for nine lemmas (14%), while Group 4 offered a third variant for 11 lemmas (17%), of which ten also had a first and/or second and/or third variant, but one lemma had only a third variant, namely WATER₃. Of all the groups, only Group 2 shows a marked higher presence of a third variant. All the participants in Group 1 produced a third variant for two lemmas only, WATER₃ and SHORT₃, while some participants in this group produced a third variant for another five lemmas, DANCE₃, LAUGH₃, MOTHER₃, THIN₃, and TALL₃. In comparison, in Group 2, all the participants produced a third variant for two lemmas, SHORT₃ and DANCE₃, however, only some produced a third variant for four lemmas, LAUGH₃, MOTHER₃, TALL₃ and WATER₃. In Group 3, some participants produced a third variant for three lemmas, DANCE₃, LAUGH₃ and WATER₃, while in Group 4, some participants used the third variant DANCE₃ while everyone in the group used the third variants WATER₃ and TALL₃. In Groups 1 and 4, no third variant was elicited for the lemma *die*, whereas Groups 2 and 3 did provide a third variant, DIE₃. Then, for the lemma *night*, Groups 1, 3 and 4 produced no third variant, while Group 2 did produce NIGHT₃. From these examples it is clear that Group 2 produced more variants than other groups.

For the fourth variant, Group 1 produced no instances of these signs, Group 2 produced a fourth variant for six lemmas (9%), Group 3 produced a fourth variant for three lemmas (5%) and Group 4 produced a fourth variant for five lemmas (8%). When looking across the groups, there was a total of nine lemmas that elicited a fourth variant from some and/or all group participants. As one can see from Figure 4.8, the most fourth variants were elicited from Group 2, where some of the participants produced a fourth variant for six lemmas, namely DANCE₄, DRY₄, GRASS₄, HOW₄, SALT₄, and SHORT₄. Of these, three were also produced by some participants in Group 3, namely, DRY₄, SALT₄ and SHORT₄, while participants in Group 4 also produced fourth variants for DRY₄ and SHORT₄. Group 4 participants produced a fourth variant for an additional three lemmas, namely

LEAF₄, PIG₄ and WHO₄, which were not produced by Groups 2 and 3, meaning they produced fourth variants for a total of five lemmas. Of these signs, all Group 4 participants used three, DRY₄, LEAF₄ and WHO₄, while two signs were only used by some participants, SHORT₄ and PIG₄. Group 3 and Group 4 did not use three of the fourth variants elicited from Group 2, DANCE₄, GRASS₄ and HOW₄. Of those nine lemmas which elicited a fourth variant, the variants were not used by all participants and only used by some of participants in Groups 2 and 3. This means that fourth variants are not typically present in this school-lect except for those in the 50+ age group.

4.2.5.2 *Amount of variation*

In this section I look at the amount of variation that exists in each group and compare the groups with each other. The number of variants elicited for a lemma is given in Figure 4.10 below. To start with, for example, Group 1 has the same number of variants per lemma as Group 3, however the signs themselves are not the same in these two groups – meaning they don't share the exact same sign for the same lemmas in each group. Furthermore, if one only looks at variants produced by all members of the group, then the amount of variation decreases. For example, only eleven lemmas elicited two or more signs from all the young children in Group 1. In all groups the number of lemmas that elicited one variant was compared to each other, however it should be noted that where lemmas elicited one variant only for one group, it does not mean it is the same variant for all lemmas across the groups in this study.

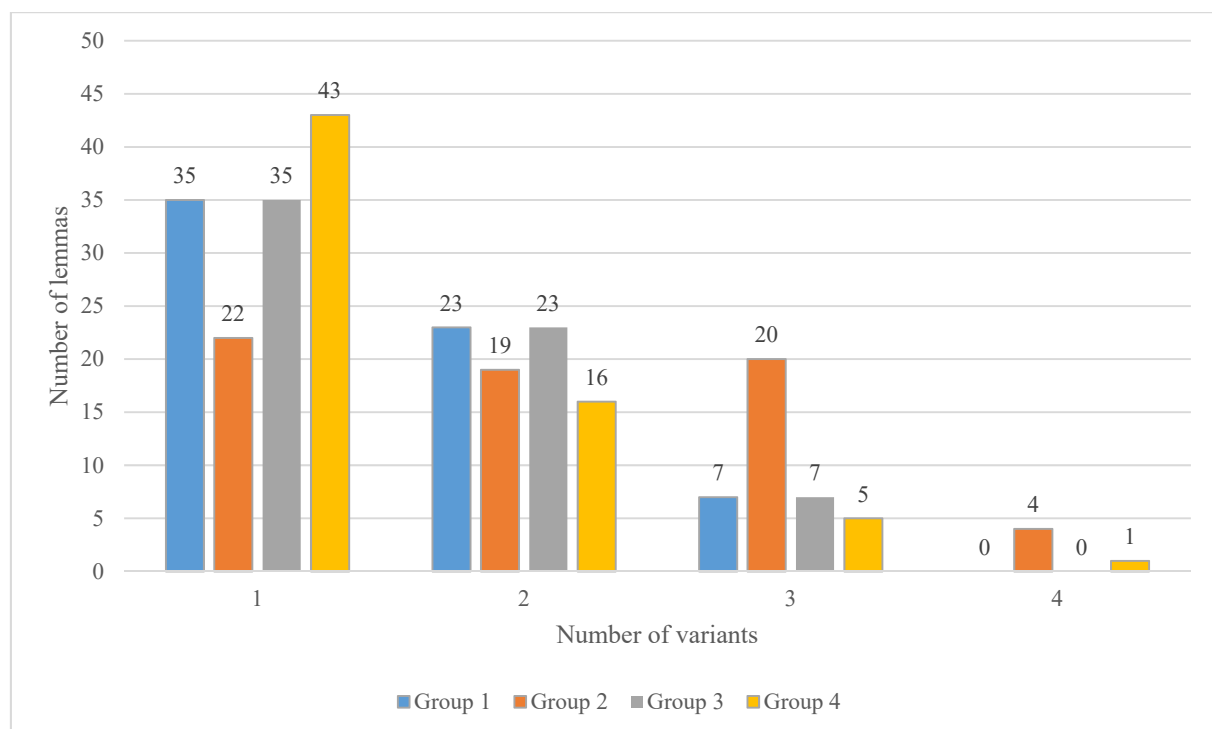


Figure 4.10 Number of variants per group (amount of variation)

The amount of variation from the data (Figure 4.10) shows that for Group 1, the 65 lemmas elicited only one variant for 35 of those lemmas, whereas 23 lemmas elicited two variants and 7 lemmas elicited three variants. Interesting to note, from the data it was observed that Group 1 produced the same first variant for every lemma, which is not the case in the other groups. The result of this data indicates that this group shows more uniformity, or less variation, when compared to the other groups. During the qualitative data process, I observed that possible reasons for the lower level of variation/higher uniformity in this group could be attributed to limited access to social media and other Deaf communities, with teachers being the main source of language input they receive. Due to the age of this group (8 – 10 years old), they are separated from other, older age groups at school which means there is limited language contact with the older children as they mainly socialise with their peers. As is the case with many deaf children in South Africa, many arrive for the first time at a school at a very late age where they acquire language from their peers and teachers only. This can be seen as another possible reason for the higher uniformity.

In Group 2 it was found that 22 lemmas elicited a single variant per lemma, while 19 lemmas elicited two variants per lemma. Another 20 lemmas elicited three variants per lemma and 4

lemmas elicited 4 variants per lemma. The data clearly indicates that in Group 2 there is a much higher level of variation. From further qualitative observations, this level of variation can be attributed to the age of the group (16 – 18 years old) where they have more autonomy and thus access to a wider Deaf community beyond the school environment. They also have knowledge of technology use, coupled with access to the internet and other social media platforms where they watch videos. At this age they are also more active in social events outside of school and often referred to interacting with other Deaf people from other communities. Some of the children in this group indicated that they attended a different school before they joined Wittebome, and they had to learn new variations. In this group there was a discussion around the lemma ANIMAL₂, where two variants were elicited, but some of the participants had a debate about whether the one variant was used at Wittebome or not, because even though they went to the same school, some had never seen that variant. When looking back at the data for Group 1 (8 – 10 years old), the variant being debated about in Group 2 (16 – 18 years old), was never produced by anyone in Group 1. This was an interesting observation and led me to suspect that some variation in the Wittebome community is influenced by children who move to Wittebome from another school. They therefore didn't receive their primary language learning input from the same school. Another possible reason for the variation of ANIMAL₂ could also be that some of the participants' parents were also Deaf and had gone to school at Wittebome as well, hence the knowledge of the variant by some of the participants.

With Group 3 we see an exact same amount of variation as we did in Group 1. Out of the 65 lemmas, 35 had one variant only, whereas 23 lemmas elicited two variants and 7 lemmas elicited three variants. Here as well, a lower level of variation is seen in comparison to Group 2. However, in this case the possible reasons, which can also be deduced from the qualitative data, is that Wittebome used to be a school that only accepted children of colour during the apartheid era, therefore less variation was experienced because of the limited contact between schools. Out of this group only two participants indicated that they had started and finished their formal education at Wittebome school. The rest of the participants (four) had attended other schools for the deaf and after apartheid ended, they joined Wittebome to complete their education. It is suspected that they share variations (similar and same) with Groups 2 and 4 because they spent some time at Wittebome, however at their age, they had more exposure to other variants because at the time of

the interviews they had already spent time with the deaf community outside the school environment. Therefore, some variants learned during their time in school were being replaced by variants used by older members of the community that they've come into contact with since leaving school. It can be said that this group is influenced by recent school variants as well as older variants from older users and they are in a process of changing their variants to those variants mostly used by the community around them.

Even though this group attended school after democracy was attained in 1994, the remnants of apartheid was still felt because for many years schools had developed their own variants due to limited contact between schools. When this group started school, their language input was that of a specific variant in that school and when they transferred to Wittebome, they brought that with them, but also learned the variant used at Wittebome. The participants who had attended Wittebome school in the past also indicated that when they visited Wittebome again since they finished their schooling, they could identify some new variants used by the children at Wittebome and that they could make a connection to variants used by children at De La Bat School.

Lastly, in Group 4, 43 out of 65 lemmas elicited a single variant per lemma, while 16 lemmas elicited two variants per lemma. Another five lemmas elicited three variants per lemma and only one lemma elicited four variants. This means that Group 4 has the least amount of variation in comparison to the other groups but is still closest to the amount of variation seen in Group 1. It was noted from the qualitative data that half of the 43 lemmas with one variant was still being used by participants from all groups, which leads me to believe that some variants are still being used across generations. Possible reasons for the low amount of variation could be that this group (42 – 68 years old) attended formal education during the apartheid era where contact with other schools was limited. The exposure of these participants to other variants was thus limited as well. During qualitative data collection some of the participants (50 years and older) indicated that they didn't want to learn or use other variants other than their own. In stark contrast the younger groups (Groups 1 – 3) appear to be more willing and able to assimilate to the variants used by older signers to communicate, but then they are able to switch back to the current school-lect when they need to. Then again, some participants from Group 4, aged 42 – 48 years old, indicated that they work as teaching assistants at Wittebome School where they've been forced to adapt to new variants as

required by the school. However, some of them are married and when communicating with their spouse, they would have to switch back to the older variant used for communication at home.

