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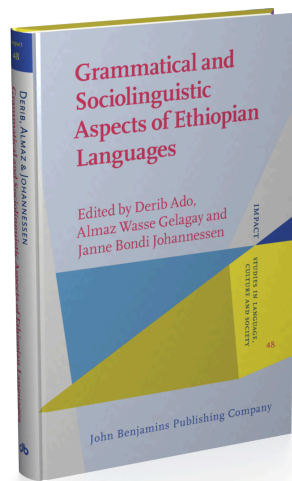
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# Term-formation methods in the Gamo language

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This research describes the techniques used to form terms in the Gamo language, an Omotic language of Afro-asiatic family spoken in South-Western Ethiopia. The introduction of Gamo as a medium of instruction in primary education and as a language subject for all grade levels requires the creation of new terms for concepts that do not already exist in the language. A number of new terms were formed to facilitate the teaching and learning of language, science and mathematics education. This research followed linguistic and communicative approaches, as illustrated in Antia (2000: 39, 44), to describe techniques of term-formation and to analyse features of the terms in line with the linguistic properties of Gamo. To this end, lexical data were collected from language and mathematics textbooks prepared in the Gamo language. Data were also gathered from native speakers who participated in textbook preparation and terminology works. According to the data, borrowing, compounding, blending, initialism, paraphrasing and semantic extension were applied to form terms pertinent to education in the Gamo language. The most frequent mechanisms were borrowing, followed by compounding, but few terms were formed by blending and paraphrasing.

**Keywords:** Gamo, education, terminology, term-formation methods

## 1. Introduction

Ethiopia is a multiethnic and a multilingual country where more than 85 languages are spoken (Lewis 2009). The languages have different levels of written development and social function. For a long time, Amharic has been used in domains like in education, media and literacy in all regions, and as a result has become the default lingua franca of the country (Cooper 1989: 21–28). Around 15 languages, including Oromo, Tigrinya, Somali and Wolaitta, were also used during the 1979–1991 literacy campaign (Vaughan 2003: 257). Most of the other languages were not used in public settings, but served mainly at home and in intimate conversations.

To improve this situation, the country adopted a multilingual approach in its constitution of 1994 by granting speakers the right to use, promote and develop native languages in different domains. Another policy, the Education and Training Policy (1994) was also framed to enhance the constitutional provision in education and training areas. The policy declares the use of mother tongue as a medium of instruction for every child in primary education and beyond. Inclusion of as many languages as possible in the education system is believed to be a way to engage diverse linguistic and cultural groups in the development system and to address education for all. Gamo is one of the languages whose function is promoted in education as a result of these policy initiatives.

Gamo is spoken natively by more than a million people (Central Statistical Authority 2008: 91) who live mainly in South- Western Ethiopia. The language comes under the Afro-Asiatic, Omotic Central Omoto language category (Bender 1975: 127). Its dialects amount to 42, with varied degrees of intelligibility (Hirut 2005, 2013 and Wondimu 2010: 33). The percentage of shared cognate words among the dialects ranges from 65% to 98%. There is high intelligibility among dialects sharing a high percentage of cognate words, and mutual intelligibility is low among dialects with a lower percentage of shared lexical items. There is an assumption that extensive dialectal variation is caused partly because the language has not been written until recently. Other reasons that account for the large number of dialectal variations in Gamo include 'political, settlement history and topography of the area (Wondimu 2010: 117)'.

Gamo has been introduced as a medium of instruction (MOI) for primary education since 1995. To this end, textbooks are published in a Latin based orthography for primary and secondary grade levels. The introduction of Gamo as MOI in primary education requires formation of relevant terms to be used in science and language education textbooks. The major purpose of this research is to describe the methods used to form terms, and to analyse features of the terms according to the linguistic properties of Gamo. The paper includes an introduction section, a conceptual framework (Section 2), the methodology used to collect data (Section 3), term-formation methods in the Gamo language (Section 4) and concluding remarks (Section 5).

