**I'm Going To Lis The Cows:  Development Of Code Switching In The Speech Of Sesotho-English Bilingual Preschool Children**

by

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*Abstract*

*Code Switching as a topic in linguistics has been dealt with so extensively that it no longer needs to be defined.  For some people it means a "dialectal mixture" (see, for example, Labov, 1972:188).  For others it means "...some sort of relationship – negative or positive – between languages" (Khati, 1992:181) or even "...switching languages or linguistic varieties within the same conversation" (Slabbert and Finlayson, 1999).  The present study uses a naturalistic approach to examine development of lexical, morphological and syntactical mixing of English L2 and Sesotho L1 in the same utterance between ages 3;0 and 6;0.  In this way it differs from some current local studies whose focus is on the sociological (Khati, 1992; Slabbert and Finlayson, 1999; Kamwangamalu, 1999; Matee, 2000) and educational (Keiswetter, 1995; Akindele and Letsoela, 2001, du Plessis and Louw, 2008) functions of code switching.  It shows a bell-shaped rate of code switching development    from the beginning of exposure to the second language, where there is very little switching to L2, through the "grey area" period, where children switch easily from one language to another, to the period where they largely separate the two linguistic codes.  It further shows a productive switching of morphemes, lexical items, phrases and sentences from one language to the other.*

## Introduction and theoretical background

Researchers (such as Bergman, 1976; Volterra and Taechner, 1978) have observed that when a child is exposed to two languages from infancy (as may be the case where the child's parents do not speak the same language), such a child acquires both languages from the beginning. A child who acquires two languages in this way is said to be simultaneously bilingual (Alvarez, 2006). Alvarez proposes two types of simultaneous bilingualism, namely 'simultaneous bilingualism from a majority ethno-linguistic community' and 'simultaneous bilingualism from minority ethno-linguistic community.'  The former means that the language and culture of the majority group is the one that serves all the official and formal functions even if such a language is not declared the official language. Speakers of other languages learn this language as their second language in order to follow the mainstream day-to-day activities and to be able to do well in schools. Their language and culture receive full support from the authorities. Alvarez gives the example of English and French in Canada. Simultaneous bilingualism from the minority ethno-linguistic community refers to the situation where the language and culture of the group do not play any important role in the community. They are merely tolerated. They are not valued. They are not supported. It is up to the family and/or the community to do whatever they can to promote and sustain the language and the culture in question.

Hoff and Shatz (2007:325) show that simultaneous acquisition of two languages is characterized by heterogeneity of factors such as "the … language combinations and differences in the amount, consistency, and contexts of language exposure." According to Volterra and Taechner (1978:312),

> In the first stage, the child has one lexical system which includes words from both languages …in this stage the language development of the bilingual child distinguishes two different lexicons, but applies the same syntactic rules to both languages. In the second stage, the child distinguishes two different lexicons, but applies the same syntactic rules to both languages. In the third stage the child speaks two languages differentiated both in the lexicon and syntax.

The Unitary Language system Hypothesis has been proposed for the development of code switching in this manner. It says that children start with one system that later separates into two.  That is,

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the separate grammars/systems of the two languages start as if they were one system and separate into two systems later. Studies that support this theory include those by Swain and Wache, (1975), Volterra and Taeschner (1978), Redlinger and Park (1980), Vihman (1985), Arnberg (1987) (1989). These researchers propose that initially children form utterances with morphemes or words from both languages. They separate the two as they become cognitively more developed. Volterra and Taeschner, for example, observe that between ages 2;4 and 2;9 an Italian and German-speaking child formed sentences using words from both languages. However, the child's systems of negation developed separately from the beginning. Vihman (1985) concludes that children's early sentences are built with words from both languages 'haphazardly'. They are used as if they were drawn from the same language. In particular, function words are used without regard for the language of the interlocutor. That is, they are initially not sorted out according to the language of the interlocutor. The two distinct systems develop over time in terms of the lexicon, morphology and syntax. Vihman hypothesizes the possibility of two "receptive stores" with words from both languages, followed later by a single lexicon where words from one language are used in the appropriate language situation. She attributes this pattern of development to a child's cognitive development, which accounts for the different levels of cognitive awareness of the two languages as well as the differences between patterns in child and adult code switching.

As the child develops, cross-linguistic transfer occurs, with morpho-syntactic structures of one language being manifested on the other. The most common pattern is that of the dominant language structures being incorporated into the weaker language. Structures that are acquired early in one language are substituted for the ones that are acquired late in the other language.

Another situation is that of the sequential bilingualism where a child begins to acquire the second language around or after age 3;0 when the first language is already quite established, although not completely acquired. The theory that explains this situation is the Dual (or Two) Language System Hypothesis (supported by researchers such as such as Bergman, 1976; Lindholm and Padilla, 1978; Wapole, 2000, Genesse et al., 2004). According to the Two Language System Hypothesis, a child separates the two language systems from the beginning. For example, Wapole (2000) finds that children start with two separate systems from the beginning and therefore refutes the assumption that a child automatically uses both languages to learn one system.

