# The acquisition of inflectional morphology: The representation of nominal inflections in Amharic speaking children's speeches 

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#### Abstract

This study describes the acquisition of inflectional morphology with particular focus of nominal inflections and it employed cross sectional research design to gather the speech data from twelve Amharic speaking children using picture description, picture narration, spontaneous speech elicitation, and story-telling tasks. The data were audio-recorded, transcribed using IPA, and analyzed. The result indicated that the presence of correct and erroneous production of nominal inflections. The highest percentage of correct nominal inflections was registered, especially; gender, person, and possessive morphemes had a better representation in all children's speeches. Children also appropriately addressed and assigned meaning to plural, definite, and case inflections in a certain utterance. On the other hand, they were seen unable to apply the correct forms in other circumstances. When they were exposed to full paradigms, they encountered difficulty of identifying the distribution of nominal inflections and their assigned meaning. As result, children were committing errors of omission (plural, definite, and accusative inflection errors) and paradigm shift (overgeneralization of regular plural marker) and the situation was measurably visible across age groups. In short, when children were unable to deal with the combinational occurrence of nominal morphemes, the complexity of the assigned meaning and their functional loads, errors of omission and paradigm shift were observable at different levels. This highlighted that a cumulative and complete representation of inflectional morphemes and their mastery require long period to be accomplished.


Keywords:Language acquisition, inflectional morphology, nominal inflection, inflectional errors, and morphological mapping

## 1. Introduction

Language acquisition is a process by which children learn to speak and communicate with their surrounding they are exposed to at first. Normally, children acquire any of the world's language if they have early exposure to target one (Lust, 2006). They also acquire their first language without being taught by adults formally and without conscious learning; this has been a mysterious issue for many scholars. In the last hundred years, scholars have been studying children's language acquisition for a number of reasons, in different methods and at various length and depth to answer how this special endowment of nature as well as modulation of nurture interact with each other for the development of children's language and that poses many questions that researchers have to address.

[^0]In line with this, Lust (2006) noted that, the developmental study of language acquisition permits researchers to address different questions and there have been various questions regarding language development that are pursued by different researchers. Lust (2006) raised questions in related to language acquisition. There are questions like what is it about human mind that makes possible to acquire language? Which aspects of the language components are biologically programmed? What specifically linguistic knowledge is evident at early periods? Researchers have contributed a lot by proving different information about acquisition of phonology, morphology, lexicon and syntax and cultural backgrounds. Moreover, these topics are investigated in psycholinguistics as well as in other related scientific disciplines such as developmental psychology. One of the most investigated topics in this area is the acquisition of inflectional morphology, which focuses on how children learn various inflectional categories and each inflected word differs substantially (Tatsumi, 2017).
In line with this, Penke (2012:2) states, The acquisition of inflectional morphology has been a central topic in language acquisition research since the seminal works of Berko (1958), Cazden (1968) and Brown (1973) on the acquisition of English'. Penke (2012) also explained many researchers have carried out studies on the acquisition of inflectional morphology in many languages all over the world in the last 30 years. As these studies have indicated, most of the languages addressed by different researchers are spoken in Europe and Asia (Lust, 2006) and some are found in African languages. According to Deen (2005) explanation, studies on the acquisition of language have contributed a lot to the description of the nature of human language acquisition in one way or another: be it phonological, morphological, or lexical and this situation initiates the researcher to carry out the current study on the acquisition inflectional morphology.

### 1.1 A brief review of first language theories

Language acquisition is an unconscious process in which children go through to interact and understand others (Soltanieh, 2014) but it is still a debatable issue to describe how and when children learn to listen, speak and understand their first language. In order to describe and theorize the acquisition process, scholars have ingrained their point of views from various perspectives and have attempted to address how language acquisition is described from behaviorism, nativism, cognitivism, and interactionism perspectives.
Language acquisition from the perspective of behaviorists lay on the idea that it occurs through imitation, and reinforcement. In line with this, Assaiqeli (2013) noted that children learn how to speak from other human role models through a process of involving imitation, reward, and practice. Human role models in children's environment provide stimuli and rewards. When children attempt to imitate to speak like the sounds or speech patterns, they are usually praised and given affection for their efforts. However, the theory criticized as it ignored the natural ability of a child, which enables to accumulate knowledge through process.
Unlike behaviorism, nativism rooted its proposal from child's innate capacity. The theory is directly associated with Noam Chomsky's proposal
that states humans are born with an innate capacity and a knowledge system which is specifically designed for language and language acquisition (Tavakoli, 2012; Cruz, 2015). Clark (2009) also states that children must rely on a certain innate structures and mechanisms, which enable them to acquire their first language. The theory proposed that children have a generative grammar (UG) of their language (Cruz, 2015). Cognitive theory, on the other hand, emphasizes that language acquisition occurs with the interaction of both a social and cognitive phenomenon. It deeply emphasizes how cognitive development of a child fosters language acquisition process. For Piaget, the child's level of language is determined by whether she/he acquires certain fundamental concepts or complex processing operations, which make children be capable of acquiring language (Tavakoli, 2012). Generally, cognitive theory is one in which psychologists attempt to understand how humans create and use knowledge for communication purposes.
On the other hand, interactionists' theory of first language acquisition has also been modeled from a wide range of developmental understanding; and social interaction. The theory suggested that a child's language is developed through close interaction with the environment. In addition, Thuresso (2011) noted that the interactional/developmental perspective puts emphasis on cognitive development as a part of the language acquisition, where the hypothesis is that children acquire their language through interaction with people and objects in their surroundings.
In sum, behaviorists, nativists, cognitivists and interactionists theories of language acquisition have played significant role to understand how nature and nurture interact to foster the development of children's language. The interactionist position is especially assumed proper and concurrence of the theories that acknowledges the contribution of both nature and the nurture to the development of children's language in general and various linguistic components in particular.

### 1.2 Acquisition of morphology by young children

Language is composed of sounds, words, phrases, and sentences. At each level, language is rule governed. At the sound level, phonology refers to the rules of the sound system and the rules of sound coordination. At the word level, morphology plays a role to govern the grammatical structure and formation of words. Thus, acquisition of different morphological elements is one of the significant components of children language acquisition process and even for children to communicate properly using grammatical structured words, phrases and sentences. In relation to this, children who are native speakers of any language with normal development are able to extend morphological rules to novel nouns, verbs, and adjectives; this is evident in children's everyday interactions with friends and adults (Barry, 2013; Clark 2003). However, the acquisition of some morphological rules appear frequently in children's interaction process and they are able to apply these rules to certain nouns and verbs forms before they are able to extend the rules to other nouns and verb forms, and for deriving and inflecting adjectives (Barry, 2013; Kit, 2003; Stolt, 2009).