4.3 Qualitative Analysis

The qualitative data was collected through conducting focus group interviews where I questioned the participants in different groups (see chapter 3) about their reasons for using different lexical variants and whether they were different from the signs they used at school, and why. I transcribed the interviews while watching the videos of the various groups of young and older adults. I used a questionnaire which they could read then I also asked them the questions in SASL and they answered in SASL. However, sometimes they did not give answers to the questions asked because some of them couldn't remember. Also, some questions were not in the questionnaire, rather they were follow-up questions based on participants' answers. Therefore the groups received the same questions from the questionnaire, but the follow-up questions were different for each group.

After the interviews concluded, I looked at the video recordings of the answers to ascertain any commonalities between the two groups and organised the transcription according to themes. I observed what my understanding was of their sentiment about language contact and language change. I will discuss three themes, first, related to the change of signs that they learned from school compared to what is used in the same school now. Secondly, I will discuss their opinions about, or attitudes towards, lexical variation, and thirdly about the effect of generational Deaf families and if they transmitted their signs to their children.

4.3.1 Signs change

The young adult signers from group 3 explained that some of them went directly to Dominican (Wittebome) while others attended another school for the deaf in the first place and then moved to Dominican (Wittebome). In the Western Cape Province there are five schools for the deaf, as well as one school which only uses oralism. Two schools for the deaf are situated in the Southern suburbs of Cape Town, with one school in Khayelitsha, a township just outside Cape Town. Another two schools are situated in Worcester which is quite far from Cape Town and Khayelitsha (about 150km). The young signers brought signs from Worcester, Khayelitsha, and other places to Wittebome School. Upon arrival at Wittebome, the signers did not know the signs used in that

school, but after about two weeks they were fluent in the new variety. One Deaf female participant in Group 4 (aged 45) noticed that some of the signs at Wittebome had changed and that it was adopted from another school:

There is a very big difference between current signs in Wittebome School and the signs used by the older community who also went to school there. I see that their signs are more related to the signs used in Worcester. It is interesting that they adopted new signs from another school and abandoned their own school signs. (Participant 1- Group 4)

Most of the older adults still used the same school signs they learned when they were at school at Wittebome. There are many examples of the signs they had identified that had changed and they compared the newer and older signs with their reasons for the new variants. Participants therefore provided me with sign variants for lemmas not part of the elicitation task during the interview discussions. However, it is insightful to discuss participants' arguments to support my data on reasons why these changes occurred. The older signers insisted that they would stick to their older variant and they felt that they communicated more easily. They also felt strongly that these older variants were appropriate. For instance, the sign for YELLOW₂ with f -handshape that moves with a circle movement in front of signer compared to sign YELLOW₁ with B-handshape on the ear that moves with a rotating movement. One male participant aged 29 claimed:

The sign for YELLOW₁ with a B-Handshape I feel is inappropriate and it's easy to be confused, and it might be thinking a person is busy scratching in the ear while talking, but actually it's their sign for YELLOW₁. I asked them where they learned the sign from and they said that they attended Dominican School for the Deaf in Wittebome. I said that I also went to the same school, and we agreed that signs have changed from when I was in school, and that my signs are now the 'old' signs. (Participant 3 – Group 3)

Another example speaks to how signers have seen a change in the sign for *brother*. The sign BROTHER₁ is used at Wittebome today, but the older sign BROTHER₂ is located at the waist with = -handshape. Moreover, older signers understood the signs because these signs looked same and have the same meaning. However, some signs have already been given different meanings. The older signers are confused when their signs are used with a different meaning, but they are still

using their original variants. For instance, the sign WHEN has replaced COLD-DRINK, WOOD has replaced MILK, and NO has replaced WHAT.

Examples of the specific signs that were discussed as part of the theme of changed signs are given below in Table 4.2 (these are not part of the modified Swadesh List).

Old sign	Description	New sign	Description
YES	using the A-handshape (Irish fingerspelling) with the movement (start as a A-handshape and flicks open with all fingers spread out, 5 hand palm facing down)	YES	with an 1-handshape that remains closed and move it up and down from the wrist to imitate a head nodding and to indicate the sign as a head classifier
NO	with the T-handshape, with the one hand's index and middle finger on top of the other hand's index and middle finger (flat, both palms facing down) and the movement is pulling apart the two hands, palms still facing down, left hand going left and right hand going right at the same time	NO	with an 1-handshape that remains closed and move it from side to side and down from the wrist to imitate a head negation and to indicate the sign as a head classifier
DEAF	B-handshape, index finger touch ear and touch mouth	DEAF	T-handshape on the ear
MILK	H -handshape (single finger) with the opposite hand's fingers touching the H from the base of the finger and moving to the tip of the finger	MILK	3-closed handshape and the hands are closed to squeeze (movement) milk from the cow (imitating the milking action of an actual cow)
PROBLEM	The top of one hand, with the palm facing down in an y - handshape and a tapping movement.	PROBLEM	y -handshape on the arm location and a tapping movement.
SORRY	\-handshape on the chest and circular movements.	SORRY	1- handshape on the chest with circular movements.

Table 4.2 *Examples of newer vs. older signs*

However, one of the younger signers (25 years old) spoke about “forgotten”:

No, I don't remember exactly and I've completely forgotten which signs have changed.
(Participant 4 – Group 3)

Some of the older signers work at Wittebome School and they said that they must learn and accept the (newer) school signs. However, this does not mean that they have abandoned their older variants. Older signers report that they adapt their signs to the school environment and again when they are

at home or interacting with an older Deaf community. Sometimes, when younger signers meet older signers from Deaf communities from different regions, who use different variants, they would realise that they don't understand each other. They reported that they try to understand each other's variants, through non-manual features, body language, and the context of the conversation. They will also use , finger spelling, and even sometimes write a text on a phone or using mouthing, if they use the same spoken language, e.g., English, Afrikaans and/or IsiXhosa.

An older female participant (group 3, between 42 and 48 years old) commented on the changes in the hand alphabet. Another participant supported her claim by saying:

They use a different sign for the alphabet letter H. Another example is the signing of HOW-ARE-YOU with eyebrow raise. The new way of signing it shows a syntax difference. The grammar should be like this, but they sign HOW-ARE-YOU with eyebrow raised. It looks strange, this is the old grammar modified to simultaneous morphology/syntax. (Participant 1 – Group 4)

There are three different variants to sign a greeting at Wittebome. Today the school uses only one variant of the greeting for different times of the day. For example, the same signer said that:

I use the sign for GOOD-MORNING with the 3-handshape on the chin, but the children told me it was wrong! That it's supposed to be signed as GOOD-MORNING with the X-handshape greeting on the top of the forehead. My point is that I use different signs for GOOD-MORNING with the 3-handshape on the chin, GOOD-AFTERNOON with Y-handshape in the air and GOOD-NIGHT with B-handshape in the air. But now they use one sign for all three greetings. For example, the sign for GOOD-MORNING, GOOD-AFTERNOON and GOOD-NIGHT is signed with the X-handshape on the top of the forehead for all three forms of greeting. Are these accurate signs for greeting? (Participant 5 – Group 4)

Some signers pointed out grammatical differences. Another signer from Group 4 also commented about the ungrammatical nature of variants:

The signs we use at Wittebome is very different to what they use in Worcester. We learned English. I went to school in Wittebome. Some of them struggle to sign different variants

like I do. I didn't learn the Worcester variant because it was like signing ungrammatically.
(Participant 7 – Group 4)

As discussed in Chapter 2, older people received a lower level of education, with very limited literacy skills, especially during the apartheid era. They sometimes do not know the concepts new signs are referring to. This is contrast to younger children who are learning new concepts and expanding their signing vocabulary. The same female participant then said:

Older people struggle to understand new signs and when we explain it to them, we must expand on the concept. For example, the word EDUCATION is signed with initialised signs using ED from the alphabet. I would have to explain to them that the word EDUCATION means school, where you learn to read and write. Once I've explained it, they will grasp the meaning. At work I'm responsible for the programme that takes care of the old people in our community. Sometimes a person will be signing to them, but they struggle to understand them. They will call me to be a relay interpreter for them. I've been able to adapt to their signing dialect. I don't want the older people to feel left out from the younger group and I feel that they should interact with and learn from each other. (Participant 1 – Group 4)

4.3.2 Attitudes towards lexical variation

Signers reported in the interviews that in the time of apartheid they realised they were using different signs from those used in other schools when they met each other for school sport events, As discussed in Chapter 2, because of the separation in deaf education, schools for the deaf have developed different variants of SASL. There is physical distance between schools and limited contact. Older people explained that they had had one variant for most of their lives, which was taught by hearing teachers or nuns who introduced foreign education and sign language to schools. One of the younger female participants indicated that she wanted to understand what was being signed when they communicated in similar or different signs from each other, because they came from different schools. She said:

Sometimes deaf people would use similar signs to mine, even though they came from other schools for the deaf in different regions. Sometime I repeat or ask if they have a different

sign and I adapt to match their sign. But if I still don't understand, they would fingerspell a spoken word and then I would understand.

Signers have become aware of lexical variation.

Two signers from Group 3 said they didn't want to learn any new variant and that they preferred to use the Wittebome variant. One of them also added that she's not an adventurous person, and that she's lived her entire life in the Western Cape. The other participant, who is hard of hearing, was only familiar with the Wittebome variant. However, other participants from group 3 (aged 23 – 48 years old) said that they were willing to learn other variants from different regions to broaden their SASL and to communicate and understand each other better. They also said that they liked to meet new deaf people and make new friends. With that being said, they also said that they felt deep down in their hearts that they are proud of their Wittebome variant.

One female participant from group 3 (aged between 23 and 29 years old) said:

It is important for me to expand my knowledge of all the signs and dialects used in the different provinces in South Africa. But I also must know International Sign so that deaf people in the world are able to understand us. I am a SASL user in my country. Informant 3: I agree with informant 1 that she is a SASL user. (Participant 1 – Group 4)

A male participant from group 4 (aged between 42 and 48 years old) commented:

I believe that I am a SASL user in my country and I feel I must know the variations within SASL. (Participant 4 – Group 4)

Another signers from group 4 said:

I've seen Bibi and Razaq, who are deaf interpreters, when they sign SASL so I'm learning it for the first time whenever I see them. However I still prefer the Wittebome school-lect. (Participant 6 – Group 4)

The participant also said that he missed his old school variant from Wittebome, because he moved to a new school and had to learn a new variant. But after he finished school, he went back to his signing community and once again had to adapt his signing to that of the community again.

It seems likely that signers have no choice but to acquire both the older and newer variants in order for them to communicate with a range of signers of different ages. They have to adapt to the variants used in the communities they find themselves in. On the other hand, some older signers were not willing to learn a different variant because they felt that a new variant would be too hard for them to learn. Some older signers felt that young children developed completely different signs that looked strange and/or inappropriate. They claimed that young children judged their old signs and did not respect them for this difference. So they've decided to pay no attention to lexical differences. They respect and rather distance themselves from children who like to use different signs or change signs. Some older signers indicated that they didn't socialised with young people because of signs that they did not understand. They're not willing to try to communicate in another way to grasp what was being said. They would rather call another Deaf person to act as relay interpreter between them and younger signers, such as the participant who works in the program for old people at the Deaf association. Older people prefer to communicate in a variant that is comfortable rather than learning a new variant.

4.3.3 Generational Deaf families

The Deaf community is relatively small, where many deaf children are born into non-deaf communities where they don't have the experiences of Deaf generations to learn from. Because deaf children are mostly born to non-deaf families, they are often raised in a dominant spoken language world and such a deaf child of a hearing family does not have sufficient exposure to an accessible language, nor do they have a role model to look up to like a Deaf child of a Deaf family.