Another theory of the development of code switching is the Dominant Language Hypothesis, proposed by Petersen (1988). The theory explains the imbalance between the two languages. In other words, although a child has acquired the two language systems, one system dominates the other. The child's language use is biased towards the dominant language, as a result of the 'unbalanced language development' with respect to the lexicon and the grammar. Petersen (1988:486) says,

> The dominant language hypothesis states that in word-internal code-switching, grammatical morphemes of the DOMINANT language may co-occur with lexical morphemes of either the dominant or the non-dominant language. However, grammatical morphemes of the NON-DOMINANT language may co-occur only with lexical morphemes of the non-dominant language.

Lanza's (1992) study supports the "Dominant Language Hypothesis" proposed by Petersen (1988). Her research subject predominantly used the dominant language, Norwegian, more than the other language, English.

The children in the present study are introduced to English L2, through the nursery/preschool environment, after two and half years of exposure to Sesotho L1. They are therefore sequential bilinguals. One wonders how they acquire the two languages. In particular, the study seeks to identify the developmental code switching patterns in their speech and therefore to add more light on the theories of development of bilingualism. The study hypothesizes that the children follow the Two-System and the Dominant Language hypotheses because of the imbalance in the length of exposure to each of the languages. It further hypothesizes that codes are switched at morphological, lexical and sentence levels.

The study was motivated by the utterance "I'm going to **lis** the cows" (also used here to frame the title of the article) from the researcher's grandson. At age 3;0 he did not know the English (second language) equivalent of the Sesotho verb **lisa** (look after domestic animals). When he was not able to access the exact English verb, he used the Sesotho equivalent, **lisa** (pronounced **disa**) which he used quite frequently because this was a common activity at home. However, because this verb was going to occur within an English utterance, he attempted to make it an English verb (so that it might fit into the English utterance) by omitting the obligatory Sesotho final vocalic /-a/. As will be shown later (see example (5), Sesotho-speaking children add /-a/ to an English verb to make the latter fit into a Sesotho utterance.

## Methodology

The present study is based on data collected in English-medium preschool environment from 30 Sesotho-speaking children aged between 3;0 and 6;0. All of them had been introduced to English L2 through contact with English-speaking teachers and children at the age of 2;6 within a nursery (and later, preschool) environment, as explained in detail in Moloi (1996, 1998a). All of them were selected from five typical English medium preschools in Maseru Urban area. The five preschools from which they were selected had at least one third of the population as English L1 speakers and English was the dominant language used. The children were in preschool for approximately five hours every weekday during term time. Outside of the preschool, they were growing up in an environment where Sesotho (a Bantu language which is their L1) is the dominant language used in the family and in the community. The children were identified at the same time. They were divided into three age groups of ten children each. At the beginning of data collection, the youngest children, the beginners, were three years old. Those in the next group, the intermediate group, were four years old and the ones in the advanced group were five years old.

Data was collected cross-sectionally by the researcher from the 30 children's naturalistic speech using a voice-activated tape-recorder, as the children interacted with one another and with teachers during playtime and during learner-directed activities such as painting and colouring. The art lessons were chosen because in those lessons the children were free to interact with one another about anything of interest. The voice-activated tape-recorder was hung with straps around a child's neck in a small cloth bag secured with straps. Further straps were tied around the child's waist so that the recorder rested on the child's chest. In this way the recorder was safe, regardless of the children's activities. Each child was tape-recorded for two hours at his/her pre-school every other month, for fourteen months. A placebo was used for the children who were not in the sample. These children also carried around similar bags containing old cameras and tapes, so that the child with the tape-recorder did not feel different and uncomfortable. Such a situation might have affected the data collection process. Recordings were later transcribed.

## Data Analysis

The data was coded for switched bound morphemes, lexical items, phrases, sentences, translation, numerals, quotations and endearments, following the coding system attached here as Appendix 1. The researcher further indicated whether the switch was made within the L1 or L2 matrix. Compound words such as **ice cream**, **swimming pool, motor bike, ice block, ice pop, tidy up, pink eye, white eye, peanut butter** occurring within a Sesotho matrix, were coded as individual lexical items. On the other hand, English lexical items such as **drink, taxi, bicycle** (or baesekele), **petrol, plastic, boot** (car trunk) were treated as L1 if they were within a Sesotho context (as Sesotho has no equivalents for them) but as L2 if they were within an English context. They were therefore not coded. Data categories from individual children were quantified and are attached here as Appendices 2, 3, and 4 (the children are identified by number, rather than name for the sake of anonymity). The study uses the Myers-Scotton's (1993) Matrix Language Frame Model for analysis. It takes consideration of the language in which a child's utterance begins and identifies the type of switch that the child makes. Frequencies of the various

types of switches that the children make between the two languages were quantified and presented on Tables. The following section shows the findings of the study.

## Discussion

The children's language is heavily L1 based, as Table 1 as well as Appendices 2, 3, and 4 show. The overall ratio of switching from an L1 matrix to that of switching from L2 (English) is 63.6:34.0 while in Vihman (1985) the ratio was 4:1. The difference might indicate the role of maturation as well as the length of exposure to the L2. Both factors were positive in the case of the children under this study.