In line with this, Bittner, et al (2003) categorizes morphological acquisition into three periods: pre-morphology, proto-morphology, and morphology proper. During the pre-morphological period, children do not acquire a grammatical system. They use only forms, which are single, unmarked or, which are morphologically very simple and one form is used for each word. These early morphological patterns of words are first acquired by mere repetition and differ from one language to the other. According to Bittner et al (2005), in certain languages, children acquire verb morphology early: the infinitive or the third person singular present form, either inflected with a person marker (Dutch, German), or with the stem vowel (Lithuanian) or very non-inflected form(Turkish). The multi-syllabic utterances at pre-morphology period are categorized as reduplicated (a string of identical syllables, like [ba.ba.ba] or multicolored babbles (syllable strings with varying consonants and vowels), like [ba.gi.da.bu]).
Children's morphology grows vigorously in their productive language and their ability to use inflectional morphology increases within a relative short period. At the end of this pre -morphology period, children also begin to increase the use of those inflectional types as they have already used (Bittner, et al, 2003; Clark, 2003). At this time, children are not only using rote repetition patterns, but they are processing the rules behind the morphology, for example, the regular form of past tense is applied widely. In relation to this, Radford (2009) noted that early language learning is dominantly rote repetition, that is, through hearing. Based on the word patterns they hear, young children tend to treat different patterns in the same way. They may form rules for themselves that past tense verb in English ends in/d/or /-ed/ and they overgeneralize that rule to irregular English verbs, such as 'go' and 'bring' as [goed] and [bringed] before eventually they learn the actual irregular forms 'went' and 'brought'.
Bittner et al (2003) also attempted to indicate that the onset of protomorphology era is as an essential phase of morphological development. During this transition, active morphological elements are roughly observed and children show dramatic development in lexical diversity. Class of words, such as noun, verb, and functional word types are manifested. The main feature of this transition from the pre to the proto-morphological period is observed with measurable enrichment of morphological diversity. Children commonly start to utter their first words between twelve and twenty months and they produce regular morphological patterns of words. However, when they develop their ability to use an expression that is more complex, they produce grammatical morphemes: prefixes suffixes, prepositions, and clitics. For example, on nouns, they start to add morphemes, which indicate differences in gender, number, and case; on their verbs, they try to use rules for aspect, tense, gender, number, and person (Clark, 2003).
Rubino (2003) has described that once children hear the plural form of the regular English noun dog is dogs; they overgeneralize this form to irregular nouns as well. Over-generalization of the plural formation rule in English occurs when children start treating singular nouns that end with the fricative /s/ as plural nouns and they may think that nouns like house or purse are in plural forms(Clark, 2009). Similarly, Fashold (2010) observation on English learning children indicates that children pass through three
predictable stages in acquiring morphological elements of the target language: among these features, over-generalization commonly occurs in the second stage (proto morphological period). First, children use the correct present and past tenses of verbs (e.g. go and went). However, they do not relate the two forms as belonging to the same verb. They rather treat the two tenses as separate entities in their lexical repertoire. In the second phase, they construct a rule of forming the past tense and begin to overgeneralize by applying it to irregular verbs like 'go' they learn the exceptions to the past tense rule and acquire the ability to apply this rule selectively. As Bittner et al (2003), the morphological period arises when the first inflectional differences come to be regular and children use the relevant morphological patterns to new lexicons.
However, in a certain language, the acquisition of morphological patterns may take a long period due to three basic reasons. Some morphological inflections appear to be more complex conceptually; which means they convey meanings that are also perceived by other inflections. The more semantically complex grammatical morphemes, the late to be acquired; for instance, the English past/-ed/ is acquired earlier than auxiliaries 'is/ was /were' (Clark, 2003; Ingram, 1999). The second factor, which affects morphological acquisition, is the nature of the target language's typology. The proper complexity to express particular differences varies between languages. The concept of number, for example, one versus more than one is normally acquired between the ages of $1 ; 6$ and $2 ; 3$ (Clark 2003; Ingram et al, 2006; Lieven, 2010; Slolt, 2009). However, the acquisition of number can be described differently in different languages.
According to Gor (2000), some languages, like Russian use only one inflection to mark plural nouns and have some exceptions to learn by repetition. On the other hand, other languages may have more complex systems to indicate the plural forms, for example, plural forms of nouns depend on gender and phonological form of nouns. However, the morphemes of number are acquired relatively early. Frequency of input may also affect the acquisition. Children are more familiar to some morphological patterns, which appear frequently; stem-types have a tendency to be acquired first. The most often used morphemes are acquired earlier than those used less in the target language (Ingram, 1999; Slolt, 2009). The amazing feature of morphology is its developmental sequence which seems to be partly independent on the frequency input in which the various morphemes occur in adult speech. For example, the determiners /the/ and/a/are the most frequent morphemes in children's environment but they are acquired relatively late. Thus, frequency by itself may not always be a determinant factor to the developmental order of morphemes despite having role to play in conjunction with other factors. It is also clear that pronunciation, by itself is not decisive either, since the three/-s/ morphemes are acquired at different times. What, then, determines the order of acquisition of non-lexical categories and bound morphemes is still a question (O'Grady, 2006).
Children start to apply a certain word formation processes at nearly the same time as their first inflections. In particular, they produce novel compound forms from simple stem combinations. Then, during their second year speech production, some inflectional patterns become apparent; they
also start to produce a few derivational affixes in novel word forms. The occurrence of such derivational and compound morphemes is becoming numerous in numbers between ages three and four (Clark 2003). The major word formation processes in English are derivation and compounding both of which emerge early in the acquisition. However, the process of evaluating morphological patterns and inferring meaning is a requirement to describe the acquisition of inflectional morphology.

### 1.3 The current study

Language plays a pivotal role to have a better communication and becomes a means to someone to create good relationships with others. Having a good command of language bestows power to literacy acquisition and it enables children to make sense of the world around them. To reach to these language uses, children need to acquire various linguistic components of the target language. The acquisition of phonology and morphology plays an important role for the production of grammatically meaningful and different domains of words; the type of words children likely produce are highly influenced by the type of morphological components and their order of acquisition. Studies on language acquisition area have a range of differences in terms of approach. Several studies have described phonological aspect of language acquisition, while others are motivated on morphological or morphosyntactic aspects; however, most of these studies have a dominant emphasis on European, Asian and some in African languages (Bittner et al 2003; Natalia, 2003; Wine et al, 2005; Garsho, 2013; Lorusso, 2017; Westergaard, 2005; Demuth et al, 2010).
In Ethiopia, of course, there is a growing awareness in the field of language acquisition and studies on the area are increasing despite a great requirement to address many local languages. A study on speech production in Amharic Speaking Children with Repaired Cleft Palate by Abebayehu (2013), Child Language and Baby Talk in Amharic by Ebenezer (2013), the developmental realization of Ejectives by Fikre and Abebayehu (2021), the acquisition of verbs by Amharic speaking children by Fikre and Abebayehu (2022) are research works found in Amharic language. In addition, a PhD dissertation on the acquisition of Oromo phonology by Tariku (2019), an MA thesis on Sidamuu Afoo by Demeke (2015) and an investigation of the acquisition of inflectional morphology by Afan Oromo speaking children by Alemayehu (2022) are studies found in other local languages. Apart from these attempts, no other work on the acquisition of Ethiopian languages could be found. This calls researchers to conduct studies on the acquisition of various features of Ethiopian languages. Along the same line, this study, therefore, aimed to describe and document the acquisition of inflectional morphology by Amharic speaking children with particular focus of nominal inflections. The study in effect will fill the knowledge gap observed on the topic, particularly in in Ethiopian context. It would also be a contribution to cross-linguistic analysis of patterns of language acquisitions. Thus, in order to describe and document the representation of nominal inflections by typically developing Amharic-speaking children, the research raises the following questions.