One female participant, who was aged around 25 years, explained that she had a Deaf cousin who lived in Johannesburg, Gauteng:

She went back and stayed there for good. When my cousin would socialize with my friends who were from Wittebome she would sign to them in the Wittebome variant because my friends are all from the Western Cape and they did not understand her. But we would

communicate, and she would adjust her Johannesburg variant. I don't know why she uses the Johannesburg variant with me even though she knows I am from the Western Cape. I have to ask her repeatedly what her signs mean, maybe because we are family. (Participant 1 – Group 3)

The other participant who is hard of hearing indicated that they went to Wittebome School and had two Deaf older aunts who went to school at Worcester, but they didn't communicate with them because they used the Worcester variant and their niece did not understand this variant. They would communicate through lip-reading. The next participant told us that she has a Deaf family and her brother, cousin, daughter, and her husband are all Deaf. Her family uses the Wittebome variant at home, but her daughter moved to the school in Worcester and has subsequently learned a different variant. She brought her new variant home to communicate with her family, however, many in her family did not understand her new variant while some of them managed to understand. She started to use both variants at home.

Another participant (group 4, aged between 42 and 48 years old) said:

I have two older Deaf sisters and they mainly use our Wittebome school-lect. I sign both new and old dialects because I work to serve the Deaf Community of Cape Town (DCCT). When I communicate with my older sisters over video call, I use a DCCT variant because of the influence from DCCT. But my older sisters don't understand when I do this. Then I remember that I must switch to their 'old' Wittebome school-lect. I also have two Deaf brothers-in-law who are married to my two older sisters, and they also use the 'old' Wittebome school-lect. They live in Kimberley, approximate 954 kilometres away from Cape Town. They often contact me through video chat and sometimes they struggle to understand what I was signing because of my dialect, then I must repeat for clarification. I usually switch to a dialect that they use when we communicate. (Participant 1 – Group 4)

4.4 Summary

From the quantitative analysis it was found that the group with the most intra-variation was group 2, the 16- to 18-year-olds. While the most inter-group variation was found in group 1, between the youngest group, 8- to 10- year-olds, and the two adult groups (3 and 4, signers older than 18 years).

From the qualitative analysis it appeared that most older adults (group 4) felt strongly that their (older) sign variants were appropriate, and that they communicated more easily with each other. They also observed that some signs had developed new meanings, leaving them confused. Some observed that young Deaf children and older Deaf adults do not connect with each other and that older adults do not want to learn new variants. In contrast, the young adults (group 3) were willing to learn other new variants from different regions to broaden their SASL and to enable them to communicate with each other better. They are able to switch variants depending on the signing community. They wish to adapt their sign lexicon because they feel it is important to expand one's knowledge of all the signs and varieties used in the different South African provinces.

In the following chapter the results will be discussed to reflect the findings and to make some conclusions and further recommendations.

CHAPTER 5

Discussion and conclusion

5.1 Introduction

This chapter will discuss the results of this study and use these results to answer the research questions as set out in section 2.4 (section 5.2). Challenges encountered in the research will be outlined (section 5.3) and recommendations for future research will be given (section 5.4).

5.2 Answering the research questions

In this study the aim was to answer the question “to what extent is lexical variation present in three generations of SASL users who attend/attended the same school in the Western Cape?”. From the data elicited on the basis of 65 lemmas, I identified up to four different variants for each lemma (see Figure 4.6 in Chapter 4). The quantitative data analysis results reflect both internal and external factors that affect the amount of variation with and across groups due to age, which I will discuss in this section.

In terms of the first research sub-question, “to what extent is there lexical variation present in the current school-lect?”, it is clear that lexical variation is present. As shown in Chapter 4, for Group 1, 30 lemmas elicited two or more variants, while for Group 2, 43 lemmas elicited two or more variants. The data clearly indicate that in Group 2 there is a much higher level of variation. The reasons for this variation are not evident, but they may be related to exposure to other variants through social media and the broader community, together with the influence of the new SASL curriculum introduced in 2016.

Research sub-question two asks “to what extent does the lexicon of learners currently in school differ from the lexicons of older SASL users of the same school-lect?”. Participants in Group 1 shared a variant for all 65 variants, whereas in Group 4, the older SASL users, only used this variant for 45 out of 65 lemmas (69%). This leads me to conclude that many of the older signs are still being used. However, Group 1 produced a variant for 20 lemmas that are not produced by the older participants (Group 4) at all. This is possibly a result of language contact between schools

and through exposure to the internet. It is worth noting that participants in Group 4 attended school during the apartheid era (1948-1994) and used a school-lect that may have been strongly influenced by Irish Sign Language, since the Dominican order founded the school. However van Niekerk (2020) has shown that only 11% of signs currently being used at Wittebome are borrowed from ISL.

With respect to variation within the current school-lect, participants from both Groups 1 and 2 are still in school but in Group 2 the children are older with more access to additional language input outside the school. For example, for 20 lemmas (31%) the second variant was only used by some of group 1's participants. It is the question as to why these second variants were not used by all participants. Some young children were able to produce a second variant, which given its use in the other groups, seems to have been acquired from older signers (such as the older participants in other groups), while others do not use the second variant at all. One reason is that they might only know the new signs rather than the older signs, having acquired SASL from their peers and teachers, in school. Other children from the same age group may have acquired SASL from deaf children of deaf adults who use more variants because they have access to variants used by older signers. Sometimes the deaf children develop their own signs during interaction in the playground, away from formal learning in the classroom. The majority of hearing teachers seem to use only one variant, and then only teach that one variant in language teaching and learning at the school. Possibly there are differences between how hearing people and deaf children can learn and use different sign variants.

With respect to the third variant elicited for some lemmas, group 2 showed a higher presence of a third variant than the other groups. One possible reason for this is that those in group 2 are of an age (16 – 18 years old) where they are in the process of assimilating signs learned in school and those used by the outside deaf community which they now have become exposed to. Similarly, with respect to the fourth variant, group 2 offered more variants than any of the other groups. Group 1 had the least variation, with no fourth variants. It is most likely that deaf children in group 1 (8 – 10 years old) have limited exposure to other variants outside of school. As mentioned above, many of the signs used by the older generation of signers are still being used by group 1, however the fourth variants used by only group 4 (older signers) seem to be used less and could possibly lead to those signs disappearing because they are not being used anymore. Very few fourth variants

were elicited in all groups and it is evident that the fourth variant in general is used less than other variants. This means first, second and third variants are used more and have a stronger influence on the regional dialect of SASL in the Western Cape. More specifically, group 1 produced no fourth variants for any lemma, while group 2 produced a fourth variant for six lemmas (the most of all groups), with group 3 producing a fourth variant for only three lemmas, and group 4 producing a fourth variant for five lemmas.

One factor in the variation observed, and the difference between the younger children's school-lect and the older participants' school-lect is the recently introduced Curriculum and Assessment Policy Statement (CAPS) (Morgan et al. 2016). To support this new curriculum the Western Cape Education Department (WCED) has provided five schools of the deaf in the province with additional funds to develop the Learning and Teaching Support Materials (LTSM) for their respective schools. The schools then decided to pool their funds together and appoint one service provider to develop the LTSM at one central point. As part of the project, weekly terminology meetings have been held with representatives from all provinces to establish the variants used by students. The terminology was recorded and used in the development of the LTSM project material by the curriculum development unit at Stellenbosch University (SUHandlab). The deaf schools in the Western Cape then received this material without any screening committee being involved and at the same time the material would be submitted for screening by the DBE for the national catalogue which other schools across South Africa could access and purchase.

Much of the feedback from non-deaf teachers about the material was that it still included the use of different variants, and it was difficult for them to work with. However, in the Western Cape the two deaf teachers and most of the teaching assistants were reluctant to provide any feedback, for unknown reasons⁷. When asked about the impact observed from using the same material across the five schools, the manager of the curriculum development unit at Stellenbosch University (SUHandlab) answered that variation was still very much used by learners. They would attend class and follow the content presented in one variety of SASL on video, as well as what the teacher would use, but, in the playground, they would often revert to a different variety of SASL. However,

⁷ Information provided by the curriculum development unit at Stellenbosch University (SUHandlab).

it was suggested that foundation phase (Grade R to Grade 3) material should cover a maximum of two variants to build the foundation, whereafter from intermediate phase (Grade 4) the students could more easily be exposed to and use different variants. The impact of the LTSM project and how it has possibly affected the standardising or levelling of SASL variants is still unknown and undocumented, which is an area that requires further research.

The third sub-question asked “to what extent do the SASL users in the older two groups feel that their lexicon has changed from when they were at school and why?”. The answer to this question comes from the qualitative data, the focus group interviews, which provide anecdotal evidence related to the three themes identified: the change in the signs that they learned from school compared to what is used in the same school now, their opinions about lexical variation, as well as about generational Deaf families and whether they transmit their signs to their own children.

There are different ways in which the younger and older groups learned new variants, such as through social events or more formal spaces like work. The older signers insisted that they would stick to their older variants and use what they felt was more appropriate. Younger signers would meet older Deaf people from communities in different regions, who use different variants. They manage to communicate with each other in spite of different regional variation and other Deaf people were able to understand variants in different regions and influence other Deaf people as well. Older people received a very different and watered-down type of education, with very limited literacy skills, during the apartheid era and that could be why they did not know some of the new signs for new vocabulary in comparison to young children who received and expanded their signing vocabulary. Young adults and some older persons have changed their attitudes about lexical variation and believe that is important to expand their knowledge of the different varieties used in the different provinces in South Africa. In contrast the attitude of older signers who are over 50 years old was that they do not want to learn new variants and do not have a connection with young children as they felt that they did not have respect towards their traditional variety of SASL.

As noted in chapter four, Deaf communities in the Western Cape community use a lot of Afrikaans mouthing which is sometimes mixed with English too. Interestingly, participants appear to manage to communicate with each other despite different regional variation and other Deaf people were

able to understand variants in different regions and influence other Deaf as well. According to the older participants, Coloured and Black Deaf people from other regions adopted the Wittebome variant the most and abandoned their variant, especially the hard of hearing who speak Afrikaans.

5.3 Research challenges

There were several different challenges in the methodology of this project. Firstly it was difficult to recruit young adults aged 20 – 35 who had attended Dominican (Wittebome) School for all of their schooling. These young people do not come to visit the local Deaf organisation. An attempt to use a social event where some younger Deaf signers would be in attendance, was only partly successful, because they preferred to rather enjoy the event than sit down with us for research data collection.

It was also the case that some of group 4 participants were working at the school. They were therefore exposed to the current variants by the children, which may have affected the results.

The process of data collection was a huge challenge and problematic because available images for elicitation of the data were limited, due to the abstract nature of some of the lemmas. Some images also confused the participants and I had to include words in English and Afrikaans because it did not always work well with pictures only. Also, during the elicitation process, I, or the research assistant, had to point at pictures to make sure the participants produced the signs for the correct lemma.

As a Deaf person, I feel that my access to English has always been limited and even more so for academic English as required for this research. Therefore, doing the literature review chapter was very challenging and a SASL interpreter (with sufficient qualification and experience) was often utilised to interpret the text into SASL and again from SASL into written English. However, the ideas and analysis of this thesis are all my own work. I would like to see other Deaf academics access a master's programme such as this one, and therefore would propose that the university consider that some Deaf candidates be offered the option of attending an intensive English second language program to learn and investigate the goals of writing and improving this skill before embarking on a master's thesis.