**Table 1: Overall Patterns of code switching in children's language**

| Age group | Switching from L1 Matrix | Switching from L2 Matrix | Translation from L1 to L2 | Translation from L2 to L1 | Total |
|---|---|---|---|---|---|
| 3 yr olds | 392 (27.7) | 176 (23.3) | 12 (38.7) | 7 (30.4) | 587 (26.3) |
| 4 yr olds | 583 (41.1) | 303 (40.0) | 12 (38.7) | 8 (34.8) | 905 (40.6) |
| 5 yr olds | 443 (31.2) | 278 (36.7) | 7 (22.6) | 8 (34.8) | 737 (33.1) |
| Total | 1418 (63.6) | 757 (34.0) | 31 (1.4) | 23 (1.0) | 2229 (100.0) |

The children in the two youngest age groups mostly embed L2 items in mother tongue matrix more often than they embed L1 items into L2 matrix. Thus, on the whole, the L2 utterances that embed L1 (Sesotho) are comparatively fewer in number. This situation may be explained through the largely L1 environment in which most children are located most of the time. Children further switch between languages more frequently as their L2 vocabulary increases. That is, the more acquainted they become with the second language, the more they switch between languages. However, as they become even more competent in the second language, and get a firmer control of each language (from age 5:0), they begin to separate the codes more than they did in the previous (grey area) period. If and when they switch codes, they do so more from the L2 matrix.

Generally, therefore, there seems to be a definite rising and then falling trend in the rate of switching between languages. In addition, there seem to be individual differences, especially among the most advanced group of children (Appendix 4 illustrates this point). It is possible that environmental conditions in which they acquire L2 accounts for this difference. This observation needs to be studied further. Productive tendencies of switching are illustrated in Table 2.

## Patterns of Switching

Table 2 shows that children tend to make inter-sentential and lexical switches more frequently than other types of switches and that lexical switching is the most productive category.

Table 2 (a): Tendencies of Switching within the L1 Matrix

| Age Group | 3 year olds | 4 year olds | 5 year olds | Total |
|---|---|---|---|---|
| **Lexical switch** | 139 | 283 | 152 | 574 (41.9%) |
| **Numeral** | 20 | 14 | 28 | 62 94.5) |
| **Quotation** | 7 | 4 | 3 | 14 (1.0) |
| **Intra-sentential** | 40 | 31 | 40 | 111 (8.1) |
| **Inter-sentential** | 121 | 168 | 134 | 423 (30.9) |
| **Endearments** | 7 | 2 | 3 | 12 (0.9) |
| **Morphological** | 42 | 81 | 50 | 171 (12.5) |
| **Total** | 376 | 583 | 410 | 1369 (100.0) |

**Note:** Percentages are in brackets

This is not surprising because vocabulary building is the basis of language acquisition. Children make use of their mental lexicon as the basis for sentence construction, using both languages.

Table 2 (b): Tendencies of switching within the L2 matrix

| | Age Group | | | |
|---|---|---|---|---|
| | **3 Year olds** | **4 Year olds** | **5 Year olds** | **Total** |
| **Lexical items** | 56 | 67 | 72 | 194 (25.7) |
| **Numerals** | 0 | 2 | 2 | 4 (0.5) |
| **Quotations** | 4 | 4 | 0 | 8 (1.0) |
| **Intra-Sentential** | 31 | 22 | 25 | 78 (10.3) |
| **Inter-Sentential** | 80 | 192 | 154 | 426(56.6) |
| **Endearments** | 1 | 1 | 0 | 2 (0.2) |
| **Morphological** | 1 | 15 | 24 | 40 (5.3) |
| **Total** | 173 | 303 | 279 | 752 (100.) |

**Note:** Percentages are in brackets

## The Findings

## Lexical Code Switching

Children tend to use the L2 (English) lexicon within L1 (Sesotho) matrix more frequently than they use L1 lexicon within an L2 matrix. Earlier studies (Pfaff, 1979; Poplack, 1980, 1981), based on adults and older children (Lindholm and Padilla, 1978), show that nouns are switched more frequently than other lexical categories. A later study by Pert (2007) also finds that Mirpur-speaking children acquiring English L2 switch nouns more frequently than they switch verbs. This observation is confirmed in the present study where nouns are, by far, the most frequently switched lexical items within both Sesotho and English matrices. Sesotho nouns imported into English utterances include kinship/addressee terms such as **'m'e** mother/lady', **ntate** 'father/sir', **ausi** 'older sister/girl', **abuti** 'older brother/boy' and others such as instruments (e.g.**thipa** 'knife'), locatives (**sefateng** 'on/at the tree'), various types of food (such as **motoho** 'sour porridge'). English nouns include items such as **schoolbag, swing, teacher, madam, pencil, balloon, colour,** all of which are found around the house or school. A commonly used abstract noun is **turn**. The fact that nouns are the most frequently switched category even in L2 in this and other studies is not surprising, as naming words have been observed to be the first lexical items to be acquired. In the current study, L2 nouns are imported into L1 utterances more frequently than L1 nouns are

imported into L2 utterances.  Nouns are followed in frequency by verbs (Tables 5 and 6).  English verbs such as **push**, **stop**, **look**, **come**, **get down**, **jump**/ **jumping** are commonly used while Sesotho verbs used most frequently include **sheba** 'look', **shapa** 'beat up', as in, we **shapa** you 'we beat you up'.