### 1.4 Research questions

This study generally described the acquisition of nominal inflections and answers the following fundamental research questions in the current research

1. What does the order of nominal inflections acquisition look like in Amharic speaking children's speeches?
2. What mechanisms do children employ when they encounter difficulty of mapping and assigning appropriate inflections?
3. To what extent are correct nominal inflections represented in children speeches?
4. To what extent do children's functional age and gender difference exert an impact on frequency distribution of correct nominal inflections?

## 2. Methodology

This current study recruited a cross-sectional research design. Its design is defined as a type of observational research that analyzes data collected once in a given point of time across a sample of population or a predefined subset (Zoltan, 2007).Cross-sectional research design is helpful to include a large representative sample and less demanding to recruit respondents. This allowed researcher to gather a large size of data within a short period and helped to see individual ability of producing various morphological patterns and the representation of nominal inflections in Amharic speaking children's speeches.

### 2.1 Participants

Twelve $3 ; 0$ to $5 ; 0$ years old children were selected as participants of the study. This age bound children were preferred for some reasons. Many studies have indicated that children at this age bound have the ability to construct longer and more complex grammatically structured words, phrases and sentences and different class of words with complex morphological inflections and these are highly prominent (O'Grady, 2006). This stage of development is also characterized by the emergence of quite different type of morphological elements in children words (Ingram, 1988). Bearing this in mind, three to five years old, children were taken as subjects to describe the nature and development of children's morphology and various procedures were followed to select the target participants.

Table 1
Children's demographic data

| Background | Group |  | Frequency | Percentage |
| :--- | :--- | :--- | ---: | :--- |
| Gender | Male |  | 6 | 50 |
|  | Female |  | 6 | 50 |
|  | $3 ; 0-3 ; 3$ | Male | 1 | 8.33 |
|  |  | Females | 2 | 16.66. |
|  | $3 ; 9-4 ; 0$ years | Male | 2 | 16.66 |
|  |  | Females | 1 | 8.33 |
|  | $4 ; 5-4 ; 6$ years | Male | 1 | 8.33 |
|  |  | Female | 2 | 16.66 |
|  | $4 ; 11-5 ; 0$ | Male | 2 | 16.66 |
|  |  | Female | 1 | 8.33 |

As the above table indicated, twelve Amharic speaking children were chosen and grouped in to four with five-month age intervals. Equally, six male and six female children were the participant of this study.

### 2.2 Data collection and processing

The data were collected using picture description, spontaneous elicitation, and storytelling tasks. The speech data were audio recorded and transcribed using IPA and Ext IPA. The transcription was done in ELAN linguistic annotator tools as it was easy to search the frequency of part of speeches (POS), segmentation and helpful to display the different morphological patterns

### 2.3 Data analysis

The research used qualitative and quantitative data analysis methods. First, the audio-recorded files were transcribed in ELAN annotator tools and were saved in eaf for searching frequency of different morphological patterns. After searching was completed, ELAN displayed the following search results; the number of utterances, key words, and part of speeches (POS), frequency of derivation and inflectional morphemes and the number of correct and incorrect nominal inflections. The results found in this way were registered in excel format and put into order. Each child's data were registered to SPSS. Then, the analysis was made using descriptive, (sum, frequency percentage, mean and standard deviation) analysis and qualitative analysis was made taking example words and sample extracts that demonstrate nominal i nflections.

## 3. Findings

Amharic is one of Semitic languages, which have a rich and complex morphology, and it is best described by three basic morphological processes; a root-pattern, derivation, intercalation and inflection. Amharic uses different affixes to create inflectional and derivational word forms. Different nouns and verbs are derived richly by root- pattern morphology; nouns are derived from other basic nouns, adjectives, stems, roots, and the infinitive form of a verb by affixation and intercalation. Verbs are also derived from roots and stems but nouns can be derived by adding prefixes and suffixes to basic nouns, and nouns also inflected for different grammatical information; number, person, case, gender, definiteness and possession. The interaction of such inflections likely makes the acquisition process more complex (Anbessa and Hudson, 2007).

### 3.1 The total representation of nominal inflectional in children's speeches

 Inflection is the other complex phenomenon in Amharic language. Nouns can be inflected for, person, gender, number, possession, definiteness and case. Similarly, adjectives have a great possibility to be marked by gender, number, and definiteness in adults grammatically meaningful sentences. However, the representation of these inflectional morphemes may not be typically the same in children's speeches and most of children's utterances are errors prone due to complexity of the nominal inflections. In order todescribe the representation of correct and incorrect nominal inflections, the result was presented in the following tables.

Table 2
The total frequency of correct and incorrect nominal inflections in Amharic

| STAT. | COR.N. INFLC | FRQ.ERR.N.INFLC | TOTAL |
| :--- | :--- | :--- | :--- |
| N | 12 | 12 | 12 |
| Total | 818 | 389 | 1207 |
| $\%$ | 67.77 | 32.23 | 100. |
| Mean | 68.17 | 36.5 | 100.58 |
| SD | 22.445 | 13.021 | 25.092 |

As indicated in the above table, an attempt was made to present the total frequency distribution of correct and incorrect nominal inflections. The total size of correct inflections was $67.77 \%$ (mean 68.17) and the incorrect inflections covered $32.23 \%$ (mean 36.5). Although the frequency of nominal inflections differed from child to child and from one age group to other, the emergent development of correct inflections was by far greater than the representation of total errors.