## 2. Conceptual framework

Terminology focuses on '... the relationship between objects in the real world and the concepts that represent them (Cabre 1999: 9)'. It mainly concerns creating understanding about the way concepts in a special field are represented by terms. Terminology involves three basic areas that put terms at the centre, referring to the

study of terms, the methods used to form terms and a group of terms in a special field (Cabre 1999: 32). On the one hand, it presents theories and approaches that could be used in studies of terms and, on the other hand, studies determined to analyse the methods by which terms are formed in different fields also fall under the category of terminology.

Formation of terms is motivated by a concept that enters in to an area of knowledge. Unlike lexicography, which begins work by collecting terms and then moves on to define and explain their meanings, terminology work considers concepts to be central, preceding terms (Antia 2000: 81).

Terms are defined as, ‘...the specialized words occurring in natural language which belong to specific domains of usage (Cabre 1999: 32)’. It is possible to note from the definition that terms play a special purpose or are applied to domain-specific communication. People from the same profession or area of experience share terms unique to the knowledge they have and that are relevant to the exchange of information with each other. To update communication in terms of knowledge innovation in different fields, terms are formed by the people concerned.

In order to use a language in education, science and technology, efforts have to be made towards the development of relevant terminology. This kind of work has not been extensive enough to advance education in African languages context, and the resulting shortage of terms has been referred to several times as a major impediment in the use of languages in science and technology (Probyn 2006: 394). Due to the lack of appropriate terms, the progress of mother-tongue education in the continent has been stagnant. For example, Kingei (1999: 146) takes the lack of scientific terms to be a barrier in implementing Swahili in higher education in Kenya. Terminology work is also uncommon in Gamo, except in the education sector, where teachers created a few terms while textbooks were being translated. Some publications that relate to agriculture and engineering are also available. They explore the indigenous living system and experiences of the Gamo people and contain lists of terms in their specialised fields. Blench (2006) compiles livestock terms in different Omotic languages, including Gamo, and explains how the words are introduced in to the languages. Habte (2013) describes ‘vernacular houses’ built in Gamo, and provides terms that refer to the local houses and the raw materials with which they are built.

Two other lexicography works in Gamo include Gebreyohannes (2000), a bilingual dictionary that compiles words from Gamo and Gofa languages and provides their meanings in Amharic. Another publication is Hayward and Eshetu (2014), a large volume that includes grammatical analysis of the Gamo language followed by selected words and their English meanings. However, research on methods of developing Gamo terms for scientific concepts are not available so far.

Different techniques are used to form terms for a given purpose and for a special subject. The techniques can help to create new terms or to adapt an existing

word to suit a new concept. These methods include: creating new terms through compounding, coining, paraphrasing and blending; using existing forms or modifying them; and borrowing (ISO704 2009: 51; Kloss & McConnell 1978: 63, quoted in Deumert & Vandenburg 2003: 7). A number of these techniques are applied to form terms in different languages.

### 3. Methodology

Researchers use different approaches to study terms, their formation and their communicative purpose. These include the linguistic, terminological system, sociological and communicative approaches (Antia 2000: 39–46). In the linguistic approach, term-formation methods used in a special domain are described. The terminological system approach is concerned with consistency in forming terms with different mechanisms. According to Antia (2000: 41), the sociological approach of terminology study focuses on finding out the social understanding of newly formed terms in a given language. Finally, the communicative approach refers to ‘... the extent to which proposed terms cover the pertinent field’. The present study used a combination of linguistic and communicative approaches to study terms formed to facilitate communication in education in the Gamo language. The linguistic aspect – the analysis of term formation methods – informs readers about textbook writers’ efforts to form terms to fill in the observed terminology gaps to apply Gamo in education. In addition to describing term-formation methods, the research takes a communicative approach in evaluating the role the new terms play in facilitating students’ learning in the language, and their adequacy in covering the intended ideas or concepts.

Data were collected from textbooks and from native speakers of the Gamo language. Sixty three terms were gathered from textbooks written in Gamo, and the methods used to form them were described. However, more new terms than the number indicated here are expected to be available in Gamo, particularly in religion, music, law, and other sciences that are not covered in this study. Terms were selected for inclusion in the study based on whether they were new formations or newly used in a given context, according to consultants’ knowledge. The textbooks from which terms were taken include *The Gamo Language Students’ Textbook Grade One* (2012), *The Gamo Language Students’ Textbook for Grade Two* (2003), *The Gamo Language Students’ Textbook for Grade Three* (2012), *Mathematics Students’ Textbook in Gamo for Grade Three* (2003), *The Gamo Language Students’ Textbook for Grade Nine* (2003), and *The Gamo Language Students’ Textbook for Grade Ten* (2010), i.e., five textbooks for language and one for mathematics. These textbooks were selected because the researcher accessed copies from individuals and book shops.