Table 3: The rate of English lexical items used within a Sesotho matrix

| | Age Group | | | |
| --- | --- | --- | --- | --- |
| | 3 Year olds | 4 Year olds | 5 Year olds | Total |
| **Noun** | 105 | 249 | 110 | 464 (80.6) |
| **Verb** | 20 | 10 | 14 | 44 (7.6) |
| **Adjective** | 9 | 9 | 20 | 38 (6.6) |
| **Adverb** | 3 | 12 | 7 | 22 (3.8) |
| **Pronoun** | 1 | 2 | 1 | 4 (0.6) |
| **Conjunction** | 0 | 1 | 0 | 1 (0.1) |
| **Tag Q** | 1 | 0 | 1 | 2 (0.3) |
| **Total** | 139 | 283 | 253 | 575 (100.0) |

**Note:** Percentages are in brackets

## Switching the Functors

Functors were grouped here as was done by Pfaff (1979), Poplack (1980) and Vihman (1985) for comparative purposes. The present researcher categorized adjectives, pronouns, adverbs, and conjunctions in each language. Prepositions and articles were not coded because Sesotho marks prepositions morphologically and does not have articles. Coding them in English only would have created an imbalance in data analysis. As is the case in Vihman's (1985) study, children switch content words (nouns and verbs) more frequently than they switch functors (which in this study include adjectives pronouns, adverbs, conjunctions, tag questions.). They do not commonly switch functors. Table 3 illustrates that even when taken together as a group, functors constitute an insignificant number compared to content word groups, whether one considers their use within an L1 or L2 context. This is the case for both the youngest and the most advanced children. Table 3 indicates that Sesotho functors (including 2 tag questions) are used 14 (7.1percent) times within an English matrix utterance. The actual functors are limited to a few repeated words. Pfaff (1979: 293) observed that adverbs were not switched in adult speech. The scarcity of switched functors is also reported in the speech of adults (Pfaff, 1979; Poplack, 1980). This observation contrasts sharply with the one made by Redlinger and Park (1980) where, for children aged between 2;0 and 3; 0, functors as a general category constituted over half of the switched words (even though individual subcategories of functors, were not so significant even in that study). The observation is further different from the one made by Lanza (1992) for a child aged between 2;0 and 6;0, where functors, as a group, were the most frequently switched lexical items. It is assumed that children switch content words more than they switch function words because Sesotho uses affixes to indicate what English functors, such as prepositions indicate in these contexts. This reduces the category of English functors while it increases the category of switched affixes.

As is the case in Pfaff's (1979:293) study, adverbs are rarely switched in the present study. When they do occur, they are more frequently switched from English into a Sesotho matrix than the other way round (the ratio is 22:4). Thus, children hardly ever use Sesotho adverbs within an English matrix. The four Sesotho adverbs are temporal, with **maobane** 'yesterday' used twice, as in (1).

(1)    Give me drink like **maobane** '…yesterday'

    Let's do like **maobane**  '… yesterday'

The other temporal adverb used in this way is **hosane 'tomorrow'**. The rate of English adverbs use within a Sesotho matrix is somewhat productive and includes adverbs of manner such as **straight**, as in u tsamaee **straight** 'walk straight', and **quickly** and temporal adverbs such as **everyday**. Others are formed with the use of the Sesotho morpheme **ka-**, indicating manner in this case (although it can indicate instrument or location in other cases), as in tsamaea ka **speed** 'walk speedily/fast' or ha, as in ha **slow**

'slowly'. Adverbs of time such as **hosane** 'tomorrow' and adverbs of place such as **ka toilet** 'in the toilet', are also used in this way. It is noted that the bases are mostly English words preceded by **ka** to indicate manner, time or place. Adjectives are mostly colours, as in bohobe bo **yellow** 'yellow bread'; 'na heso ho na le ntja e **red** 'at my home there is a red dog'; 'na e **purple** ha ke e rate 'I do not like the purple one'. Pronouns are mostly personal, as in '**na** I'm going to tell teacher 'me I'm going to tell teacher'; **uena** this is my thing 'you, this is my thing'. However, these and the tag questions (**ha ke re**?) are not common features of children's code switching. Elsewhere, tag questions are reported to switch frequently.

English adjectives and adverbs occur more frequently in Sesotho utterances than Sesotho adjectives and adverbs in English utterances as Table 3 shows. The researcher's personal observation is that children who go to English-medium preschools generally use English adjectives, as in 'na ea ka e **red** 'mine is red' more than they use Sesotho ones, regardless of the language of conversation. The most frequently used adjectives are those indicating colours, possibly because children are given activities (such as sorting, colouring, pasting) that enable them to use colour terms early and frequently. This situation forces them to talk about, and therefore learn, colour terms. A similar observation is made in Vihman's (1985) child study where adverbs were switched less (3 percent) from L2 (English) into L1 (Estonian) than from L1 into L2.