5.4 Recommendations for future research

In this section I will look at recommendations for possible future research. An avenue of further research could be to compare the current and older Wittebome school-lect with current and older varieties of Irish Sign Language (ISL) and with SASL varieties used by older signers who live in Gauteng, North West, Mpumalanga and Limpopo and who attended Dominican School for the Deaf in Hammanskraal. The reason for this is that Irish Dominican nuns employed at Wittebome established the school at Hammanskraal. There may be many similar shared variants in the two school-lects and in ISL. This research project could involve collaboration with Deaf researchers in Ireland, through data collection of ISL variants from older signers in Dublin. In this regard, see van Niekerk (2020) for comparison of various SASL variants with lexical variants in ISL and other sign languages. Van Niekerk (2020) found only 11% overlap with ISL and SASL, with his Wittebome informants, but it is still worth exploring further.

Another avenue of future research is to understand the impact of the SASL LTSM project and how it may be affecting the standardising or levelling of SASL variants, as empirical evidence of this doesn't yet exist. Is it possible that the development of the LTSM for use in teaching the SASL curriculum in schools may influence a more standard variety of SASL, leading to levelling of the variations used? Related to this is the question of whether all schools for the deaf in South Africa use the same material or whether each school has its own resources for SASL as a subject. An example of levelling is very evident, for example, in New Zealand and the UK, so the question is also whether South Africa would follow a similar route.

Connected to the issue of curriculum-driven standardisation is the issues raised by Morgan et al. (2016) around the implementation of the SASL curriculum and the use of SASL. The questions raised include: how and which signs would be selected for use in the curriculum?, what was the final decision by the DBE regarding SASL and variation and what progress has been made?, and is it Deaf-expert led?. Answering such questions will contribute to understanding the processes of lexical change and standardisation that are ongoing in SASL.

5.5 Conclusion

In this thesis I set out to examine lexical variation and change in SASL, and more specifically to look at the role that school-lects play. Although the younger participants' lexicons differ from older SASL users of the same school-lect, there is some overlap where the first variant sign produced is used by all groups.

It was found that lexical variation within the 8-10 year old group was lower when compared to the 16-18 year old group which offered more variants than any of the other groups, even though they went to the same school. It is likely that deaf children in group 1 (8 – 10 years old) had limited exposure to additional variants outside the school environment.

The older generation indicated that they do not necessarily understand the signs used by the younger generation because they've used one variant for most of their lives, which was taught to them by hearing teachers or nuns who introduced foreign education and sign language to the school. However, some of the signers (middle age and young adults) indicated a willingness to learn new variants within SASL in order to understand and communicate meaningfully with the younger generation.

Furthermore, it was noted that when learners move from one school to another, they are expected to learn and understand the new variant in the new school. Different variations between schools can happen due to factors such as lexicon being influenced by the multilingual and cultural background of that area and school and operating in isolation from other schools of the deaf. This means that there is considerable variation across schools for the deaf in South Africa where similar factors influence the lexicon used. Movement between schools often happen for reasons ranging from subject availability, matric as an option, whether a school has a hostel facility or the proximity of the school to the learner's home, etc. Movements can occur within a province (between schools) and in many instances between provinces too, which leads to the assumption that learners (new and old) are exposed to variants from other schools beyond their own province alone.

It was noted during this research that there is a possibility that learners in the foundation phase are only taught limited variants and once they enter intermediate phase, they learn additional variants. This leads to the assumption that the older learners would be able to understand the younger

learners very well, but that the younger learners may struggle to follow older learners because they haven't learnt the additional variants yet.

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APPENDICES

Appendix 1 – Background questionnaires



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Background Questionnaire for Participants

Please fill out a copy of this form

What is your hearing status?

- ☐ Hearing
- ☐ Hard of Hearing
- ☐ Pre-lingual Deaf
- ☐ Post-lingual Deaf
- ☐ Other (please specify) _____

Place of birth: City _____ Province: _____ Country: _____

Education (highest qualification obtained): Grade _____
University/ College degree/ Diploma

What school(s) did you attend?

List all the places that you have lived:

Occupation: _____

What do you consider to be your first language? _____

Is your first language the language with which you are the most comfortable?

☐ Yes

☐ No

If you answered “NO” to the question above, please explain:

What other languages do you use?

When were you first exposed to this/these language(s)?

In what language do you communicate with your family at home? _____

When were you first exposed to South African Sign Language? _____

What is your self-rated proficiency in South African Sign Language? Please circle:

1 being the lowest (unable to sign), 3 being basic signs to communicate, 5 being the highest proficiency (fluent in South African Sign Language)

South African Sign Language Production:

1 – 2 – 3 – 4 – 5

South African Sign Language Comprehension:

1 – 2 – 3 – 4 – 5

In everyday life, when and where do you use sign language? _____



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Background Questionnaire for Parents

Please fill out a copy of this form

Section A:

Parent/Guardian #1

What is your hearing status?

- ☐ Hearing
- ☐ Hard of Hearing
- ☐ Pre-lingual Deaf
- ☐ Post-lingual Deaf
- ☐ Other (please specify) _____

Place of birth: City _____ Province: _____ Country: _____

Occupation: _____

Education (highest qualification obtained): Grade _____ University/ College degree/ Diploma

What school(s) did you attend? _____

Where do you live currently? _____

What do you consider to be your first language? _____

Is your first language the language with which you are the most comfortable?

- ☐ Yes

☐ No

If you answered “NO” to the question above, please explain:

What other languages do you speak?

When were you first exposed to this/these language(s)?

In what language do you communicate with your family at home? _____

In what language do you communicate with your deaf child? _____

When were you first exposed to South African Sign Language? _____

What is your self-rated proficiency in South African Sign Language? Please circle:

1 being the lowest (unable to sign), 3 being basic signs to communicate, 5 being the highest proficiency (fluent in South African Sign Language)

South African Sign Language Production:

1 — 2 — 3 — 4 — 5

South African Sign Language Comprehension:

1 — 2 — 3 — 4 — 5

Are there any members of your (extended) family that use SASL, and if so, who (e.g. aunt, cousin)? _____

If yes, how often is your child exposed to them? _____

In everyday life, when and where do you use sign language? _____

Parent/Guardian #2

What is your hearing status?

- ☐ Hearing
- ☐ Hard of Hearing
- ☐ Pre-lingual Deaf
- ☐ Post-lingual Deaf
- ☐ Other (please specify) _____

Place of birth: City _____ Province: _____ Country: _____

Occupation: _____

Education (highest qualification obtained): Grade _____ University/ College degree/ Diploma

What school(s) did you attend?

Where do you live currently? _____

What do you consider to be your first language? _____

Is your first language the language with which you are the most comfortable?

- ☐ Yes
- ☐ No

If you answered “NO” to the question above, please explain:

What other languages do you speak?

When were you first exposed to this/these language(s)?

In what language do you communicate with your family at home? _____

In what language do you communicate with your deaf child? _____

When were you first exposed to South African Sign Language? _____

What is your self-rated proficiency in South African Sign Language? Please circle:

1 being the lowest (unable to sign), 3 being basic signs to communicate, 5 being the highest proficiency (fluent in South African Sign Language)

South African Sign Language Production:

1 — 2 — 3 — 4 — 5

South African Sign Language Comprehension:

1 — 2 — 3 — 4 — 5

Are there any members of your (extended) family that use SASL, and if so, who (e.g. aunt, cousin)? _____

If yes, how often is your child exposed to them? _____

In everyday life, when and where do you use sign language? _____

Section B: Child

What is your child's hearing status?

- ☐ Hearing
- ☐ Hard of Hearing
- ☐ Pre-lingual Deaf
- ☐ Post-lingual Deaf
- ☐ Other (please specify) _____

Please indicate the child's degree of hearing loss:

- ☐ mild (25 to 40 dB)
- ☐ moderate (40 to 70 dB)
- ☐ severe (70 to 90 dB)
- ☐ profound (> 100 dB)

Age of child: _____

Gender of child:

☐ Male ☐ Female

How old was your child when they were diagnosed as deaf/hard of hearing? _____

How old was your child when they first started learning sign language? _____

How old as your child when they first started attending a school for the deaf? _____

Place of birth: City _____ Province: _____ Country: _____

Current school: _____

Has your child been to other previous places of education? _____

Were all of these previous places of education for deaf children?

☐ Yes ☐ No

Did all of these previous places of education make use of South African Sign Language?

☐ Yes ☐ No

Please rate your child's proficiency in sign language as you see it:

1 being the lowest (unable to sign), 3 being basic signs to communicate, 5 being the highest proficiency (fluent in South African Sign Language)

South African Sign Language Production:

1 — 2 — 3 — 4 — 5

South African Sign Language Comprehension:

1 — 2 — 3 — 4 — 5

Appendix 2 – Interview schedule



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STELLENBOSCH UNIVERSITY DEPARTMENT OF GENERAL LINGUISTICS

Focus group interviews

Interview schedule

Do you think the signs you use today are all the same as the ones you used when you were at school?

Have you changed the signs that you use for any specific reason?

Do you find that the children at Wittebome school today use different signs from the ones you used when you were at school?

Are these signs different from the ones you use today, or do you use the same signs that the children use?

Do you notice that you use different signs from those Deaf people living elsewhere, e.g. Johannesburg?

Do you find that you use different signs with different people in Cape Town if they didn't go to Wittebome?

Appendix 3 – Participant consent and assent forms



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STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

Dear Participant

My name is Susan Njeyiyana and I am a masters student in the General Linguistics Department at Stellenbosch University. I would like to invite you to participate in a research project investigating lexical variation in South African Sign Language (SASL).

Please take some time to read the information presented here, and/or to watch the video, which will explain the details of this project and contact me if you require further explanation or clarification of any aspect of the study. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you initially do agree to take part. If you withdraw, all your information will be deleted. You may also refuse to answer any questions you don't want to answer and still remain in the study.

This study aims to examine the way different users of SASL use different signs for the same things, even in the same community. We are doing this research in order to enable us to better understand lexical variation in SASL, as well as to help us document one of the regional varieties of SASL that are under pressure to standardize.

In this study we will ask you some questions about your background, such as how old you are and where you went to school and we will ask you to complete a picture-based elicitation task where you look at pictures (with or without English/Afrikaans words) and provide the sign for those concepts. We will also ask you some questions about the signs you use today and how they may differ from the ones you used at school and signs that other Deaf people use.

All your responses will be video recorded. These video recordings will be stored on a password-protected computer and will be transcribed by me, a fluent signer of SASL. The video recordings and their transcriptions will be used to help me describe lexical variation in SASL. The results of my research will be shared with other researchers through conference presentations and academic articles and with the Deaf community and other interested people through news articles – in English and in SASL – in the popular media and on social media websites. The video recordings will eventually be stored in an online data repository and other researchers will be able to apply for access to use the videos in their own research on sign language. These video recordings may also be used in the teaching of SASL and Sign Language Linguistics at Stellenbosch University.

None of the information you share with us during this study and that could possibly identify you as a participant will be shared with other researchers or interested parties. Your name will not be used in any of the transcriptions of the video recordings or in any of the articles that result from this study.

There are no foreseeable risks to participating in this research and while you will not benefit personally from the research, the research will help us to understand SASL and its variants better, which may help in creating learning material for SASL learners.

The researcher may withdraw you from this study if they feel it is in your best interests or if you are unable to complete one or more of the tasks required.

If you have any questions or concerns about the research, please feel free to contact me.

Ms Susan Njeyiyana
modiegi@sun.ac.za
082 558 2112

RIGHTS OF RESEARCH PARTICIPANTS: You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research participant, contact Ms Maléne Fouché [mmfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.
You have right to receive a copy of the Information and Consent form.

If you are willing to participate in this study please sign the attached Declaration of Consent and hand it to the researcher or the research assistant.