Table 3
The total frequency of correct and incorrect nominal inflections across age groups

| AGE |  | TOTAL | COR. N. INFLC | FRQ ERR NINFLC |
| :---: | :---: | :---: | :---: | :---: |
|  | N | 3 | 3 | 3 |
|  | Sum | 276 | 141 | 135 |
| 3;0-3;3 | \% | 22.86 | 17.2 | 34.7 |
|  | Mean | 92.00 | 47.00 | 45.00 |
|  | SD | 13.892 | 15.133 | 18.028 |
|  | N | 3 | 3 | 3 |
|  | Sum | 320 | 209 | 111 |
|  | \% | 26.56 | 25.6 | 28.5 |
| 3;9-4;0 | Mean | 106.66 | 69.67 | 37.00 |
|  |  |  |  | 2.646 |
|  | SD | 35.679 | 29.195 |  |
|  | N | 3 | 3 | 3 |
|  | Sum | 306 | 228 | 78 |
| 4;5-4;6 | \% | 25.35 | 27.9 | 20.1 |
|  | Mean | 101.67 | 76.00 | 26.00 |
|  | SD | 15.503 | 14.933 | 7.211 |
|  | N | 3 | 3 | 3 |
|  | Sum | 305 | 240 | 65 |
| 4;11-5;0 | \% | 25.6 | 29.3 | 16.7 |
|  | Mean | 101.66 | 80.00 | 21.67 |
|  | SD | 12.097 | 22.113 | 6.658 |

According to the data in the above table, the total frequency of correct and incorrect nominal inflections had different distributions across age groups. From the total correct nominal inflections, 17.2 \% ( mean 47) was registered from the first age group ( $3 ; 0$ to $3 ; 3$ year) , $25.6 \%$ ( mean 69.67) from the second ( $3 ; 9$ to $4 ; 0$ years ), $27.9 \%$ ( mean 76 ) from the third $(4 ; 5$ to $4 ; 6$ years ) and $29.3 \%$ (mean 80 ) from the fourth age group( $4 ; 11$ to $5 ; 0$ years ) children's speeches. On the other hand, $37.7 \%$ (mean 45) of nominal inflection errors were also found in the first age group, 28.5\%(mean 37) in the second, 20.1\% (mean 26) in the third and $16.7 \%(21.67)$ in the fourth age group children's speeches.
Indeed, the correct and incorrect nominal inflections were registered from each group and the frequency occurrence of correct and incorrect inflection was pertinent to children's functional age groups. The emergency of correct nominal inflections increased vertically across age groups and the frequency occurrence of inflectional errors decreased although errors were inevitably subjected to the incomplete development of different nominal inflection patterns in children's utterances.

Table 4
The frequency of correct and incorrect nominal inflections in relation to gender

| GENDER | TOTAL | FRQ.CORR.INFLC | FRQ. ERR. INFLC |  |
| :--- | :--- | :--- | :--- | :--- |
| Male | N | 6 | 6 | 6 |
|  | Sum | 653 | 360 | 218 |
|  | $\%$ | 50.9 | 44.0 | 56.0 |
|  | Mean | 108.83 | 60.00 | 36.33 |
|  | SD | 33.666 | 23.409 | 15.501 |
| Female | N | 6 | 6 | 6 |
|  | Sum | 629 | 458 | 171 |
|  | $\%$ | 49.1 | 56.0 | 44.0 |
|  | Mean | 104.83 | 76.33 | 28.50 |
|  | SD | 15.562 | 20.007 | 9.793 |

From the total frequency of correct nominal inflections, $44 \%$ (mean 60) was counted from boys' and $56 \%$ (mean 75.33 ) from girls' speeches where as $56 \%$ (mean 36.33) of nominal inflection errors were from boys' and 44\% (mean 28.50) from girls' speeches. The data indicated that despite their age and individual difference, girls, as a whole, performed better in using correct nominal inflections than boys but the frequency of errors appeared more frequent in boys' than girls' speeches. Particularly, the frequent omission of plural markers from Elias's ( $3 ; 2$ years) speech and the absence of correct plural markers production due to phonological difficulty in Bruk's (3;9 years) and Elnata's ( $4 ; 11$ years) increased the frequency of nominal inflections errors in boys' side. In line with this, the type of correct inflectional patterns and the nature of errors' paradigms were treated in the following section.

### 3.2 The type and frequency of correct nominal inflections

The acquisition of nominal inflections is also crucial patterns in language acquisition process as they determine adjective- noun and subject-verb and object-verb agreement in number, gender, and person and case and
definiteness in a grammatically meaningful sentence. In Amharic, the acquisition of these nominal inflections may not be as complete as adults in children's speeches but the vigorously growing lexical development is likely to be a sign to the presence of different types of nominal inflections in this age bound.

Table 5
The type and frequency occurrence of correct nominal inflections

| STAT | TOTAL | .PL.MRK | GEND | DEF | POSS | ACC. MRK |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| N | 12 | 12 | 12 | 12 | 12 | 12 |
| Sum | 818 | 183 | 253 | 236 | 129 | 134 |
| $\%$ | 100 | 22 | 30.9 | 28.85 | 15.77 | 16.38 |
| Mean | 68.17 | 15.25 | 21.08 | 19.67 | 10.75 | 11.17 |
| SD | 22.445 | 10.532 | 2.906 | 8.305 | 5.723 | 7.756 |

From the total correct nominal inflections, the plural markers like /-ot//as in the word /lam-ot $/$ / 'cows' or /-wot// as in the word /bore-wotf/ 'oxen' and/-a-/like in the word /fir-a-fire/ 'fruits' had $22 \%$ (mean 15.25) representation. Morphemes inflected for gender and person covered 30.9\% (mean 21.08) of correct nominal inflections. The table also portrays the frequency of definite markers /-u/, /-w/, /-ua/, /-wa/, the accusative marker /-n/ and, possessive markers and these inflections had 28.85\% (mean 19.67), 16.38 \% (Mean 11.17) and $15.77 \%$ (mean 10.75) of total frequency coverage respectively. The common possessive marker /jo-/ the first person singular, /-e/je/, third person female possessive markers /-ua/ or /wa/, third person male possessive /-u/ or /-w/ were appeared more frequently than others. Although the first person plural, /-at/n/, the second person male possessive marker/-h/, the second person female possessive $/-S /$, the second person plural /-atfhu/, and the third person plural marker /-at〇əw/ were found in some children spontaneous' speeches like talking about their family or what they do after school.
From the researcher's observation, this age bound children had better realization of nominal inflection for gender, person, and possession. Children did not have difficulty of identifying and mapping the meaning to such inflections. However, in the production of the other nominal inflections like number, definiteness, and case, they encountered difficulty of consistency of mapping their meaning in appropriate context. As a result, they were observed being on and off to preserve such nominal inflections and identify how to use potential affixes together.