Code switching in the early stages seems to have a strong tendency towards the use of formulaic speech. Children are not yet equipped with English but they are expected to use English in their day-to-day conversation. They use L2 formulaic speech that occurs frequently within the school environment to overcome the L2 communication inadequacy. English speech chunks commonly used in the school environment are found within Sesotho sentences, as in (2).

(2)   Ke mang a itseng ke **tidy up**? 'Who said it is **tidy up** time'

Ba ntse ba re **stop it** 'they are saying **stop it**' Ha re etse **happy birthday to you '**let us say **happy birthday to you'**

Ha re nka **ten little monkeys** u se ka ba e nka 'when we take **ten little monkeys**, don't take it'.

**Table 4: The rate of Sesotho lexical items used within an English matrix**

| Age Group | 3 year olds | 4 year olds | 5 year olds | Total |
|---|---|---|---|---|
| **Nouns** | 47 | 56 | 50 | 153(78.4) |
| **Verbs** | 6 | 8 | 14 | 28 (14.3) |
| **Adjectives** | 1 | 0 | 0 | 1 (0.5) |
| **Adverbs** | 0 | 1 | 3 | 4 (2.1) |
| **Pronouns** | 1 | 1 | 4 | 6 (3.0) |
| **Conjunctions** | 0 | 1 | 0 | 1 (0.5) |
| **Tag Q.** | 1 | 0 | 1 | 2 (1.0) |
| **Total** | 56 | 67 | 72 | 195 (100.0) |

**Inter-sentential switching**

Inter-sentential switches that take place at sentence and/or clause boundaries are as common in this study as they are reported in other local studies, based on speech from adults and older children (Khati, 1992; Matee, 2000). Most of the sentences that fall within this category begin as English (L2) and switch to Sesotho later. Those that begin in Sesotho and switch to English are comparatively fewer in number. Inter-sentential switching seems to take place particularly among the children in the middle group. This pattern is congruent with the observed overall pattern and rate of the development of code switching. The other language sentence generally has no semantic relationship to the previous or the following sentence, as in (3) a and b.

(3) a. Le banana ha ba tšabe bashanyana 'girls are not afraid of boys, either'. **Don't put sand here**.

b. What's going on? **Ha se ea ka** 'It's not mine'.

Romaine (1995:122) observes that inter-sentential code switching is a feature of fluent bilinguals' speech in casual conversation. In formal conversation they stick to one language.

## Morphological Code Switching

Writing on code switching in the language of adult Sesotho-English bilinguals, Khati (1992:184) observes the switching of morphemes between words in the two languages. He refers to this phenomenon as "intra-lexical" switching and observes that it occurs with various parts of speech. He notes that the prefixes for Sesotho noun classes 6 (ma-) and 10 (liN-) are attached to English nouns to indicate plural. In some instances, nouns are marked for plural twice, once in English and once in Sesotho, as in **li**comment**s** where *li–* is the Sesotho plural marker and /–s/ the English plural marker on the same English noun, *comment*. Khati further observes the use of Sesotho verbal extensions. Vihman (1985), on the other hand, notes that her subject, Raivo, found inflections difficult and avoided them. For example, he used the English **has** where he was supposed to use the Estonian possessive morpheme –'s. He also used English **mine**, **me** and **I have** to replace their Estonian equivalents within an Estonian conversation. Vihman sees this as Raivo's strategy to avoid the use of the difficult Estonian marker morphemes. Thus, he had time to be confident in the use of Estonian and English bound morphemes while "hiding" behind the use of the English equivalents of these morphemes.

The present study differs from Vihman's in that morphological switching seems to be productive, as it was in Lanza's (1992) study. Using data from a Norwegian-English bilingual child, Lanza (1992) found morphological switching between the two languages, as in (4) a and b.

**(4)**   a.      husk**er** swing(**s**); **jeg** spiser 'I eat', where Norwegian words
                co-occurred with Norwegian grammatical morphemes.
         b.      look**er**, looks; **jeg** eat, 'I eat', where English words were used with Norwegian as well as English grammatical morphemes.

However, when there were no word equivalents, the child used words from only one of the languages. The child mostly used nouns, verbs and adverbs from the new language. In addition, Norwegian morpho-syntactic development was more diversified than that of English. Lanza's general conclusion was that the dominant language influenced the patterns of code switching in a child's speech. In this case, Norwegian dominated English because it was the dominant language in the community (in fact, the mother of the subject, Siri, was the only English-speaking person in Siri's immediate environment). Thus, Lanza's study supported the "Dominant Language Hypothesis" proposed by Petersen (1988).

Morphological switching is a common phenomenon just as is the case with Sesotho-English bilingual adults and older children (Khati, 1992). Children attach L1 bound morphemes on L2 nouns and verbs productively, as in example (5). Their use of English bound morphemes with Sesotho words is less productive (5.3 percent). In particular, children show a productive use of Sesotho prefixes and suffixes on English words, possibly because Sesotho has a rich verb and noun prefix and suffix morphology. As Table 2 shows, the use of Sesotho affixes on English words takes place 171 times (12.5 percent of the various types of switches). An English verb used within a Sesotho matrix usually suffixes an appropriate Sesotho verbal extension if it is used within a Sesotho utterance. Generally, verbs attach Sesotho affixes more frequently than nouns. Sesotho affixes attach to English nouns and verbs, as illustrated in (5).