Two Gamo native speakers were also used as resources. Both were linguists by profession, and had written and edited Gamo textbooks for different grade levels. Since dictionaries for specialised terms were not available in Gamo, identifying new terms from the textbooks was very challenging to the researcher.<sup>1</sup> This problem was overcome by asking one of the consultants to identify new terms from the Gamo textbooks. The other consultant, who participated in terminology work during textbook preparation, provided information with regard to the procedures followed in forming terms when textbooks were prepared for mother-tongue education in Gamo.

A Gamo-Amharic bilingual dictionary (Gebreyohannes 2000) was also used to cross-refer meanings of some existing Gamo words that were included in Gamo terminology for language and science education.

#### 4. Term-formation methods used in Gamo

In person-to-person communication, speakers depend mostly on their knowledge of words in communicating needs that arise in the moment. On the other hand, the use of words for a planned purpose, such as education, require the strategic development of terminology. Accordingly, new terms have been formed in Gamo largely due to its use in education, though the role of electronic and paper media, and the speakers themselves, is also profound. Terms must be formed to cover concepts that are introduced into the language in science, mathematics and language education. According to one of the consultants, new terms were first formally created in 1995, when common mother tongue textbooks were prepared in DaGaGo, a written language coined from three North Omoto languages that included Dawuro, Gamo and Gofa. As indicated in Almaz (2016: 277), the decision to amalgamate the three languages was an attempt to have a standard language that could serve as MOI for mother-tongue education for speakers of those languages.

Textbooks were prepared by subject teachers selected from the three linguistic groups of Gamo, Gofa and Dawuro. Parallel to the textbook writers, another group consisting of language teachers from the three linguistic groups was established. The group was in charge of forming terms for concepts given to them by the textbook writers. According to one consultant (who was the head of the terminology group and a textbook writer), most of the members of the terminology team were Amharic and English language teachers who were well-known as culture and language experts in their own linguistic groups. This group was given concepts in Amharic or English by the textbook writers, and then searched for terms that

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1. As a second language speaker of Gamo, I had very little knowledge of the new terms before this research.

could represent the concepts well. When a concept had a term in one of the three languages – namely Gamo, Gofa or Dawuro – they chose that term rather than form a new one. On the other hand, if a word was available in three of the languages, the one which the group agreed up on, based on its linguistic and pedagogical advantages, was chosen. When these approaches did not work for a given concept, the last option was forming a new term using different methods for concepts that were not represented in the target languages.

The three languages (Gamo, Gofa and Dawuro) are now considered to be autonomous languages after speakers opposed the idea and the practice of merging the languages into one. Some individual and coordinated efforts have been put in place to develop the lexis of Gamo. There is an online web-based Amharic-Gamo dictionary called ‘Glosbe’ that aims to provide Gamo translations to Amharic words based on users’ request. The system contains important features, such as an Amharic keyboard, that makes it possible for readers to enter a word online. The site asks speakers to provide Gamo words when they can, and this encourages term-formation practices in speakers. However, the dictionary does not yet provide Gamo equivalents, even to common Amharic words. This may show that speakers are not participating at the level required, and that the development of an online Amharic-Gamo dictionary is not taken seriously.

The methods used to form terms to facilitate teaching and learning in Gamo include borrowing, compounding, semantic extension, blending, initialism and paraphrasing. The following section deals with these term-formation methods.

#### a. Borrowing

Borrowing refers to ‘incorporation of foreign elements into the speakers’ native language (Haspelmath, 2009: 36)’. A number of synonymous words are available, parallel to the term borrowing. According to Haspelmath (2009: 37), terms like adaptation, copying or transfer of terms or concepts from one language into the other can be used to mean borrowing, based on researchers’ focus of study.