1. DECLARATION BY PARTICIPANT

By signing below, I agree to take part in a research study investigating lexical variation in South African Sign Language, conducted by Ms Susan Njeyiyana.

I declare that:

- I have read the attached information leaflet and it is written in a language with which I am fluent and comfortable, OR I have watched the video and the information has been signed in a sign language that I am fluent in.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.
- All issues related to privacy and the confidentiality and use of the information I provide have been explained to my satisfaction.

Signed on

.....

Signature of participant

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the participant*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/English/Xhosa/South African Sign Language (SASL)/Other*] and [*no translator was used/this conversation was translated into* _____ by _____].

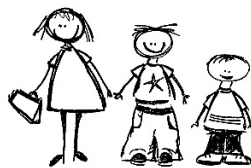
Signature of Investigator

Date



STELLENBOSCH UNIVERSITY

ASSENT FORM FOR MINORS



TITLE OF THE RESEARCH PROJECT: Lexical variation and change in SASL: a case study of a Western Cape school-lect

RESEARCHERS' NAME(S): Susan Njeyiyana

RESEARCHER'S CONTACT NUMBER: 082 558 2112

What is RESEARCH?

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

What is this research project all about?

This project is about the way that different Deaf people use different signs for the same things even if they went to the same school. We are going to ask you to give us the signs for a bunch of things and then we are going to compare those signs with signs that adults who went to your school use. That means that the way that you sign will be teaching us about South African Sign Language!

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

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

Who is doing the research?

My name is Susan Njeyiyana and I am a masters student at the University of Stellenbosch. I really enjoy researching sign language and I am very interested in the signs that children use.

What will happen to me in this study?

You will be asked to come into the room with me and my helper. We are going to explain the steps to you and then show you some pictures. We will then ask you to give us your sign for what you think is in the picture.

Can anything bad happen to me?

There are not supposed to be any things bad that can happen to you while you help us with this research. If anything does make you feel bad or uncomfortable, then you can tell us and we can stop the test immediately. Nobody is going to be mad at you for stopping.

Can anything good happen to me?

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

Will anyone know I am in the study?

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

Who can I talk to about the study?

You can talk to me, Susan, via email (modiegi@sun.ac.za) or via telephone (082 558 2112). You can also contact my supervisor, Dr Kate Huddleston via email (katevg@sun.ac.za).

What if I do not want to do this?

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

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

YES

NO

Has the researcher answered all your questions?

YES

NO

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

YES

NO

Signature of Child

Date

Appendix 4 – Parent/Legal guardian consent form



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STELLENBOSCH UNIVERSITY PARENT/LEGAL GUARDIAN CONSENT FOR CHILD TO PARTICIPATE IN RESEARCH

We would like to invite your child to take part in a study conducted by Susan Njeyiyana, a masters student in the Department of General Linguistics at Stellenbosch University. Your child has been invited as a possible participant because they are Deaf and use South African Sign Language (SASL).

2. PURPOSE OF THE STUDY

This study aims to examine the way different users of SASL use different signs for the same things, even in the same community. We are doing this research in order to enable us to better understand lexical variation in SASL, as well as to help us document one of the regional varieties of SASL that are under pressure to standardize.

3. WHAT WILL BE ASKED OF MY CHILD?

If you consent to your child taking part in this study, the researcher will then approach the child for their assent to take part in the study. If the child agrees to take part in the study, he/she will be asked to complete a picture-based elicitation task where they look at pictures (with or without English/Afrikaans words) and provide the sign for those concepts. This should take about 20 minutes per child, depending on how long they take to provide a sign for each picture, or how long it takes for us to make sure that they understand the procedure and feel comfortable enough to start. This will be done at their school during the school day.

4. POSSIBLE RISKS AND DISCOMFORTS

There are no evident risks to partaking in this study, but should your child start to feel uncomfortable for any reason, the task will be stopped immediately and we will do our best to set your child at ease before letting them return to their class. Should the children experience any form of distress, the researcher, a native signer of SASL, will be on hand to help sort out the problem and reassure the child. The child will also then be referred to the school's counselor, so as to ensure that there are no negative repercussions for the child.

5. POSSIBLE BENEFITS TO THE CHILD OR TO THE SOCIETY

There are no direct benefits to the children who partake in this study. The study aims to broaden our knowledge about lexical variation in SASL. This will help us to understand SASL and its variants better, which may help in creating learning material for SASL learners.

6. PAYMENT FOR PARTICIPATION

The participants will not receive payment or any form of compensation for their participation.

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

Any information you or your child will share with me during this study and that could possibly identify you or your child will be protected. This will be done by using code names for each participant and protecting the data collected. The data will be kept on two hard drives in password protected folders. These hard drives will stay with the supervisor (Dr K Huddlestone) and the researcher (Ms S Njeyiyana) only. They will be kept in rooms that will remain locked to anyone without permission to enter. Participants can choose, at any time, to have their information and data removed from the study, they only need to contact the researcher.

The children will be videotaped and the recordings will be analysed. Clips and stills from these videos may be used in the thesis and in articles and conference presentations resulting from the thesis and with the Deaf community and other interested people through news articles – in English and in SASL – in the popular media and on social media websites. Due to the nature of sign languages, we will not be able to blur their faces or black out their eyes, because this will cause us to lose crucial linguistic information. However confidentiality and anonymity will be maintained as far as possible, given these constraints. The video recordings will eventually be stored in an online data repository and other researchers will be able to apply for access to use the videos in their own research on sign language. These video recordings may also be used in the teaching of SASL and Sign Language Linguistics at Stellenbosch University.

8. PARTICIPATION AND WITHDRAWAL

You and your child can choose whether to be part of this study or not. If you consent to your child taking part in the study, please note that your child may choose to withdraw or decline participation at any time without any consequence. Your child may also refuse to answer any questions they don't want to answer and still remain in the study. The researcher may withdraw your child from this study if they appear to show any signs of distress, even if they do not mention it.

RESEARCHERS' CONTACT INFORMATION

If you have any questions or concerns about this study, please feel free to contact Susan Njeyiyana at 082 885 2112 (SMS only) or via email at modiegi@sun.ac.za, and/or the supervisor Dr Kate Huddlestone at katevg@sun.ac.za.

9. RIGHTS OF RESEARCH PARTICIPANTS

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

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

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

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

By signing below, I _____ (*name of parent*) agree that the researcher may approach my child to take part in this research study, as conducted by Susan Njeyiyana

Signature of Parent/Legal Guardian

Date

DECLARATION BY THE PRINCIPAL INVESTIGATOR

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

Signature of Principal Investigator

Date

Appendix 5 – Quantitative data (MS Excel sheets)

Group 1

	Lemma	Variant 1	Variant 2	Variant 3	Variant 4
1	ANIMAL	1	0		
1	BAD	1	0		
1	BIRD	1	0		
1	BLACK	1	0		
1	BLOOD	1	0		
1	BROTHER	1	1	0	
1	DANCE	1	1	1	0
1	DAY	1	0		
1	DIE	1	0	0	
1	DIRTY	1	1		
1	DOG	1	1		
1	DRY	1	0	0	0
1	EGG	1	0		
1	FATHER	1	1	0	
1	FIRE	1	0		
1	FISH	1	0		
1	FLOWER	1	1		
1	GOOD	1	0		
1	GRASS	1	1	0	0
1	GREEN	1	1		
1	HOW	1	0	0	
1	LAUGH	1	1	1	
1	LEAF	1	0	0	0
1	LIE	1	0		
1	LONG	1	0		
1	MOON	1	1	0	
1	MOTHER	1	1	1	
1	NEW	1	0		
1	NIGHT	1	1	0	
1	OLD	1	1	0	
1	PERSON	1	0		
1	PIG	1	0	0	0

1	PLAY	1	1	0	
1	RAIN	1	0		
1	RED	1	1	0	
1	RIVER	1	0		
1	SALT	1	1	0	0
1	SEA	1	0	0	
1	SHORT	1	1	1	0
1	SING	1	1	0	
1	SISTER	1	1		
1	SIT	1	1	0	
1	SNAKE	1	0		
1	STAND	1	0		
1	STAR	1	0		
1	SUN	1	0		
1	TAIL	1	0		
1	TALL	1	1	1	
1	THIN	1	1	1	
1	TREE	1	0		
1	WATER	1	1	1	
1	WET	1	0	0	
1	WHAT	1	1	0	
1	WHEN	1	0		
1	WHERE	1	0	0	
1	WHITE	1	1		
1	WHO	1	1	0	0
1	WIFE	1	0		
1	WIND	1	0		
1	WOMAN	1	1		
1	WOOD	1	1		
1	WORK	1	1	0	
1	WORM	1	0		
1	YEAR	1	0		
1	YELLOW	1	1		
Total		Variant 1	Variant 2	Variant 3	Variant 4
65	Signs	65	30	7	0
		100%	46%	11%	

Group 2

	Lemma	Variant 1	Variant 2	Variant 3	Variant 4
1	ANIMAL	1	1		
1	BAD	1	1		
1	BIRD	1	0		
1	BLACK	1	0		
1	BLOOD	1	0		
1	BROTHER	1	0	1	
1	DANCE	1	1	1	1
1	DAY	1	1		
1	DIE	1	1	1	
1	DIRTY	1	1	1	
1	DOG	1	1		
1	DRY	1	1	1	1
1	EGG	1	0		
1	FATHER	1	1	1	
1	FIRE	1	0		
1	FISH	1	0		
1	FLOWER	1	1		
1	GOOD	1	0		
1	GRASS	1	1	0	1
1	GREEN	1	1		
1	HOW	1	1	1	1
1	LAUGH	1	1	1	
1	LEAF	1	1	0	0
1	LIE	1	1		
1	LONG	1	0		
1	MOON	1	1	1	
1	MOTHER	1	1	1	
1	NEW	1	0		
1	NIGHT	1	1	1	
1	OLD	1	1	0	
1	PERSON	1	0		
1	PIG	1	1	1	0
1	PLAY	1	1	1	

1	RAIN	1	0		
1	RED	1	1	1	
1	RIVER	1	0		
1	SALT	1	0	1	1
1	SEA	1	1	0	
1	SHORT	1	1	1	1
1	SING	1	1	1	
1	SISTER	1	1		
1	SIT	1	1	1	
1	SNAKE	1	0		
1	STAND	1	0		
1	STAR	1	0		
1	SUN	1	0		
1	TAIL	1	0		
1	TALL	1	1	1	
1	THIN	1	1	0	
1	TREE	1	0		
1	WATER	1	1	1	
1	WET	1	1	1	
1	WHAT	1	1	0	
1	WHEN	1	1		
1	WHERE	1	1	1	
1	WHITE	1	1		
1	WHO	1	1	1	0
1	WIFE	1	1		
1	WIND	1	0		
1	WOMAN	1	1		
1	WOOD	0	1		
1	WORK	1	1	1	
1	WORM	1	0		
1	YEAR	1	0		
1	YELLOW	1	1		
Total		Variant 1	Variant 2	Variant 3	Variant 4
65	Signs	64	43	24	6
		98%	66%	37%	9%