**(5)     Nouns**
   a)   The plural class 2 (a) prefix bo-, as in **bo**teacher 'teachers'
   b)   The plural class 6 prefix ma- as in **ma**gents 'gents'
   c)   The plural class 10 prefix li-, as in **li**radio 'radios', **li**ice cream  'ice cream cones/packets', **li**flops 'flip-flops", **li**swing 'swings', **li**colour 'colours'
   d)   The suffix /-a/, as in coloura **'**(v) colour' or **'**(n)'colour'
   e)   The suffix /-i/ or /-e/, as in speed**i**  'speed'**,** swing**i** '(n) swing'

f) The suffix locative marker /-ng/ or /-eng/ as in speaker**eng** 'at the speaker'**,** filming 'at the film'

**Verbs**

(a) Present tense marker (or vocalic –a): Hape, push**a** hape 'again, push again'

(b) Past tense: Look, e light**ile** ka nqena 'it has a light on this side'; ke colour**ile** hantle 'I have coloured properly'; u mpushile 'you have pushed me.

(c ) Causative: Ke tlo u swing**isa '**I'm going to make you swing**'**

(d) Reflexive: E re ke **i**cut**e** le 'na 'let me cut myself too'

(e) Applicative: U mpush**el**ang? 'why do you push me?' ncolour**ele** 'colour (something) for me'

(f) Subjunctive:     Mpush**e** 'push me'; e re ke push**e** 'let me push'

(g) Objective marker: **M**pushe 'push me'; **n**colour**ele 'colour (something) for me'**

(h) Negative: Ha ke favour**ele** Matlama 'I do not favour (for) Matlama'

It is noted that children use the plural noun class 2 (a) prefix **bo-**, which is not reported in earlier studies.  In the examples, u **m**-push-**el-a-ng** 'why do you push me', **m**-push-**e** 'push me', **li**-colour-**a** 'colours', **n**-colour-**el-e** 'colour for me' there is multiple morphological switching of prefixes and suffixes.  Although Sesotho-speaking children acquire the passive extension early (much earlier than English-speaking children do), as Demuth (1989) shows, there are no instances of Sesotho passive morpheme suffixed to English verbs in the data.  Khati notes its use in bilingual adult speech on verbs such as **treat** and **train** that become treat**oa** and train**oa.**  It can be assumed that this is a late development in code switching and if so, it would correspond to the pattern observed with the late acquisition of the passive construction in English L1 (Ervin-Tripp, 1974).

As has been mentioned, the use of English verb affixes with Sesotho verbs is not a productive phenomenon, although it does take place.  Children use the progressive aspect marker, as in (6)

**(6)**     you are hlais-**ing** him in the window 'you are making him look through the window'.

When this takes place, the vocalic /–a/ is deleted.

Other examples of the use of the English progressive morpheme in this way include khutl-**ing** 'going back', si-**ing** 'leaving behind, lelekis-**ing** 'chasing', qal-**ing** 'starting (trouble)',shap-**ing** 'beating', lom-**ing** 'biting', khenoh-**ing** 'losing a tooth'.  Some verbs even use the dimunitive form, as in **shapa-**shap-**ing** 'beating just a little bit' and tsama-tsamae-**ing** 'walking just a little bit'.  This type of affixation, occurring predominantly in the speech of one child between age 4;0 and 5;0, seems like lack of effort to access an appropriate word in the relevant language rather than lack of linguistic competence because prior to this time she had not used this type of speech.  It further supports the earlier (in comparison to other inflections) use of this inflection than others both is L1 and L2 acquisition as reported in early studies, such as Brown (1973), de Villiers and de Villers (1973), Dulay and Burt (1974).

## Intra-sentential code switching

Intra-sentential code switching is a common feature in the language of English/Sesotho bilinguals and has been explained extensively in previous local studies (such as Khati, 1992; Matee, 2000).  It occurs productively in the current study as well and it is the next most frequent situation after lexical switching within both the L1 and L2 matrices, as Tables 3 and 4 show.  In some cases children even switch back to the original language of the utterance.  Volterra and Taeschner (1978) found that their subject, who spoke Italian and German, used only one set of syntactic rules to express negation and possession for one year.

**Translation**

Researchers such as Imedadze (1967), Redlinger & Park (1980) and Vihman (1985) show that children often give synonym patterns side by side when they first begin to combine the two systems syntactically, as in example (7) where the conversation is between Raivo and his father in Vihman's study:

**(7)**      Raivo:  Ei ole enam, **some more** 'there isn't    anymore some more'.

                Father:     Ei ole enam mida?' There isn't anymore what?