Languages may borrow terms or concepts for various reasons, which are complicated to explain (Haspelmath 2009: 35). Two general issues that motivate lexical borrowing are ‘social and attitudinal factors and grammatical factors’. Social factors relate to the social status of the resource language and the recipient language. On the other hand, verbs are believed to be borrowed less often from other languages than nouns, because they require more grammatical modification, meaning that speakers prefer other techniques to form verbs than borrowing from other languages.

One obvious reason for lexical borrowing is the absence of a term referring to a concept or an object in a given language. Changes in a society’s communication

needs, due to changes in life experience or technological and scientific developments, paves the way for the transfer of certain concepts and the terms used to illustrate them from one language to the other. Through borrowing, a concept and a word that designates it are transferred to a language, which involves social change. In most cases, borrowed words take on the linguistic features of the recipient language and adapt to its system.

Haspelmath (2009: 38) identifies two kinds of borrowing: material borrowing and structural borrowing. Material borrowing refers to borrowing lexical items or affixes, while structural borrowing concerns ‘the copying of syntactic, morphological or semantic patterns (e.g., word order patterns, case-marking patterns, semantic patterns such as kinship term systems)’. Loanwords, which are defined by Haspelmath (2009: 36) as, ‘that at some point in the history of a language entered its lexicon as a result of borrowing (or *transfer*, or *copying*)’, are believed to be the best examples of material borrowing.

Gamo has borrowed several words from the Amharic and English languages. Amharic is in a contact situation with Gamo in many social settings, and is widely used as a second language by most Gamo native speakers. Most of the written materials, like textbooks and the Bible, are translated from the Amharic versions. For that reason, many words were borrowed from Amharic to Gamo. Some examples are presented here in groups, according to the linguistic features analysed.

Amharic	Gamo	English
<i>fidāl</i>	<i>pidale</i>	letter
<i>fīrd</i>	<i>pirde</i>	verdict
<i>sik<sup>w</sup>ar</i>	<i>fukkaare</i>	sugar
<i>muuz</i>	<i>muuze</i>	banana
<i>kiffil</i>	<i>kiffile</i>	grade
<i>loomi</i>	<i>loome</i>	lemon
<i>timhirt</i>	<i>timirtte</i>	education
<i>k'al</i>	<i>k'ala</i>	word
<i>mārfe</i>	<i>marppe_narppe</i>	needle
<i>ḏäbäna</i>	<i>ḏabana</i>	coffee pot
<i>mäs'ihaf</i>	<i>mat'aafa</i>	book
<i>masimäria</i>	<i>maasimaaria</i>	ruler
<i>tämari</i>	<i>tamaare</i>	student
<i>märräja</i>	<i>marraja</i>	information
<i>et'a</i>	<i>et'a</i>	fate
<i>kihilot</i>	<i>kilote</i>	skill
<i>mäkina</i>	<i>makina</i>	car
<i>lämafäḡ</i>	<i>afaganau</i>	to pack
<i>b<sup>w</sup>amb<sup>w</sup>a</i>	<i>bomba</i>	water pipe



Gamo borrowed many words from Amharic, including those shown in the above data. As can be noted from the examples, the borrowed words have been adapted in to Gamo through phonological and morphological processes. In the borrowed word *fidāl* 'letter', the labio-dental fricative /f/ is changed into the bilabial stop /p/, resulting in the Gamo word *pidale*. The borrowed word is adapted into Gamo, which lacks the phoneme /f/ in its phonetic inventory (Azeb 2012: 434). The phoneme /f/ is believed to be equivalent to /ɸ/, which is an allophonic variant of the phoneme /p/ in Gamo (Wondimu 2010: 47).

The word *fukkaare* 'sugar' has undergone sound change in that the initial fricative /s/ in the Amharic word *sik<sup>w</sup>ar* is changed into the affricate /ʃ/. This change seems sporadic, since it is not regularly applied to other words with initial /s/ sound, as in the word *silke* 'phone', borrowed from the Amharic *silk* 'phone'. According to Campbell (1998: 17), 'Sporadic changes affect only one or a few words, and do not apply generally throughout the language'. Though the real motivation for this adaptation may not be clear, it seems that the textbook writers were not in favor of copying the Amharic word without slight adaptation to it.