Table 6
Type and frequency correct nominal inflections across age group

| AGE |  | NPL. MRK | GNDR | DEF | ACC | POSS |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{3 ; 1 - 3 ; 3}$ | N | 2 | 3 | 3 | 3 |  |
|  | Sum | 32 | 55 | 39 | 16 | 21 |
|  | $\%$ | 17.5 | 21.7 | 16.5 | 11.9 | 16.3 |
|  | Mean | 10.67 | 18.33 | 13.00 | 5.33 | 7 |
|  | SD | 2.517 | 1.155 | 12.166 | 0.577 | 3.25 |


| 3;9-4;0 | N | 3 | 3 | 3 | 3 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sum | 44 | 61 | 60 | 22 | 43 |
|  | \% | 24.0 | 24.1 | 25.4 | 16.4 | 33.3 |
|  | Mean | 14.67 | 20.33 | 20.00 | 7.33 | 14.33 |
|  | SD | 12.702 | . 577 | 6.083 | 4.619 | 3.055 |
| 4;5-4;6 | N | 3 | 3 | 3 | 3 | 3 |
|  | Sum | 49 | 66 | 62 | 43 | 49 |
|  | \% | 26.8 | 26.1 | 26.3 | 32.1 | 26.8 |
|  | Mean | 16.33 | 22.00 | 20.67 | 14.33 | 16.33 |
|  | SD | 10.116 | 4.359 | 5.859 | 6.429 | 10.11 |
| 4;11-5;0 | N | 3 | 3 | 3 | 3 | 3 |
|  | Sum | 58 | 71 | 75 | 53 | 58 |
|  | \% | 31.7 | 28.1 | 31.8 | 39.6 | 31.7 |
|  | Mean | 19.33 | 23.67 | 25.00 | 17.67 | 19.33 |
|  | SD | 16.773 | 1.528 | 7.00 | 10.786 | 16.77 |

As shown, from the total frequency of correct nominal inflections, number, gender, definiteness, case and possession, $17.5 \%$ (Mean 10.67) Plural inflections was found first age group, 24\% (Mean 14.67) in second, 26.8\% (mean 16.33) in third and 31.7\% (mean: 19.33) frequency distribution was registered from the fourth age group children's speeches. Similarly, the correct mapping of meaning for gender had $21.7 \%$ (mean 18.33) of frequency coverage in the first age group, $24.1 \%$ (mean 20.33) in the second, 26.1 (Mean 22) in the third and $28.1 \%$ (Mean 23.63) in the fourth age group. The correct representation of definiteness had $16.5 \%$ (mean 13.00) of frequency coverage in the first age groups $25.4 \%$ (mean 20 ) in the second, $26.3 \%$ (mean 20.67) in the third and $31.8 \%$ (mean 25) to the fourth age group.

By the same token, the accusative /-n/and the possessive inflections had also different coverage across age groups and their distribution grew a bit larger in older age group children's speeches. For example, the frequency of appropriate accusative/-n/inflection also covered $11.9 \%$ (mean 5.33) of the total in the first age group, $16.4 \%$ (mean 7.33 ) in the second, $32.1 \%$ (mean 14.33 ) in the third and $39.6 \%$ (mean 17.67) in the fourth age group. Similarly, possessive markers had $16.3 \%$ (mean 7) of frequency coverage in the first age group and $18.6 \%$ (mean 8 ) in the second and the frequency grew to $31.8 \%$ (mean 16.33) in the third and $33.3 \%$ (mean 19.33) in the fourth age group.
In sum, all nominal inflections like number, gender, definiteness, accusative and possessive markers had a significant depiction across age groups and their frequency occurrence augmented heretically in older children's speeches. The increment observed in mapping appropriate meaning for different nominal inflections across age group was evident to say that older age children had better realization and production. Although a heavy and complex functional load of such inflections, which occur in a phrase or sentence, forced children to drop or make paradigms shift. For example, the phrase /jo-lid子-otf-u-n dəbtor-ot $\int /$ 'children's exercises books' is loaded by different inflections. The noun /lid\}/ 'child' is marked by the possessive marker /jo-/, the plural /-ot $5 /$, the definite /-u/ and accusative /-n/ and such a heavy functional load in a single word was a challenge for most of this age bound children. As a result, some children dropped one or the two
due to inability of applying them together whereas the other might not realize the function of each pattern in a connected speech.

Table 7
The distribution of correct nominal inflections in relation to gender


An attempt was also made to describe the frequency of correct nominal inflections from gender perspective. In girls' speeches, the correct representation of the plural markers /-ot $\int$ / or /-wot $\int /$ had $72.1 \%$ (mean 22) of frequency coverage whereas, in boys' speeches, it was $27.9 \%$ (mean 8.5). Similarly, appropriate mapping of meaning for gender was $51 \%$ (mean 21.50) in girls' speeches and $49 \%$ (mean 20.67) in boys and $42.8 \%$ (mean 16.83) of correct definite markers representation was registered from boys' and 57.2\% (mean 22.50) from girls' speeches. Besides, the accusative and possessive markers had also a significant representation in both sides but there was an increment in girls ( $53 \%$ mean 11.83 ) side than boys ( $47 \%$; mean 10.50). The possessive inflections had $48.1 \%$ (Mean 10.33) of frequency coverage in boys and $51.9 \%$ (mean 11.17) in girls.
Indeed, from this analysis it is possible to deduce that different types nominal inflections; plural, gender, definite, possessive and accusative markers were fairly represented in both girls' and boys' speeches but most of the girls had better performance on mapping and assigning appropriate meaning for the combinational occurrence of different inflectional morpheme than boys. However, children's speech production was not completely correct and free from errors and they made phonological, lexical, and morphological errors in their different level utterances.

### 3.3 Type and frequency of nominal inflection errors in children's speeches

Children's language is commonly error prone in their acquisition process. They may drop the significant morphemes due to phonological difficulty whereas others use over generalization mechanisms until they are able to apply the correct form. On the basis of this information, it was tried to examine the nature of nominal inflection errors attested in Amharic speaking children's speeches.

Table 8
Total frequency and types of nominal inflection errors observed in children's speeches

| STAT | Total FRQ. | PL. MRK. ERR | DEF.ERR | ACC.ERR |
| :--- | :--- | :--- | :--- | :--- |
| N | 12 | 12 | 12 | 12 |
| Total | 389 | 202 | 88 | 99 |
| $\%$ | 100.0 | 51.92 | 22.62 | 25.44 |
| Mean | 32.41 | 16.83 | 7.33 | 8.25 |
| SD | 13.021 | 9.867 | 3.380 | 4.115 |

From the total frequency of nominal inflection errors (389 frq.) counted from twelve children's speeches, $51.32 \%$ (mean 16.83 ) was plural inflections errors. The remaining 22.62 \% (mean 7.33 ) and 25.44 (mean 8.25) were identified as omission definite and accusative markers respectively. As the table depicts, errors of plural inflections were the highest followed by accusative one.