Group 3

	Lemma	Variant 1	Variant 2	Variant 3	Variant 4
1	ANIMAL	1	1		
1	BAD	1	0		
1	BIRD	1	0		
1	BLACK	1	0		
1	BLOOD	1	0		
1	BROTHER	1	0		
1	DANCE	1	1	1	0
1	DAY	1	1		
1	DIE	1	1	1	
1	DIRTY	1	0		
1	DOG	1	0		
1	DRY	0	1	1	1
1	EGG	1	0		
1	FATHER	1	1		
1	FIRE	1	0		
1	FISH	1	0		
1	FLOWER	0	1		
1	GOOD	1	0		
1	GRASS	1	1	0	0
1	GREEN	1	1		
1	HOW	1	1		
1	LAUGH	1	1	0	
1	LEAF	1	0	0	0
1	LIE	1	0		
1	LONG	1	0		
1	MOON	1	1	0	
1	MOTHER	0	1	0	
1	NEW	1	0		
1	NIGHT	1	0	0	
1	OLD	1	1	1	
1	PERSON	1	0		
1	PIG	1	1	0	0
1	PLAY	0	1	0	

1	RAIN	1	0		
1	RED	0	1	1	
1	RIVER	1	0		
1	SALT	1	0	1	1
1	SEA	1	1	0	
1	SHORT	1	0	0	1
1	SING	1	1	1	
1	SISTER	1	1		
1	SIT	1	1	0	
1	SNAKE	1	0		
1	STAND	1	0		
1	STAR	1	0		
1	SUN	1	0		
1	TAIL	1	0		
1	TALL	1	1	0	
1	THIN	1	1	0	
1	TREE	1	0		
1	WATER	0	1	1	
1	WET	1	1	0	
1	WHAT	1	1	0	
1	WHEN	1	1		
1	WHERE	1	1	0	
1	WHITE	0	1		
1	WHO	1	1	0	0
1	WIFE	1	0		
1	WIND	1	0		
1	WOMAN	0	1		
1	WOOD	0	1		
1	WORK	1	1	1	
1	WORM	1	0		
1	YEAR	1	0		
1	YELLOW	1	1		
Total		Variant 1	Variant 2	Variant 3	Variant 4
65	Signs	56	34	8	3
		86%	52%	12%	5%

Group 4

	Lemma	Variant 1	Variant 2	Variant 3	Variant 4
1	ANIMAL	0	1		
1	BAD	1	0		
1	BIRD	1	0		
1	BLACK	1	0		
1	BLOOD	1	0		
1	BROTHER	1	0	1	
1	DANCE	1	1	1	0
1	DAY	0	1		
1	DIE	0	1	0	
1	DIRTY	1	0		
1	DOG	1	0		
1	DRY	1	0	0	1
1	EGG	1	0		
1	FATHER	0	1		
1	FIRE	1	0		
1	FISH	1	0		
1	FLOWER	0	1		
1	GOOD	1	0		
1	GRASS	0	1	1	
1	GREEN	0	1		
1	HOW	0	1		
1	LAUGH	1	1	0	
1	LEAF	1	0	1	1
1	LIE	1	0		
1	LONG	1	0		
1	MOON	1	0	0	
1	MOTHER	1	1	0	
1	NEW	1	0		
1	NIGHT	1	0	0	
1	OLD	0	1		
1	PERSON	1	0		
1	PIG	1	1	1	1
1	PLAY	0	1		

1	RAIN	1	0		
1	RED	0	1	0	
1	RIVER	1	0		
1	SALT	1	0	1	0
1	SEA	1	1	1	
1	SHORT	1	1	0	1
1	SING	0	1	0	
1	SISTER	1	1		
1	SIT	1	0	1	
1	SNAKE	1	0		
1	STAND	1	0		
1	STAR	1	1		
1	SUN	1	1		
1	TAIL	1	0		
1	TALL	0	1	1	
1	THIN	1	1	0	
1	TREE	1	1		
1	WATER	0	0	1	
1	WET	1	0	0	
1	WHAT	0	1	1	
1	WHEN	0	1		
1	WHERE	1	1	0	
1	WHITE	0	1		
1	WHO	1	1	0	1
1	WIFE	1	0		
1	WIND	1	0		
1	WOMAN	0	1		
1	WOOD	0	1		
1	WORK	1	1	0	
1	WORM	1	0		
1	YEAR	1	0		
1	YELLOW	0	1		
Total		Variant 1	Variant 2	Variant 3	Variant 4
65	Signs	45	33	11	5
		69%	51%	17%	8%

Appendix 6 – Qualitative data (interview transcripts)

Interview data

Age: 23-29 Group 3

- When you were first attending school for the Deaf at Wittebome many years ago and do you still used your current signs as before?

2014 -2016 (2019 interview) Informant 1: I remember some old Wittebome signs that are still same, but some Wittebome signs are different. I learned signs from Worcester and left school there and moved to Wittebome. My signs from Worcester I brought to Wittebome because I didn't first learn signs from Wittebome. I studied there at Worcester and moved to Wittebome School later where I finished school.

- When did you first attend Wittebome School?

Informant 1: No, I first attended Mary Khan School in Observatory from until 2007. After I passed my grade I moved to De la Bat School and then later I moved to Wittebome School and spent my last two years there.

- You first attended Mary Khan School, okay. When did you moved to Wittebome school?

Informant 1: I moved to Wittebome in 2014 and completed my schooling in 2016.

- Oh, 2019 now so you completed your schooling not too long ago. You are still new to know traditional signs of Wittebome School. To second informant: When did you attended Wittebome school?

Informant 2: I went to a hearing school first and then moved to Wittebome School in 2009 and completed in 2015.

- After you first attended Wittebome School in 2009 and looking back today, would you say you are still using the same signs?

Informant 2: No, I see there are different signs from now but I don't remember what the differences are.

- To third informant: When did you attended Wittebome school?

Informant 3: When I was very young, but I moved to De la Bat School when I was sixteen years old. Today I still use same signs from Wittebome School.

Informant 4: I first attended Wittebome School when I was very young and grew up there until I finished my schooling in 2009 and then I moved to practical class to do a course in hairdressing and completed my practical work in one year. I then started here at eDeaf to further my studies and the Deaf facilitator taught me how to teach sign language and he/she uses different signs from Wittebome.

- After you gave me signs when I elicited, did you see any signs change?

Young informants 1 and 2: they said that they see sign for BROTHER is still used in Wittebome today but informant 3 said the original sign for BROTHER is on the location (waist) with w handshape.

- The original sign for BROTHER in Wittebome School and now you use a new sign for BROTHER. Why do you think the sign changed from the first version to the second?

Informant 3: I changed to the new sign for BROTHER because the Wittebome sign is old.

Informant 4: No, I don't remember exactly and I've completely forgotten which signs have changed.

- Are you guys working or studying? All informants said, they are all studying.
- Ok, you all finished your schooling, right? All said, yes.
- Ok, when you see Deaf children who attend Wittebome school now, are there any signs that they use that you feel are the same as yours?

Informant 1: I never visit the school and I really don't know.

Informant 2: I see their signs are different.

Informant 3 and 4: we also never visit the school.

- Why don't you visit school? Or maybe you meet young Deaf children out of the blue and from that interaction they ask if you were at Wittebome School?

Informant 4: I don't know any new young Deaf children and only meet up with older Deaf from Wittebome School. The older Deaf recognised me because I attended the same school as them when I was young. But I don't necessarily remember them.

- Do you see older Deaf use Wittebome signs, same as yours?

Informant 1: Yes, some signs are the same and some are similar.

- Today the school uses this sign for YELLOW (index finger on the ear location that moves with rotating movement path direction). Is that a sign you use?

All informants answered: no, it is YELLOW  with the circle movement.

- Do you see that they are the same signs?

All informants answer: no.

- Have you seen or visit Deaf community in Johannesburg, are their signs the same as yours?

Informants 2-4: responded that they had never seen or visited Deaf community in Johannesburg.

Informant 1: I have a cousin who live in Johannesburg and her signs are different. I don't always understand her and often asked her what her signs mean and then she explains.

- Can you tell me which signs are different she's had to explain to you?

Informant 1: I don't remember because she came and visited me during the June holiday last year and then she went back and stayed there for good.

- How do you feel when you see your cousin signing, but it's different to yours?

Informant 1: when my cousin would socialize with my friends who were from Wittebome she would sign to them in the Wittebome variant because my friends are all from the Western Cape and they did not understand her. But we would communicate and she assimilated her Johannesburg variant. I don't know why she uses the Johannesburg variant with me even though she knows I am

from the Western Cape. I have to ask her repeatedly what her signs mean, maybe because we are family.

- Do you think Deaf community of Western Cape regions use different signs? And are you able to understand them?

Informant 1: Sometime Deaf use similar sign to mine who come from other schools for the Deaf in different regions. Sometime I repeat or ask if they have a different sign and I adapt to match their sign but if I still don't understand, they would fingerspelled a spoken word and then I would understand.

- Do you have any previous Deaf generations in your family?

Informant 1, 3 and 4: no

Informant 2: I have two Deaf aunts.

- Where did your aunts go to school?

Informant 2: Both aunts went to school for the Deaf in Worcester.

- Why did your two aunts not go to Wittebome School like you?

Informant 2: My Deaf aunts were attending school in Worcester and I attended school in Wittebome because I live in Eesterivier and it is far from Worcester. I don't often communicate with my two Deaf aunts because I don't understand their signs from Worcester. I am hard of hearing and know little of signs. I used to lip-reading with them at home but I come to the college and use signs.

- Do you prefer to use the Wittebome variant only or do you also use other variations in SASL?

Informant 1: I prefer to use SASL and I'm willing to learn lexical variation in all regions to help me communicate better and know more. Not only the Wittebome variant.

Informant 2: I prefer to use only Wittebome variant and can't learn different signs. I feel comfortable and better way for me to use Wittebome variant.

- What if you travel to other regions and meet Deaf people there, how do you communicate?

Informant 2: I am hard of hearing and I feel it's better to talk and sign at the same time.

- What if Deaf don't understand you, what do you do then?

Informant 2: I will try my best to sign or use total communication but I feel deep down in my heart is my Wittebome variant.

Informant 3: I prefer to use the Wittebome variant because I never contact other Deaf communities in other geographical regions. I grew up and live in the Western Cape my entire life.

Informant 4: I prefer to use SASL exactly the same as informant 1 said. I love meeting new Deaf people and to learn their variant so that I'm able to communicate better.

Interview data

Age: 23 and 29 years Group 3 / 42 and 48 Group 4

- Would you say that the signs taught at Wittebome School are the same as it was taught when you were in school at Wittebome?

Code 00.33 video Interview 2-Informant 4: age 23 and 29: I see there are different signs for COLOUR and the sign for ANIMAL is also different.

Code 00.38 video Interview 1- Informant 1: age 42 and 48: They use a different sign for the alphabet letter H. Another example is the signing of HOW ARE YOU. The new way of signing it shows a syntax difference. The grammar should be like this but they sign HOW ARE YOU? It looks strange, this is the old grammar modified to simultaneous morph syntax. They also sign PROBLEM different from us where we sign it on the top of one hand, with the palm facing down in an O-flat handshape and a tapping movement. But they use it on the arm location which is a small difference.

- Why do you say there's such a big difference in signing between younger and older generations?

Informant 1: age 40-48: there is a very big difference between current signs in Wittebome School and the signs used by the older community who also went to school there. I see that their signs are more related to the signs used in Worcester. It is interesting that they adopted new signs from another school and abandoned their own school signs.

Informant 3: age 29: When I meet someone and we start chatting, and we notice that our signs are different, we share our signs and just keep chatting. We learn from each other. For example the sign for YELLOW with a One-Handshape on the ear that moves with a rotating movement was used by someone I was talking to and I asked them to explain the sign. I was told that this sign was used for the colour yellow, so I showed them my sign for YELLOW with a Y-Handshape that moves with a circle movement in front of me. I asked them where they learned the sign from and they said that they attended Dominican School for the Deaf in Wittebome. I said that I also went

to the same school and we agreed that signs have changed from when I was in school, and that my signs are now the ‘old’ signs.