Another adaptation made to borrowed words is the addition of terminal vowels. Most of the Gamo words, with some exceptions, take terminal vowels. Azeb (2017: 818) states that most of the Omotic languages, including Gamo, comprise five vowels and their long forms. From the prevailing five vowels, Wondimu (2010: 69) confirms the presence of four, /e/ /o/ /a/ and /u/, in the terminal position in five dialects of the Gamo language. Accordingly, all of the words borrowed from Amharic were given terminal vowels. For instance, *muuze* 'banana', *loome* 'lemon', *timirtte* 'education', *kiffile* 'grade', *mat'aafa* 'book' received /e/ and /a/ terminal vowels that did not exist in the source words.

The meanings of some borrowed words have also been extended to refer to a concept that is designated by a different word in the target language. For example, in Amharic *k'al* means 'word', but in Gamo extends to mean *k'aala* 'language', in addition to its original meaning. So, *gamotsto k'aala* means 'the Gamo language'. In fact, 'language' is also metaphorically expressed by the Gamo word *dona*, which literally means 'mouth', and *gamotsto dona* is again 'the Gamo language'.

Other words taken from the Amharic language include *narppe* 'needle', *ḏabana* 'coffee pot', *mat'aafa* 'book', *maasimaaria* 'ruler'. These are common materials in everyday use, and it could be assumed that the words were borrowed when materials for sewing, preparing coffee or publishing were transferred. This is not to say, however, that activities like coffee preparation or sewing were introduced through the words *ḏabana* 'coffee pot' or *narppe* 'needle'. A different material or item might have been used for the purpose, and the presence of the core word *siko*, 'to sew' in Gamo, confirms that the activity had been practiced before the word *narppe*

‘needle’ was borrowed. It can also be said that the borrowed word *mat’aafa* ‘book’ looks similar to the Gamo word *mat’afa* with short vowel, which is translated as ‘rude’ (Gebreyohannes 2000: 149). This similarity may easily confuse speakers in general, and students in particular.

The last five words in the data were borrowed from Amharic, but the Gamo words that could convey the intended meanings were given in brackets in the textbooks. The words *k’ada* ‘fate’, *hila* ‘skill’, *kame* ‘car’, *litf’anaw* ‘to pack’, *gelisyo* ‘water pipe’ were offered in brackets next to the Amharic borrowed words *ex’a*, *kilote*, *makina*, *afaganau* and *bomba*, respectively. The attempt to create clarity of meaning by providing alternative forms from Gamo, Amharic and English and its effect on standardisation of Gamo words is discussed in detail in Almaz (2016: 283). This kind of writing practice is obviously the result of language contact or speaker bilingualism. The writers might have considered the Amharic words to be more commonly used by speakers than the counter words. In situations in which one word is more widely known and practiced by speakers than another, Haspelmath (2009: 47) suggests, ‘it becomes more efficient to use the better-known word’.

From the borrowed words, the word *afaganau* ‘to pack’ can be taken as a loanblend: ‘hybrid borrowings which consist of partly borrowed material and partly native material (Haspelmath 2009: 39)’. In the example, *afag* ‘pack’ is taken from Amharic, but the suffix *-(na)u*, which Hayward and Eshetu (2014: 155) identify to be one of the postpositions in Gamo, is added.

Another word supplier for Gamo is English. As a vehicle of science and technology concepts, the English language plays a great role in the education system in Ethiopia in general, and in Gamo in particular, with relevant terms in science, mathematics and language education borrowed from it. Some of them are presented here, based on the semantic fields they cover:

Gamo	English
<i>dijite</i>	digit
<i>pirobileeme</i>	problem
<i>rediyeeese</i>	radius
<i>diyametre</i>	diameter
<i>santtimetre</i>	centimetre
<i>paraleelo</i>	parallel
<i>iskkuweere</i>	square
<i>anggile</i>	angle
<i>bawele</i>	vowel

These borrowed English terms were also adapted to fit the linguistic system of Gamo. One obvious adaptation is addition of terminal vowels. The data show that all of the words received terminal vowels, such as /e/ and /o/.