                Raivo:     Ei ole enam, **some more** 'There isn't anymore some more'

        The study hypothesized that Sesotho-English bilingual children would abundantly restate utterances through translation from one language to another. This hypothesis was based on the observations made by several researchers. However, translation does not seem to be common, as Appendices 2 and 3 illustrate. Children tend to translate (to a limited extent) from L1 to L2 in the early stages of their exposure to the L2. As they become more exposed to English they translate utterances that are initially made in the L2 more than they translate those that are initially made in L1. The rate of translation between groups is also interesting. There is an indication that the four year olds translate from L1 to L2 at the same rate as the three year olds. On the other hand, the four year olds translate from L2 to L1 at the same rate as the five to six year olds. Although there is limited data in this regard, a child's L2 competence level and cognitive development seem to be determining factors for the rate and pattern of translation from one language to another. The few examples of translation that occur include those in example (8).

**(8)**      E re ke le bontšeng 'let me show you'. **Let me show you.**

        **Anita, let me show you.**

        Is you, you, **ehlile ke uena** 'it is really you'

        You go and go and **kapa re etsetseng mona** 'or let's do it here'. You go and go **or let's do it here**.

        I'm going to get in the boot. **'Na ke il'o kena ka booting** 'I'm going to get in the boot'.

        Red ha se purple 'red is not purple'. Red is not purple, **red is not purple**

        'Na ke tla ke tlo u otla moo 'I'm going to beat you up there'. **I'm going to beat you up**

**Reasons for Switching Codes**

The conditions under which children switch languages were also examined. Firstly, children seem to switch languages according to the interlocutor. They intuitively change languages when the interlocutor does not seem to understand the language that they are using. The speaker may translate what he/she has just said for the benefit of the interlocutor. For example, if a child who is advanced in L2 addresses a less L2 competent child but realizes that there is no communication, he/she makes the same utterance in L1. In addition, a child may revert to L1 if he/she cannot access the L2 word he/she is seeking access to. Conversation may continue either in the new or in the original language. For example, failure to access the right English kinship term results in the child's decision to use a Sesotho term (after establishing that the interlocutor does understand Sesotho. Another four year old, does the same. He does not know the word for my "village/ home area", '**haeso**', in English. In the middle of a grammatically accurate English conversation, he says, "what is **haeso** in English?" Once he has the appropriate English word, he continues the conversation in English. Finally, in an English-speaking pre-school environment where a child is supposed to speak English, addressing one of the teachers or speaking in the presence of a teacher

is a subconscious reminder that the utterance made in L1 is not appropriate so it is quickly translated into English.

It has been observed that children's language acquisition is influenced a lot by the cultural background in which they are socialized (Moloi, 1998b). This seems to be the most appropriate explanation for the common use of L1 kinship terms of respect ('M'e 'mother/lady', Ntate 'father/sir', Malome 'uncle', Abuti 'older brother', Ausi 'older sister') that the children in this study use when they address Sesotho-speaking adults, even when the conversation is in English. Yet because it is proper to address English-speaking adults by name without using any term that indicates respect, children do not use Sesotho terms that express respect when they address non-Sesotho-speaking adults.

## Conclusions

The present study supports the Dominant Language Hypothesis proposed by earlier researchers such as Lanza, (1992) on child bilinguals. On the average, children's language is dominated by Sesotho matrix. Sesotho is the dominant language for the sample children. It is further observed to spread its characteristics to the L2. Children add a wide variety of Sesotho affixes to English words. The study concludes that initially (age 3;0) children use mother tongue interspersed with switches to L2. In the intermediate "stage" (4;0 – 5;0) they use a mixture of both languages (the grey area). Children use the lexicon, phrases, morphology and syntax of one language within the other indiscriminately. As they gain more competence in L2 (between ages 5;0 and 6;0), they separate the two systems and only occasionally switch from one language to the other. In addition, development of code switching is dependent on the linguistic environment and competence. Children switch when they realize that the interlocutor will understand better if an utterance is made in one language or the other. The switches further seem to depend on the linguistic environment. The more competent the child is in L2, the less he/she switches codes. Therefore, the study proposes that code switching can also be explained within the cognitive theory.

The second conclusion is that translation of an utterance from one language to another is not a common feature of children's code switching. When it does occur, younger children translate more frequently from L1 while older ones translate from the second language to mother tongue. A child's length of exposure to L2 seems to play a role in determining the pattern of switching codes.

## Implications of the study for Classroom Instruction

Akindele and Letsoela (2001) show advantages of code switching for facilitation of classroom instruction and communication. It fills in the communication gap. They observe that teachers switch codes in order to facilitate communication and understanding of difficult points. They further observe the positive use of code switching among the students themselves. Where they are not able to access the accurate structure readily in one language, they resort to the other. They may switch to a word, a phrase, a sentence or even an idiomatic expression that best expresses the meaning that they seek to convey. A word, for example, may express the speaker's intention more appropriately than the one in the main medium of the utterance. Research has actually shown that early bilingualism is an advantage. For example, Cromdal (1999: 17) concludes that bilingual children score high in 'processing of linguistic information'. Secondly, Cromdal concludes that early bilingualism shows positive results concerning error correction. That is, children who are exposed to another language early are more proficient than monolinguals in correcting grammatical errors both in their L1 and in the new language.