Table 9
The frequency occurrence of nominal inflection errors across age groups

| Age |  | Total FRQ. | PL. MRK. ERR | DEF. ERR | ACC. ERR |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | 135 | 76 | 30 | 29 |
|  | \% | 34.7 | 37.62 | 34.48 | 29.29 |
|  | Mean | 45.00 | 25.33 | 10.00 | 9.67 |
|  | SD | 18.028 | 9.614 | 0.577 | 5.033 |
| 3;9-4;0 | N | 3 | 3 | 3 | 3 |
|  | Total | 111 | 58 | 25 | 27 |
|  | \% | 28.5 | 28.71 | 28.73 | 27.27 |
|  | Mean | 37.00 | 19.33 | 6.66 | 9.00 |
|  | SD | 2.646 | 3.229 | 4.041 | 3.606 |
| 4;5-4;6 | N | 3 | 3 | 3 | 3 |
|  | Total | 78 | 38 | 20 | 20 |
|  | \% | 20.1 | 18.81 | 22.98 | 20.20 |
|  | Mean | 26.00 | 12.66 | 5.33 | 6.66 |
|  | SD | 7.211 | 2.646 | . 577 | 5.508 |
| 4;11-5;0 | N | 3 | 3 | 3 | 3 |
|  | Total | 65 | 30 | 12 | 23 |
|  | \% | 16.7 | 14.85 | 13.79 | 23.23 |
|  | Mean | 21.67 | 10.00 | 4.00 | 7.66 |
|  | S D | 6.658 | 6.245 | 0.577 | 4.619 |

The analysis of the data in the table 9 above shows that $34.7 \%$ (mean 45) of the total frequency of nominal inflection errors was found in the first age group, $28.5 \%$ (mean 37 ) in the second, $20.1 \%$ (mean 26 ) in third and $16.7 \%$ (mean 21.67) from the fourth age group. Similarly, $37.62 \%$ (mean 25.33) of plural inflection errors were found in the first age group, 28.71\% (mean 19.33 ) in the second, $18.81 \%$ (mean 12.66) in the third , 14.85 (mean 10) in the fourth age group children's speeches.
By the same token, from the total (86) frequency of omission of definite markers, $34.48 \%$ (mean 10) was detected in the first age group ,28.73\%
(mean 6.66) in the second, $22.98 \%$ (mean 5.33) in the third and $13.79 \%$ (mean 4) in the fourth age group children's speeches. Similarly, from the total frequency (105 frq.) of accusative marker/-n/inflectional error, 29.29\% (mean 9.67) of omission was detected in the first age group ,27.3\% (mean 9) from the second, $24.8 \%$ ( mean 8.67) from the third and $20.2 \%$ (mean 6.66) of accusative marker inflectional errors was also registered from the fourth age group children's speeches.
In sum, the three nominal inflection errors (plural, definite, and accusative markers) were commonly attested across age groups and in each child's speech but plural inflection errors had the highest frequency occurrence especially, in the two boys' (Bruk and Elnata) speeches. Due to their phonological difficulty, no correct plural inflections were detected in two boys' speeches and that lifted up the total frequency of errors. As far as the three types of inflection errors were concerned, their presence was decreased in older children's (4;5 to 5:0 years) speeches but dropping one or more nominal morphemes from different utterances was detectable even children who had better realization and production. It was also undeniable fact that children's speeches were not free from errors. The complex and functionally loaded morphemes to the nouns or noun phrases most probably forced the children to engage in omission or substitution. In sum, the frequent occurrence of such inflectional errors in each child's speech likely signaled that how the complete acquisition of inflectional patterns demands time.

Table 10
Types and frequency of errors in relation to gender

|  | GENDER | TOTAL | PL. MRK | DEF | ACC |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Male | N | 6 | 6 | 6 | 6 |
|  | Total | 239 | 128 | 48 | 63 |
|  | \% | 61.43 | 63.36 | 54.54 | 63.7 |
|  | Mean | 19.91 | 21.33 | 8.00 | 10.5 |
|  | SD | 10.501 | 9.766 | 5.347 | 4.637 |
| Female | N | 6 | 6 | 6 | 6 |
|  | Total | 150 | 74 | 40 | 36 |
|  | \% | 38.56 | 36.63 | 45.5 | 36.3 |
|  | Mean | 12.5 | 12.33 | 6.66 | 6.00 |
|  | SD | 9.793 | 7.847 | 3.724 | 4.893 |

Similar attempt was made to examine the frequency of nominal inflection errors from the perspective of gender difference and more erroneous productions were attested in boys' speeches than girls did. For example, $61.43 \%$ (mean 19.91) of total nominal inflection errors were registered from boys' and $38.56 \%$ (mean 12.5) from girls' speeches. In line with this, the representation of plural inflection errors was 63.36\% (mean 21.33) in boys and $36.64 \%$ (mean 12.33) in girls' speeches and omission of definiteness markers covered $54.54 \%$ (mean 8 ) in boys and $45.5 \%$ (mean 6.66) in girls' speeches. Corresponding to other inflection errors, the frequency of dropping accusative marker/-n/ from their utterances were greater (63.7\%; mean $10.5)$ in boys' speeches than girls' ( $36.3 \%$; mean 6 ) speeches.

Generally, the data in the table 10 above indicates that the frequency of nominal inflection errors was dominantly visible in boys' speeches; the boys' utterances were more erroneous than those of girls were. Most of the girls had better realization and production of nominal inflections despite uncertainty of assigning meaning for different nominal inflections due to their complex combination occurrences.

### 3.4 Types of plural markers' errors

As far as errors of plural inflections are concerned, Amharic speaking children who participated in this study had inconsistent realization of plural morphemes and their utterances hosted three distinct categories of errors; over-generalization, omission and phonological difficulty errors. The frequency of these plural inflection errors had different depiction as presented the following table.

Table 11
Types and frequency of plural inflection errors

|  | TOTAL.FRQ |  | OVERG. OMISSION | PHON.DFF |
| :--- | :--- | :--- | :--- | :--- |
| N | 12 | 12 | 12 | 12 |
| Sum | 202 | 60 | 92 | 70 |
| $\%$ | 100 | 29.7 | 41.70 | 29.95 |
| Mean | 16.83 | 5.00 | 8.58 | 6.166 |
| SD | 8.806 | 0.718 | 4.926 | 7.082 |

From the total frequency (202 frq) of plural inflection errors, 29.7\% (60 frq) was overgeneralization, $41.7 \%$ ( 92 frq ) of omission and 29.95.\% (103 frq) occurred due to phonological difficulty. The researcher's close observation during recording and transcription also indicates that over-generalization and omission of plural marking morphemes were commonly visible across age groups. Phonological difficulty errors were particularly seen in 3; 9 and 4;11 years old two boys' (Bruk's and Elnata's) speeches respectively; in the two boys' utterances, majority of their plural inflection errors occurred due to inability of uttering plural nouns. They totally substituted the plural markers/-otf/ and /-wotf/ by [-ot] or [oth]. Generally, errors of plural inflection had the highest frequency. Omission and over-generalization were evidently visible in all children's speeches but the most frequent omission of the plural marking morphemes was pertinent to younger age (3;0 to $3 ; 3$ years) children.