As can be seen from the examples, the loanwords were contextualised according to the orthography rules of the recipient language, and were adapted into its sound system. For instance, Gamo does not take labiodental fricative /v/ at word initial position. Initial /v/ words are not attested to in both Hayward and Eshetu (2014: 810) and Gebreyohannes (2000). So, the borrowed words replaced /v/ with /b/, as in the word *bawe*le ‘vowel’.

The word *iskkuweere* ‘square’ is adapted by adding an initial vowel since Gamo phonotactics does not allow for word initial consonant clusters. With regard to this, Hayward and Eshetu (2014: 35) report that Gamo ‘onsets consist of only a single consonant’. Word initial consonant clusters, according to Hayward and Eshetu’s (2014: 36) findings, are attested to in four loanwords, *skripto* sometimes adapted to *iskripto* ‘pen’, *kwaase* ‘ball’, *brille* ‘flask-shaped drinking vessel’ all borrowed from Amharic and a Gamo word *bro* ‘yet’. Apart from these, initial consonant clusters are not attested to in Gamo. Hayward and Eshetu (2014: 38) emphasise that, ‘Sequences of two consonants and geminate clusters occur only word-internally-never initially or finally’.

## b. Compounding

As a term-formation method, compounding is defined as, ‘...the unifying of two or more autonomous words to form a third (Bauer 1983: 11 cited in Brinton & Traugott 2005: 34)’. The meaning of a compound word can mostly be related to the meanings of its components, but it is not always possible to predict meanings from parts. Fabb (1998: 66) attributes such unpredictability of meaning to two characteristics of compounds that relate to their tendency to change meaning, and the presence of different semantic relations between component morphemes.

Compounding is one of the word formation techniques in Gamo. It is mainly used to mention kinship terms, such as the repetitive compounds *awa-awa* literally ‘father’s father’ or ‘grandfather’, *ayia-ayia* ‘mother’s mother’ or ‘grandmother’ from a mother’s side. All other terms used to describe kinship relationships, such as ‘*awa/ayia-mitſſje*’ father’s/mother’s sister’ or ‘aunt’, *awa/ayia -ifa* ‘father’s/mother’s brother’ or ‘uncle’, *ifa/mitſſje-naʔa* ‘brother’s/sister’s son/daughter’ or ‘nephew/niece’ are compounds in Gamo (Gebreyohannes 2000). Compounding is also used as a means to form terms for language and science education in Gamo. Some compound terms formed for this purpose are directly copied from textbooks:

Gamo	English
<i>k'ofa k'afo</i>	concluding paragraph
<i>oyfa k'ofa</i>	interrogatives
<i>meegeta k'ofa</i>	statement
<i>k'aala fik'o</i>	dictionary
<i>saloo saʔa</i>	universe/world
<i>sinta guye</i>	sequence
<i>bila t'afo</i>	literature
<i>sitta ada</i>	direct speech
<i>zari beyo</i>	revision
<i>guta hasaaya</i>	colloquial speech/dialect
<i>meddeti t'aafide</i>	fiction
<i>mat't'aafe keetsta</i>	library

The first three words, *k'ofa k'afo* 'concluding paragraph', *oyfa k'ofa* 'interrogative', *meegeta k'ofa* 'statement' are formed from the main or head word *k'ofa* 'idea' plus *k'afo* 'tie', *oyfa* 'question' and *meegeta* 'supporting wood'. Some of these components like *k'afo* 'tie', *oyfa* 'question' provide clues for students to easily identify the type of a given sentence or paragraph. In a similar system, *k'aala* 'word' is combined with *fik'o* 'collection' to form *k'aala fik'o* 'dictionary'. In *saloo saʔa* 'universe/ world', the words *saloo* 'sky/heaven' and *saʔa* 'earth' are combined. The resulting compound word *saloo saʔa* refers to every creation on the earth and under the sky. However, the new term *saloo saʔa* may not exactly coincide with 'universe' to include concepts like planets other than the earth. Similarly, the words *sinta* 'front' and *guye* 'back' come together as *sinta guye* to mean 'sequence/order'.