Kieswetter (1995:96) observes that code switching "… has serious implications for the teaching of African languages as second or third languages. School syllabi, textbooks, and teaching materials need to take cognizance of the dynamic nature of language".

Code switching can further compensate for lack of technical terms in either language. Where one language does not have a term to express a certain concept, this lack can be compensated from the other

language(s). For example, Bantu languages do not have many scientific terms that are abundant in English. English does not have specific terms for colours of animals but Bantu languages colour terms indicate even the tiniest speck of a different colour on an animal, taking into consideration the part of the body on which it is as well as whether the animal is male or female. There is no reason why classroom presentation cannot make use of this wealth of knowledge, just because it is made in a different language. Computer classes are now offered in many schools. The language used there may be difficult to understand. This is another situation in which teachers could make use of the other language. A teacher could make use of code switching in phatic communication. In the middle of a difficult lesson or when students seem tired, students would benefit from code switching. Even a joke in a different language could bring students' attention back to the lesson. Further implications of code switching in the fields of education need to be researched and tested.

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**Appendices**

Appendix 1: The Coding Matrix

1.      Sesotho matrix  Starts in Sesotho and switches to English

2.      English matrix  Starts in English and switches to Sesotho

Subcategories for 1 and 2

      a)            lexical code switching
            1                          noun
            2                          verb
            3                          adjective
            4                          adverb
            5                          pronoun
            6                          preposition
            7            conjunction

      b)      numerals/time/date
      c)      intra-sentential code-switching
      d)      inter-sentential code switching
      e)      endearments
      f)      morphological code switching

1.   Sesotho base + English inflection

      a)      Nominal        2      plural
                                3      possessive
      b)      Verbal         4      past
                                5      present

2.   English base + Sesotho inflection
      a)      Nominal        6      plural
                                7      possessive

      b)      Verbal         8      present tense
                                9      past tense
                              10     reciprocal
                              11     causative
                              12     applied
                              13     passive
                              14     intensive
                              15     reversive
                              16     subjunctive

      3         Quotation

      4         Translation from Sesotho to English

      5         Translation from English to Sesotho

Appendix 2: Patterns of Code Switching in the Speech of 3 year olds

| Child | Switching from L1 matrix to L2 | Switching from L2 matrix to L1 | Quotation | Translation from L1 to L2 | Translation from L2 to L1 | Total |
|-------|------|------|------|------|------|------|
| 1 | 21 | 20 | 0 | 1 | 0 | 42 |

| 2 | 43 | 21 | 0 | 1 | 0 | 65 |
|---|---|---|---|---|---|---|
| 3 | 17 | 29 | 0 | 2 | 0 | 48 |
| 4 | 21 | 9 | 0 | 1 | 0 | 31 |
| 4 | 68 | 15 | 0 | 0 | 1 | 84 |
| 5 | 67 | 11 | 0 | 1 | 3 | 82 |
| 6 | 68 | 28 | 0 | 4 | 0 | 100 |
| 7 | 32 | 13 | 0 | 0 | 0 | 45 |
| 8 | 20 | 0 | 0 | 2 | 0 | 22 |
| 9 | 35 | 30 | 0 | 0 | 3 | 68 |
| 10 | 392 | 176 | 0 | 12 | 7 | 587 |
| 11 | 66 | 59 | 0 | 1 | 0 | 126 |
| 12 | 11 | 11 | 0 | 0 | 0 | 22 |
| 13 | 68 | 50 | 0 | 2 | 0 | 120 |
| 14 | 98 | 25 | 0 | 3 | 2 | 128 |
| 15 | 91 | 21 | 0 | 0 | 1 | 112 |
| 16 | 19 | 19 | 0 | 0 | 1 | 39 |
| 17 | 48 | 12 | 0 | 1 | 0 | 61 |
| 18 | 47 | 33 | 0 | 1 | 1 | 82 |
| 19 | 53 | 35 | 0 | 2 | 2 | 124 |
| 20 | 82 | 38 | 0 | 2 | 2 | 124 |
| Total | 583 | 303 | 0 | 12 | 8 | 906 |

Appendix 4: Patterns of Code Switching in the speech of 5 year Olds

| Child | Switching from L1 Matrix to L2 | Switching from L2 Matrix to L1 | Quoting | Translation from L1 to L2 | Translation from L2 to L1 | Total |
|---|---|---|---|---|---|---|
| 21 | 96 | 31 | 0 | 1 | 3 | 131 |
| 22 | 11 | 22 | 0 | 0 | 0 | 33 |
| 23 | 72 | 51 | 0 | 1 | 2 | 126 |
| 24 | 121 | 68 | 0 | 2 | 0 | 191 |
| 25 | 7 | 12 | 0 | 0 | 0 | 19 |
| 26 | 65 | 20 | 1 | 1 | 0 | 87 |
| 27 | 8 | 11 | 0 | 0 | 1 | 20 |
| 28 | 7 | 15 | 0 | 0 | 0 | 22 |
| 29 | 46 | 32 | 0 | 2 | 1 | 81 |
| 30 | 10 | 16 | 0 | 0 | 1 | 27 |
| Total | 443 | 278 | 1 | 7 | 8 | 737 |