Example 1 Words illustrating overgeneralization of [-otf] for the target

| Realization | Target | Amharic script | Meaning |
| :---: | :---: | :---: | :---: |
| [bare-ot]] | /bare- wotj/ |  | oxen |
| [kəts'n-ots/kət'nots] | /kat[ne -wots/ |  | giraffes |
| [gumar-ot5] | /gumarre-wotf/ | $<7.976-9$ 年 $>$ | hippopotamus |
| [elli -otf] | /elli -wot5/ |  | tortoise |
| [dor-otf] | /doro-wot// |  | chickens |

As shown in the above example, most ( $75 \%$ ) of aged between $3 ; 0$ to $5 ; 0$ years old children committed over-generalization errors; they simply realized the
plural marker／－wot $\int /$ as the other allomorph［－otf］and these children could easily utter the morpheme $\left[-\mathrm{ot} \int\right]$ in their entire speeches．Children who made such errors already realize how to assign meaning to plural nouns but they were not yet able map the representation of／－wotf／．This implies that children acquire the regular plural inflectional morpheme／－otf／prior to／－ wot5／

Example 2 Overgeneralization of［－otf］for／－an／and／－a－／

| Realization［－ot］］ | Target | Amharic script | Meaning |
| :---: | :---: | :---: | :---: |
| ［fijewot／／firowot］］ | ／fir－a－fire／ | ＜9．69\％ 6 ＞ | fruits |
| ［kit＇l－ot．］ | ／k＇it＇əl－a－kit＇əl／ | ＜¢のпべかの | leaves |
| ［tile－wot］］ | ／tir－a－tit＇re／ | ＜TCTCo | cereals |
| ［momhir－ot］］ | ／momhir－an／ | ＜odquan ${ }^{\text {a }}$ | teachers |
| ［dejak＇on－otJ］ | ／dak＇on－at／ |  | deacons |

In Amharic language，the other type of plural formation occurs through intercalation of the morpheme／－a－／and by adding the Geez originated morphemes／－an／，and／－at／and others．In order to see how this age range children reacted with such plural markers，the above nouns were included in the picture description task．However，except aged between； $4 ; 5$ to $5 ; 0$ years old two girls，the other ten children did not utter a word with correct plural inflection／－a－／；they completely replaced it by［－otf］or some with／－wot $\int /$ as illustrated above．For example，the target plural noun／fir－a－fire／＇leaves＇ were uttered as［fijowotf］（younger children）or［firəwotf］．In addition，no child from this age range who was able to map the plural morphemes／－an／，and ／－at／in their speeches and they overgeneralized the targets by others like the target nouns／məmihr－an／＇teachers＇as［məmihj－otf］or［məmihl－otf］ （younger age children）and［məmihr－ot $\left.\int\right]$ ．Such plural mapping errors are also observed in some adults＇speeches．Thus，such a complete overgeneralization，in most of the children＇s speeches was likely observed because of lack of input children should get from the environment or the realization and the correct production of such morphemes require long period to be mastered but it needs a particular treatment to get a sound confirmation．
Example 3 Plural inflection errors due to their phonological difficulty

| Realization | Target | Amharic script | Gloss |
| :---: | :---: | :---: | :---: |
| ［ballot／ballot ${ }^{\text {h }}$ ］ | ／bare－wotf／ | ＜nc9年＞ | oxen |
| ［bagot／bagot ${ }^{\text {h }}$ ］ | ／bag－ots／ | －施〉 | sheep |
| ［totot ${ }^{\text {h }}$ ］ | ／t＇ot＇a－wotf／ | ＜ n の9 $\boldsymbol{T}_{\text {年〉 }}$ | apes |
| ［səwot／səwot ${ }^{\text {h }}$ ］ | ／sowot ${ }^{\text {／}}$ | ＜的平》 | people |
| ［lidoth］ | ／lids－ots／ |  | children |
| ［wondot ${ }^{\text {h }}$ ］ | ／wond－otf／ | ＜938第＞ | males |

As illustrated above, the other plural inflection errors occurred due to phonological difficulty. Such error was not detected in most children's speeches, except in two boys. One of the boys was a $3 ; 9$ years old from the second age group and the other was $4 ; 11$ years old from the fourth. These two boys completely changed all plural morphemes /-ot $5 /$, /-wot $5 /$, /-a/,/an/ and /-at/ as the aspirated [-oth] or [-ot] like in the word [bollot ${ }^{\mathrm{h}}$ ] for the target word /bare-wof/ 'oxen', [lidoth] for the target word /lidj-otf/'children' and in their entire production of plural nouns.
Generally, as the findings indicated, in children's speeches, the three types of plural inflection errors (over-generalization, omission, and phonological difficulty errors) were attested. Although the frequency of omission of plural markers and over-generalization was highly prominent in the first and in the second (especially in boys) age group children's speeches, the presence and absence of such errors in others was also a good sign to the incomplete and partial mapping of different nominal inflections in the development of children's language in particular.

### 3.5 Words illustrating omission of definite and accusative markers

Omission of definite and accusative morphemes is the other inflectional error attested in children's speeches. As different morphological (derivational and inflectional) elements interact with each other in nouns, adjectives and due to this complex morphological phenomenon, a sole word hosts different morphological errors. Children who participated in this study were also unable to preserve all the morphological elements in their utterances, especially, when they uttered long phrases (more than two words) and sentences. In other words, when children came across morphologically complex word or phrases, they were not able to keep all inflections and they dropped one or more morphological patterns.

Example 4 Illustrating omission of plural, definite and accusative markers

| Realization | Types <br> omission | Target | Amharic | Meaning |
| :--- | :--- | :--- | :--- | :--- |

The above examples indicate that children had a tendency of dropping one or more nominal inflections. From the total twelve children, 33.33\% (4 children) of them did not totally realize the use of definite and accusative markers and others had inconsistently uncertain realization and production. As a result, most of their nouns appeared open missing one or more inflections. A case in point, the target sentence / sost-u dimət-otf ajit'-ua-n jəbarər-u-at nəw/ 'the three cats are chasing the rat' was produced in different forms. As the above example indicates, some children totally dropped all inflectional morphemes whereas the other retained the plural and definite marker and dropped accusative /-n/ but few girls produced it correctly. Older age girls only
dropped such inflectional markers when they produced a string of ideas to narrate or describe something they saw or heard.

```
    1. Extract taken from Aman's(3;9 years) speeches
Realization = [Sost dimot ajit- abaloll-u]
    ADJ.Num[sost] three+ N.SUBJ [dimət]cat+N.OBJ [ajit]rat+V.3rd.PLPASt
    [abaloll-u]chased
Gloss: three cat chased rat.
Target: /sost-u dimət-ot{ ajt'ua-n abar3r-u-at /
        ADJ.num. DEF /sost-u/ the three +SUBJ 3rd PL .N /dimət-ot5/ cats +
        OBJ 3rd.SIG. F.DEF.ACC /ajt'ua-n/ the rat + V. PAST .3rd.PL SUJ 3rd
        SIG. F/abar3r-u-at/ chased.
Target Gloss: The cats chased the rat.
    2. Extracts taken from Bruk's (3;9 years) speech
Realization :[ t'ot'a hullat k'ətfne ajotf]
            N,SUBJ[t'ot'a]ape+ADJ.NUM.[hullət]two+3rd.SIG N.OBJ[k`\partialt\ne] giraffe
        +3rd SIG.PAT. V [ajotf] saw.
Gloss: 'Ape saw two giraff'
Target: /t'ot'a-wa hullət-u-n k'ət\intne-wot\int ajətf/
    3rd.SIG.DEF.SIG.SUBJ/t'ot'a-wa/ the ape+ ADJ.NUM.DEF.ACC /hullət-
    u-n/ the two + 3rd PL.OBJ/k'tfne-wotf/giraffes +3rd SIG.F.V/ajotf/
Target gloss: The female ape saw the two giraffes.
```