Other terms formed by compounding are *bila t'afo* 'literature', *sitta ada* 'direct speech' and *zari beyo* 'revision'. The first term *bila t'afo* 'literature' is formed from *bila* 'wisdom' and the Amharic word *s'ihuf*, which is adapted into Gamo phonology as *t'afo* 'writing', generally meaning wisdom or knowledge of writing literary materials. The word *sitta ada* 'direct speech' is taken from *sitta* 'direct' and *ada*, a word which is usually used to affirm or to mean 'true'. It can therefore be assumed that *sitta ada* is linked to speaking something directly. Finally, *zari beyo* 'revision' is created from *zari* 'returning' and from *beyo* 'look'. This compound term takes its meaning directly from the component words. To revise means to look back at something.

The term *guta hasaaya* 'colloquial speech/dialect' was also formed by joining two Gamo words. The first part *guta* literally means 'small', and the other one *hasaaya* is 'speech'. The compound word *guta hasaaya* 'colloquial speech/dialect' is meant to indicate all the Gamo dialects that are spoken in districts of Gamo other than the standard dialect. By taking the word *guta* 'small', the compound word compares the diverse linguistic forms of Gamo with the standard one, and assigned them a lower social status.

The last two terms in the data demonstrate a further technique of compounding called loanblends. One of the two components of the compounds is an Amharic word. In *meddēti t'aafide* 'fiction', the first component *meddēti* 'create' is a Gamo word, while the second, *t'aafide* 'written', is taken from the Amharic word *s'ihuf* 'written material'. One of the components, *mat't'aafe* 'book' of the last word *mat't'aafe keetsta* 'library' is taken from the Amharic word *mäs's'ihaf* 'book'. The compound word seems to have been directly taken from the Amharic word *betä mäs's'ihaf* 'library'. The word *betä*, which is taken from *bet* 'house' is *keetsta* in Gamo, therefore *betä mäs's'ihaf* is translated as *mat't'aafe keetsta* 'library'.

Since most Gamo language speakers are bilingual in their own language and in Amharic or another language, there is a high probability for these kinds of blends to occur. In fact, multilingual speakers are found in most areas of Ethiopia and, as a result, compounding words from two languages might be common in other languages, as well. For instance, Kozicki (2017: 56) identifies the use of Ge'ez system in Amharic terminology compounding as '...there are two forms of compounds in Amharic reflecting the Amharic and Ge'ez models, though the Ge'ez model is becoming more and more popular in the process of coining terminology for Amharic'. One example is the use of the Ge'ez genitive marker *ä*, as in the above example *bet-ä mäs's'ihaf* 'library', instead of saying *yämäs's'ihaf* *bet* 'library' again with the Amharic genitive form *yä*.

The compound words mentioned above fill in the lexical gap in language and science education in Gamo. Based on Fabb's (1998: 66) classification of compounds, the new compound terms of Gamo can be categorised as endocentric, exocentric and coordinate compounds in terms of their structure. Endocentric compounds are those that have one of their components as a head. *k'ofa k'afo* 'concluding paragraph', *oyfa k'ofa* 'interrogative', *meegeta k'ofa* 'statement' have the word *k'ofa* 'idea' as their head. *bila t'afo* 'literature', *guta hasaaya* 'colloquial speech/dialect', *meddēti t'aafide* 'fiction', *mat't'aafe keetsta* 'library' have the components on the right side as their head, and are also endocentric compounds.

On the other hand, in the compound terms *zari beyo* 'revision' and *sitta ada* 'direct speech' the compound terms and their components are from different parts of speech and are, hence, exocentric compounds. *k'aala fikò* 'dictionary', *saloo saʔa* 'universe' and *sinta guye* 'sequence/order' can be taken as coordinate compounds in which both of the components have equal status in the compound nouns.

### c. Blending

Blending is ‘the fusing of words into a single lexeme by a process of compounding or clipping (Brinton & Traugott 2005: 41)’. It involves different mechanisms of fusing elements of words into one form. In some instances, blending can involve a whole part of one word and a shortened form of another. In other cases, a blend can be formed by fusing parts of the source words (Hosseinzadeh 2014: 18).