- When you communicate with Deaf person who uses different signs to you, for example YELLOW with a One-Handshape or YELLOW a Y-Handshape, will you adapt to their sign and use their sign? Or would you stick to your own sign?

Three informants in the first interview prefer using their own dialect and informant 3: age 23 and 29 said: I think the sign for YELLOW with a Y-Handshape is a better sign and can be used in general. The sign for YELLOW with a One-Handshape I feel is inappropriate because it looks like it’s digging for dirty ear wax and that makes me uncomfortable. It’s easy to be confused, I might be thinking a person is busy scratching in the ear while talking, but actually it’s their sign for YELLOW.

Code 02.43 video Interview – informant 5: I attended Dominican school for the Deaf in Wittebome and later I became a teaching assistant at the school where I grew up. I’ve experienced the changes in signs at the school and I struggle to understand their new signs when I am teaching in the classroom. I complained about the changes at the time but it didn’t help. So I just accepted it. Now, when I teach, it is difficult for me because I have to switch to the new signs for the children. Then, when I get home and chat to my husband, I sometimes use new signs and then he doesn’t understand. I have to switch over to the ‘old’ Wittebome- school-lect for him. It is difficult.

- Code 03.22 video Interview 1- Have you seen or visited the Deaf community in Johannesburg, and are their signs the same as yours?

All three informants in the first interview said that they had seen different and sometimes same or similar variants of signs in Johannesburg in comparison to their own.

- If you compared the signs used by Wittebome, Worcester and Noluthando schools, would you say they are the same?

Informant 3: age 23 and 29 said: At Noluthando they used to incorporate some isiXhosa vocabulary with signs that was used by them only, whereas Wittebome had a mixture of Afrikaans and English with the one-handed spelling and Worcester had the two-handed spelling and mostly Afrikaans on

the lips. The school-lects were very clear – each school had their own signs. I found it was very interesting when we would meet the other schools for sporting events and then realise that we used different signs. When I arrived at Wittebome it took me about two weeks to be fluent in the new dialect.

- When you visit Dominican School for the Deaf today, what do you notice about their signing?

Informant 1 and 2 first interview said: today the children use completely different signs.

Code 05.16 video Interview 2-Informant 6 in second interview: I agree. When I visited the school I saw the kids using new signs for the first time. It looks like they developed different signs in comparison to ours.

Code 05.25 video Interview 1-Informant 1: I use the sign for GOOD-MORNING with the T-Handshape on the chin but the children told me it was wrong!. That its supposed to be signed as GOOD-MORNING with a B-Open Handshape greeting on the top of the forehead. I was surprised that the sign had changed. But I understand and respect their signs. Informant 3: age 20-30: Deaf children can be very straight forward with old people about signs. (Language police)

- When you visit the school and use your ‘old’ Wittebome school-lect, do the children at the school understand you or do you have to repeat what you said?

Code 06.01 video Interview 2-Informant 5: No, they don’t understand us when we use our Wittebome school-lect. They will just tell us we use old traditions and that we’re wrong. However, I respect them and have adapted to their variant. My point is that I use different signs for GOOD MORNING with the T-handshape on the chin, GOOD AFTERNOON with O- flat handshape in the air and GOOD NIGHT with D-handshape in the air. But now they use one sign for all three greetings. For example, the sign for GOOD MORNING, GOOD AFTERNOON and GOOD NIGHT is signed with the B-Open Handshape on the top of the forehead for all three forms of greeting. Are these accurate signs for greeting? This is my point.

- Code 06.27 video Interview 1- Do you have any Deaf members in your family from previous and current generations?

Code 06.31 video Interview 2- Informant 5: second interview: I have a Deaf brother and cousin and then my daughter is also Deaf. My husband is also Deaf. My daughter went to Dominican School for the Deaf in Wittebome but she moved to De la Bat School for the Deaf in Worcester. I communicate with her using the Wittebome school-lect but now she uses the De la Bat school-lect. I often have to ask her to repeat what she said because the signs are different, but in the end I do understand her. My daughter uses more of the De la Bat school-lect but sometime she uses both variants. When she comes home she's able to use both at the same time (mixed school-lects/signs). She is 16 years old. My brother and I both went to Wittebome, but he mainly signs using the older Wittebome school-lect,.

Code 07.52 video Interview 1-Informant 1: first interview said: I have two older Deaf sisters and they mainly use our Wittebome school-lect. I sign both new and old dialects because I work to serve the Deaf Community of Cape Town (DCCT). When I communicate with my older sisters over video call, I use a DCCT variant because of the influence from DCCT. But my older sisters don't understand when I do this. Then I remember that I have to switch to their 'old' Wittebome school-lect. I also have two Deaf brothers-in-law who are married to my two older sisters and they also use the 'old' Wittebome school-lect. They live in Kimberley, approximate 954 kilometer away from Cape Town. They often contact me through video chat and sometimes they struggle to understand what I was signing because of my dialect, then I have to repeat for clarification. I usually switch to a dialect that they use when we communicate.

- Do you feel that you belong to the SASL community, even though the Wittebome school-lect is so strong? Especially since you live in the Western Cape and this dialect originated from the school.

Informant 2: I mainly use the Wittebome school-lect. I live in South Africa and I belong to my Deaf community here. I am still able to communicate a little bit with others from other signing communities, but Wittebome school-lect is my preference and I continue to use it. I do not want to learn or adapt to any new sign variations because I struggle to understand new signs.

Informant 3: age 23-29 said: I'm comfortable to use both SASL and the Wittebome school-lect. I can easily use the Wittebome school-lect with my signing community, and then when meeting others from another community outside of my own, I'm also able to adapt and use SASL. I'm happy to learn other signs and to share mine. If I only use my Wittebome school-lect then the communication with others will lead to misunderstandings and it will take very long for us to understand each other. I also miss my old Noluthando school-lect that I learned when I went to school there. When I went back there I had to adapt my signing to their dialect again. For example the sign for FATHER with a B Open-handshape and place of articulation on the chest in comparison to my current sign for FATHER with an F-handshape and place of articulation on top of the other hand.

Informant 1: it is important for me to expand my knowledge of all the signs and dialects used in the different provinces in South Africa. But I also must know International Sign so that Deaf people in the world are able to understand us. I am a SASL user in my country. Informant 3: I agree with informant 1 that he is a SASL user.

Code 10.58 video Interview 2- Informant 4: I believe that I am a SASL user in my country and I feel I must know the variations within SASL.

Informant 6: I've seen Bibi and Razaq, who are Deaf Interpreters, when they sign SASL so I'm learning it for the first time whenever I see them. However I still prefer the Wittebome school-lect.

Informant 5: I am a SASL user. I feel that I must use both Wittebome and SASL signs because I am a teaching assistant at the school. So, I've had to accept the new signs.

- Code 12.15 video Interview 1- Research assistant asking the group: as a younger person in this group, do you prefer to socialise with other young people or older people? Do you decide which group to socialise with based on the older or newer dialect used by the signers? Have you seen any conflict between young and old signers because the dialect is so different from each other?

Informant 2: I am old and I only use my dialect that I'm familiar with. I don't want to adjust to any new signs. I use my signs and just my signs.

Informant 3: I sometimes don't understand certain signs from the older generation. However, when I watch their non-manual features and body language within the context of the conversation, I'm able to understand what they are signing to me. In the process of watching them, I try to pick up on signs that are different from mine, so when I respond, I try to use their signs so we can understand each other.

Informant 1: At work I'm responsible for the programme that takes care of the old people in our community. Sometimes a person will be signing to them, but they struggle to understand them. They will call me to be a relay interpreter for them. I've been able to assimilate to their signing dialect. I don't want the older people to feel left out from the younger group and I feel that they should interact with and learn from each other.

Code 14.03 video Interview 2 -Informant 5: The older Deaf people sign more simple concepts, almost like child-dialects. They prefer the signing to be simpler. Today the Deaf people sign differently, more complex and that's also why they don't understand each other.

Code 14.14 video Interview 1- Informant 1: Older people struggle to understand new signs and when we explain it to them, we must expand on the concept. For example, the word EDUCATION signed with initialised signs using ED from the alphabet when signing it. I would have to explain to them that the word EDUCATION means school where you learn to read and write. Once I've explained it, they will grasp the meaning. But they won't remember the written word.

Informant 3: I've seen a lot of slang used by Deaf signers from the Afrikaans and English communities. At first, I will struggle to understand, but I will watch them until I grasp it and then pretty soon I'm able to sign along with their conversations.

Interview data


Age: 50 + years old Group 4

- Are you still using the same signs as you did when you went to Wittebome School?

Code 00.43 video interview 1-

All 10 informants: yes, the signs we use are still the same from when we attended school.

- Are there any signs that have changed from what it was before?

Informant 1: there is no change in the signs I currently  use but there are changes in the signs used by young people and children today. I see different signs e.g. sign for MILK. We, old people do not use that sign for milk, to us that sign means WOOD.

Code 00.32 video interview 2-

Informant 9: The sign for MILK is location where a woman's breast is, handshape of the letter O with thumb facing forward and side of palm against the breast area, movement is squeezing, palm facing upwards. But I sign MILK with a G-handshape (single finger) with the opposite hand's fingers touching the G from the base of the finger and moving to the tip of the finger. I don't know the new sign for MILK in Worcester, I am sorry.

Informant 6: I also see there's a new sign for MILK with A-closed handshape and the hands are closed to squeeze (movement) milk from the cow (imitating the milking action of an actual cow). I told the school children what my sign for MILK was: with one-handshape and I asked them why they used their sign. I was astonished.

Code 02.06 video interview 1-

Informant 3: We also used to sign NO with 8-handshape (hand closing movement) and today children use a new sign for NO / YES (A-handshape, to indicate the sign as a head classifier). But informant 1: argued with informant 3 said that she is confusing. I know the new sign is as NO with 8-handshape and the hand closing movement. Our old sign for NO was with the U-handshape, with the one hand's index and middle finger on top of the other hand's index and middle finger (flat,

both palms facing down) and the movement is pulling apart the two hands, palms still facing down, left hand going left and right hand going right at the same time.

Code 02.52 video interview 2-Informant 7: I used the old sign for YES: using the S-handshape with the S movement (start as a fist in S-handshape and flicks open with all fingers spread out, handpalm facing down). I saw other Deaf using the sign for YES with an A-handshape that remains closed and move it up and down from the wrist to imitate a head nodding. So I asked what this is because I used my sign for years (informant 8 supported his claim). But now, I accept the new sign.

Interviewer: When you see new signs, do you change or keep your signs as you've always used them?

Group answer: we use our own signs; we stick to our own signs.

Informant 6: I went to visit the school and told the children I am Deaf (sign: G- handshape, index finger touch ear and touch mouth). I was so surprised then they said that my sign was wrong. I asked them how they would sign it. They said the sign for DEAF was supposed to be with a U-handshape on the ear only. I found it interesting that they had a new sign. They said called me that I am idiot and I felt that they are rude. I asked one of them what their name was, but they told me my sign for NO (G-handshape, palm facing forwards, moving from side to side at the wrist) was the sign they now used for WHAT. I just backed off and accepted it.

Informant 8: When I was in school I knew the sign for WHEN with Middle-finger and 5 handshape that point in closed left hand and press with 5-handshape together. When I visited the school, I asked the children a question about WHEN, but the children thought that I was signing COLD DRINK. They explained that my sign for WHEN is now used for COOLDRINK and a new sign was being used for WHEN: with 5-handshape to the cheek and wiggles. I felt confused about the signs changing.