The above extract (1) taken from Aman's speech also indicated that the definite marker/-u/ from the word/sost- u/, the plural marker/-ot $\int /$, from the noun /dimət-ot $/$, the gender marker/-ua/ and accusative markers /n/ from the noun /ajt'ua-n /were dropped. The boy uttered the subject /sost-u dimət-ot5/ 'the three cats' as [Sost dimət] and the object/ajt'ua-n/ 'the rat' as [ajt] and the nouns appeared open missing such significant inflections. Similarly, Bruk dropped the plural /-ot /,the definite marker/u / and accusative /-n/ from the target noun phrase /hullət-u-n k’tfnewot $\int /$ 'the two giraffes and from the subject /t'ot'a-wa/, he left the definite marker morphemes /-wa/ as he was unable to map and assign meaning of definiteness and case and such inflectional errors were also visible in other children's speeches

## 4. Discussion

Lexical and syntactic development of children's language is directed by phonological and morphological acquisition of a target language. Especially, morphologically complex language, like Amharic, the acquisition of morphol -ogical elements plays a significant role to the meaningful production of wellstructured phrases and sentences as well as the whole language development. On this regard, this study indicated that three to five years old children had progressive development but the correct and incorrect mapping of nominal inflections were measurably visible although the total percentage of correct representation was greater than the erroneously occurring frequency. Most of the children, who participated in this study, were able to produce nouns and noun phrases mapping and assigning meaning for number, person, gender, definiteness, possession, and case. The findings also confirmed that children were able to use the gender, person, and
possessive markers appropriately. Especially, the possessive marker/ja-/ was common in all children's utterances like in the example /jo-ine/' mine', /jə-səw/ 'someone's', /jə-t'ot'a/' 'ape's' etc. Despite less frequent, the first person plural possessive /-at f / as in the word /beta-at fn / 'our house', the second person singular male /-h/ as /kuas-h/ 'your ball' and the second person female $/-\delta /$ as in the word /k'omis $\int /$ your dress' were detected. In addition, the second person plural possessive/-at hhu/ /wade-bet-atfhu/ 'to your home' were appropriately used by different children to marking gender, person as well as possession, whereas, if the morpheme /-ua/ or /-wa/ and the third person male /-w/ and /-u/ which were inflected for possession, did not host omission. On the bases of this information, it is likely to deduce that most of the children (particularly older ones) were able to master mapping and assigning meaning for gender, number, and possessive inflections.
The other nominal inflections like number, definiteness, and case were appropriately marked when they occurred independently or the noun, noun phrase appeared being a single utterance, there were only one, or two inflections existed in sentence. A case in point, some children uttered the noun phrase /hullət lam-otf/ 'two cows' with plural inflection as soon as they saw the pictures of the two cows drinking water from the barrel. The others properly assigned the plural and definite inflection as /hullot-u lamotf/'the cows' but the other four children from different age groups, described the picture as/hullot lam/missing all the inflections. Surprisingly, the remaining two older age girls, Bethy ( $4 ; 6$ years from the third age group) and Samiry (5; 0 years from the last age group ) had a complete and correct production of the sentence with appropriate nominal and verbal inflections, like/hullət-u lam-ot $\int$ wuha bə-safa ijə-t'ət'-u nəw/ 'the two cows are drinking water from the barrel'. These two girls were able to map and assign appropriate meaning for all nominal and verbal inflections in spite of the heavy functional loads.
Preserving such a complex functional load of nominal inflections was difficult for other children. When the functional load of nominal and verbal inflection's patterns increased at sentence level utterances, most of the children were not able to mark the noun or noun phrase with complete and all the necessary nominal morphemes. They dropped or made a paradigm shift (over-generalization) as they encountered difficulties. In relation to nominal inflection errors, plural, definite, and accusative morphemes often hosted frequent omission because younger age children ( $3 ; 0$ to $3 ; 3$ years) were not able to map properly the function of these morphemes in a complex situation. Whereas, the other dropped as they encountered inability of producing functionally loaded nouns in a sentence due to phonological difficulty. As a result, omission of these nominal inflections was inevitable.
In addition, children also made paradigm shift (over-generalization) to unfamiliar plural marks such as /-a-/,/-an/,/-at/ and /-wit/. Almost all of the children made a paradigm shift (over-generalization) for the nouns their plural forms exist with one of the above plural markers like in the target plural noun /k'it'əl-a-kit'əl/ 'leaves' and appeared in children utterance as [k't'ol-otf] through over-generalization of the regular plural [-otf]. The findings of the study from different tables (3,4, 6,7,9 and 10) also indicated
that the frequency occurrence of correct and incorrect nominal inflections differed across age groups and in relation to gender. The highest frequency of correct nominal inflections was registered in older children's (age 4;5-5;0 years) speeches despite individual child's variation and girls also had a better realization. In sum, the number of correct productions of different nominal inflections excelled when children grew older and older age girls particularly had almost adult like morphological parsing even if errors were not completely avoidable.

## 5. Conclusion

The acquisition of some nominal inflection rules was frequently seen in children's interaction process and children were able to apply these rules to nouns before they were able to use other rules. In this regard, one of the greatest challenges that children encountered in the acquisition of inflectional morphology was the functional load of different inflectional morphemes added to a noun or a noun phrase and their combination in the target language. When children were presented with these full paradigms, they were facing a challenge and unable to realize the distribution of inflectional morphemes. From the discussion, it is possible to conclude that children's inflectional morphology in general and nominal inflections in particular appeared in a progressive development in relation to children's functional age. The errors found in their utterances were also those of omissions (plural, definite and accusative markers) and paradigm shift from infrequent plural morphemes/-a/, /an/, /-at/ and/-wit/ to the familiar and regular one (overgeneralization of regular plural marker [-otf]). The presence of errors is less frequent than the correct mapping of nominal inflections, especially, in older children's and in girls' speeches. This is a good sign to show the vigorous development of inflectional morphology in children's language. However, the low frequency of errors did not necessarily indicate children's complete mastery of mapping and assigning meaning. The combinational aspects of inflectional morphemes and their sequential occurrence are the determinant factors to the correct and erroneous production. In short, children need to explore the nominal inflection forms they encounter, identify their functional meaning, and able to assign their meaning to the nouns and noun phrases to preserve the nominal morphemes. However, children's ability to do this is likely challenged by the complexity of the meaning to be assigned and the combination of these nominal inflections load added to nouns and noun phrases. Thus, errors are predictably observable although the progressive development of mapping correct nominal inflections was significantly measurable. To conclude, it is obviously considerable that the acquisition of cumulative and combinational nominal inflections was completed far later than this age bound.

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