Code 04.50 video interview 1- Informant 3: I haven't visited the school yet.

Informant 1: We could not access the school to visit them. They blocked us. Meaning we don't have a good relationship with the school principal. We want a good relationship with the school to show children we are their role model. It's very unfortunate.

Code 05-22 video interview 2-Informant 7: I met a Deaf person and I used the Wittebome variant and he said my sign is beautiful and that he liked my sign. He then met some of my friends too, and he said he did not want to learn new signs, but preferred the old signs we used. His signing of the Wittebome variant improved a lot.

When we communicate with him and he started influence other Deaf. Some Deaf asked him where you used these signs from. So he told them that these signs are from Wittebome variant and I like it. Not like the Worcester variant because these signs use the two-hand alphabet while we use the one-hand alphabet.. My Deaf friend who is from Worcester understands the Wittebome variant but I struggle to understand the Worcester variant. He can manage two variants while I can only manage one variant but I manage to communicate with him comfortably.

I had a chat with my friend's sister and she said that what he (informant) was signing and he (friend) told her was that I am from an English speaking family and not Afrikaans. She could understand what I said. She is hard of hearing. She did not use her Worcester variant when we communicated with each other, buy rather used the Wittebome variant, I don't know why. She now uses both variants and Afrikaans but she liked Wittebome signs. I've used the Wittebome variant for many years. In school I learned one written language: English. But today schools use both English and Afrikaans.

Informant 10: The signs we use at Wittebome is very different to what they use in Worcester. We learned English. I went to school in Wittebome. Some of them struggle to sign different variants like I do. I did not learn the Worcester variant because it was like signing ungrammatically. I use my variant so I can communicate easier.

- Code 07-31 video interview 1-Have you seen or visited the Deaf community of Johannesburg and seen whether their signs are the same as yours?

Code 08.18 video interview 2-Informant 9: I have a friend who is old and he's from Johannesburg. He uses the same signs that we do as part of Wittebome. But when he meets other Deaf people in Johannesburg, he uses a different variant. The sign for WHERE is signed as: G-handshape that moves in the air left to right. Later I figured out that the sign meant WHERE which we normally sign as: B-handshape, that tap on top of the other hand of which the palm orientation is down. – support my analysis

Informant 8: I am not sure how different the signs are in Johannesburg, but I have friend from Johannesburg. We've never met in person, but we used to chat over video call. The problem was that his video was always too dark to see clearly, so we just text each other on Whatsapp now.

Informant 6: I'm a driving instructor so communication is important. I meet Deaf people everywhere even in Khayelitsha. I would try to teach Deaf people but we wouldn't be able to understand each other's signs because we are using different signs. That person would ask me what I meant with my signs and we ended up writing to each other on the phone. That was how we could understand each other. We would teach each other our signs and that's where I learned their sign for MOTHER with a B-Open handshape on the chest and then I compared it to our sign for MOTHER with a W-handshape between arms and hands with a tapping movement. It was difficult but I learned and I still teach all over the Western Cape.

Code 10.07 video interview 1-informant 3: I am not talk about Johannesburg but about Kimberley where I work with an English speaking lady and old woman from Worcester. We would always communicate well. Even though she would use different signs to mine, like MOTHER with a B-Open handshape and DADDY with D-handshape between arms and hands with a tapping movement. I could understand her different signs. We understand each other and she would always say when it is time to go home. We engaged and understood each other well at work.

Code 10.41 video interview 2 - informant 7: My granddaughter once met a Deaf person and they had a chat. She asked my granddaughter about her granddaddy and how he was doing. My granddaughter replied that he is fine. The Deaf person told her that she hadn't seen her granddaddy in a long time. So my granddaughter used the old sign to say SORRY with an F-handshape on the chest and circular movements. Then the Deaf person told her that the right sign for SORRY an A-

handshape on the chest with circular movements. But my granddaughter told her that she had learned the signs from her granddaddy and would use it. Then the Deaf girl became angry with her.

When I got home later, I saw my granddaughter at home and she was on the phone with her mom. She was upset and telling her mom about the Deaf girl. Her mother told her not to worry and that she would see her that evening to talk about it. I came home and she also arrived and then she told me about the Deaf girl. Her name is Bandla, and she disliked the sign we use for SORRY and she told the Deaf girl that her granddaddy taught her the signs. I told her that it was fine and that she should keep on using our signs.

One day I met Bandla and told her not to tell my granddaughter to change her signs and to please leave her alone. She was cross with me. But I told her that she can teach her own children all the signs she wants to in her way. She was so cross with me.

One day, my 2 and a half years old grandchild and informant 6 visited me. Then I showed informant 6 how my grandchild signs CAT with a 5 –bent handshape on the cheek like the cat's whiskers. Then informant 6 said yes. Then we laughed at her cute sign but the child is hearing and my granddaughter is also hearing.

- Code 13.26 video interview 1 – do you have any members of your family in previous generations who were Deaf?

Informant 5: My mother told me that I have Deaf uncle in Johannesburg. My mother never introduced my Deaf uncle to me, even when growing up I never met him. He is old now and lives in Johannesburg. He went to school at Wittebome. My mother is hearing.

Informant 1: I have a hard of hearing cousin. My grandmother and his grandmother were sisters and this man is my hard of hearing cousin, but I am Deaf. Yes, we both went to Wittebome school together and always used the Wittebome variant. He passed away three years ago in Johannesburg.

- After you finished school, did you keep your Wittebome variant or did you start to use SASL?

Video interview 1 - All 5 informants indicate that they still use the signs learned when they were in School at Wittebome. – - support my analysis

Code 15.25 video interview 2 - All 5 informants indicate that they still use the signs learned when they were in School at Wittebome.

informant 8: I use the Wittebome variant and SASL, both. I use Wittebome variants, but other Deaf people have different variants. I've seen some signs are from communities who are Black and Coloured and we have to work together so I'm able to adapt to all the different signs. We share our signs with each other. – regional variation and SASL as well as attitude about this

For example, some would sign SEE as a V-handshape, placed between the nose and the bottom of the eye, but I sign SEE with a D-handshape on the bottom right of the eye. They also use isiXhosa mouthing and I am learning. I can also text them in isiXhosa on whatapp. I can't speak isiXhosa but I've helped to facilitate communication when the hearing persons speaks isiXhosa. I can lipread the isiXhosa and then sign it to the other Deaf person because the hearing person cannot sign.

Most Deaf people understand me when we communicate with each other. The young Deaf signer who use the variant and I can understand each other well. And the old Deaf people who use a strong Wittebome variant can understand me because I adapt to the old signs.

Code 16.49 video interview 1- informant 1: You have to know more than just your own variant, because if you meet a Deaf person in Johannesburg you must be able to adapt slightly to their variant. When Deaf people meet each other, they learn new signs from each other and remember them, so they can communicate with each other.

Informant 3: I do adapt, especially if it's a good friend I can learn new signs from. It does get difficult sometimes because the signs can be very different, but I do try. I keep using my Wittebome variant while learning some SASL, both are important.

Informant 4: I prefer the Wittebome variant, that is what I use. I don't really understand the other signs.

Informant 5: in Johannesburg, I met Deaf people and I used their variant. I'm very willing to learn new and different variants and not only the old signs. I can remember the new signs I learn. I am tired of Cape Town and I want to learn many Johannesburg signs no matter what and I want to broaden my knowledge of SASL variation.

Code 18.29 video interview 2- informant 10: spelling is a big problem for me. I see you using a different sign for 'S'. Where you keep your hand closed in a fist, I flick my fingers out at the end. I use both SASL and Wittebome but I still prefer to use my variant. Sometimes when a person signs slowly, I can see the difference, otherwise I get confused.. I prefer using my Wittebome variant, its much easier for me

Informant 6: I am a driving instructor of a driving school. We communicate in sign language but then I see the signs they use and sometimes I have to ask what it means I asked them to please sign SLOWLY but they did not understand the sign (with X-handshape, peel on the left hand with S-handshape. I then spelled the word for S-L-O-W and they responded with their sign for SLOW (with 5-handshape that moves backward on top of the other hand). It was interesting when I asked about the sign for FAST with the I-handshape that moves forward quickly, They said that they used the same sign for FAST as I did. I learned and use both variations, SASL and Wittebome when I teach as a driving school instructor. But deep down in my core, I'm a user of the Wittebome variant.

Informant 7: When I joined a new workplace as a new staff member, they had many other old Deaf people also who worked there. One day someone from office called me and asked If I'm hard of hearing. I said yes, and asked why they wanted to know. The boss said that he struggled to understand the sign language used by the older Deaf staff and that I must tell them what he was saying. I accepted and he called one of the old Deaf staff members and told him about the complaints from others about him, that he spend too much time going to the toilet.. The Deaf person responded by explaining to me that there was a problem with the toilet and specifically with one of the women. The deaf person had to wait for 15-20 minutes to use the toilet. The boss finally understood and then the Deaf person said that the woman was always rude to him. The Deaf person felt that it wasn't fair to complain about the Deaf waiting for a toilet when the hearing staff stand outside smoking for longer and often. That he coul smell the smoke on them when they

come back.. The supervisor then called a meeting with all staff and the hearing people were complaining about the Deaf and I stood up and told them not to complain because none of the Deaf were taking smoke breaks like them, but rather putting in more time to do the work than they did. They just looked at me. Later, the one woman thought she could also walk behind me and say nasty things to me behind my back, thinking I couldn't hear her. But I did, and so I went to complain about it and the supervisor spoke to her and told her to stop. She was very shocked when I said yes, I'm hard of hearing and that I could hear her. Most of the Deaf staff were much older and from Wittebome but there were also three from Worcester and they didn't always understand me but I tried to understand them by lipreading them.. There were 22 old Deaf people who worked there but now they've retired and only 3 or 4 are left..

- Code 00.05 video Interview 3- Research assistant ask question to the group. Do young people and old people struggle to understand each other when you communicate with young people and has there been any conflict?

Code 24.27 video Interview 2-informant 7: there are misunderstandings yes. Informant 10: there have been some conflict. Their fingerspelling is different, for example the letter G is signed with the thumb and index finger, while I sign it by pinching the fingers together and spreading the rest of the fingers out, and so also for the H and other letter so I would say we have fingerspelling conflict. Informants 7, 9 and 10 prefer to use Irish fingerspelling that was taught to them in school.

Code 01.14 video Interview 3- informant 3: I agree that we as old people still use Irish fingerspelling but the younger people still use different signs and we find it hard to understand what they sign. Some of the young people dislike our signs and then I just leave it at that. We don't really communicate well, the younger and older Deaf people. Our signing is just too different.

Code 25.00 video interview 2- informant 6: I don't understand the new sign for the letter H (with a U-handshape). It doesn't even look like an H, our way of signing it at least looks iconic, like the written form. Preference of fingerspelling from Irish

Informant 7: Many of the younger Deaf people use the "I Love You" sign to say HELLO. But that's not how we greet. To me that sign means "I love you". I greet with the sign for GOOD (with thumbs pointing upward and rest of hand in fist) or the sign for HELLO (with B-Open

handshape on the side of head). This “I Love You” sign is a little like a tsotsi. To me that sign means that you love the person you’re signing it to.. **they feel signs should be appropriate and not sign like this way for adult**

Informant 6: the gangsters use the I Love You sign to greet, but then it becomes a sign for a knife to attack you. It’s intimidating! And some of the children told me that I am stupid for using the old sign. I was shocked! **attitude about what children said to older adult**