Gamo blends formed by fusing elements of different semantically related words include the following:

Gamo	English
<i>medosa</i>	animal
<i>donza</i>	plant
<i>sunkò</i>	adjective
<i>soadde</i>	subject
<i>matuma</i>	gender

These new blends were formed by different mechanisms of blending. The term *medosa* ‘animal’ was formed by clipping *me-* from *mehe* ‘domestic animal’, *do-* of *doza* ‘wild animal’, and the last syllable *-sa* of the word *hesa* ‘such’. The blend is meant to represent all domestic animals, wild animals and related creatures, such as marine animals.

Another scientific term that was blended from parts of other words is *donza* ‘plant’. Just like the above word, *donza* was formed by clipping *do-* from *dolizayta* ‘that grow upwards’, *-n* from *nne* ‘and’ and by clipping *-za-* from the middle position of *lagizayta* ‘that grow horizontally’. The term *donza* was, hence, formed to designate plants of different size and nature. The two terms, *medosa* ‘animal’ and *donza* ‘plant’ play significant roles in facilitating natural and environmental science education in the Gamo language.

The term *sunkò* ‘adjective’ was also fabricated to facilitate language learning with the same technique of blending parts of two words. It came from *sun-*, taken from *suntsa* ‘name’, and *kò-*, which is taken from *kòncč’iso* ‘describe’. The term *sunkò* literally means to name, to describe, or describing a name, which is the communicative function of adjectives.

The term *soadde* ‘subject’ was created from *so-* of the word *soho* ‘house’ and the whole syllable of the word *adde* ‘man’. The point in the word is that a man is an owner or head of a house, and this position of a man in a household is related to the function of a noun in a sentence, which serves as a subject heading the sentence. It seems that the terminologists translated this term directly from the Amharic word *baläbet*, which is used to refer to ‘subject’ of a sentence. Initially, *baläbet* can be used in wider contexts. In a very formal conversation, it may be used to mean one’s

husband or wife. In other contexts it may mean ‘owner of something’ or ‘owner of a house’. So, it seems that *baläbet* is translated into the Gamo term *soadde* ‘owner of a house’ or ‘subject’ of a sentence. Haspelmath (2009: 39) describes this kind of term formation to be ‘loan meaning extension whereby a polysemy pattern of a donor language word is copied into the recipient language’.

The term *matuma* ‘gender’ is another type of blending called phonemic overlap, where ‘a syllable or part of a syllable is shared between two words (Hosseinzadeh 2014: 19)’. *matuma* ‘gender’ is taken from two words, *mačč’a* ‘female’ and *atuma* ‘male’. From the first word *mačč’a* ‘female’, the first syllable *ma-* was taken, the phoneme *-a-*, which overlaps in the middle of the two morphemes, is shared, and *atuma* ‘male’ was included to make the term meaningful, easy and acceptable. The blend term *matuma* ‘gender’ refers only to female-and male-gendered creatures, but not to gender-neuter things.

#### d. Semantic extension

Semantic extension is a type of semantic change that refers to ‘a widening of meaning in a lexical item (Crystal 2008: 181)’. The mechanisms used to understand new concepts through existing elements include metaphor and metonymy, which, according to Sakita (2001: 248), are ‘cognitive processes of understanding abstract concepts in terms of concrete ones’. Metaphorical extension involves perceived similarity between a new concept and an existing object, while metonymy is based on physical or ideal relationship between objects and concepts (Lujan 2010: 291). Semantic extension can also occur through broadening or narrowing concepts a word can refer to. Broadening the meaning of a word is termed as generalisation, while narrowing is ‘semantic restriction, specialisation or reduction (Lujan 2010: 294)’.

The meanings of some Gamo words have been extended to cover new concepts that the words did not represent before. The original and the extended meanings of some of the words are given below:

Gamo	original meaning	extended meaning
<i>laamme</i>	change	variable
<i>femppo</i>	rest	chapter/unit
<i>č’atfja</i>	a stopping mark	punctuation mark
<i>dentsso</i>	pick up	subtraction
<i>dabbo-dabboya</i>	relative	match
<i>kaara</i>	roof	topic/title
<i>giddo</i>	inside	centre
<i>herega</i>	determine	mirror
<i>hup’e</i>	head	key
<i>ayipe</i>	eye	main



The above words were extended to designate new concepts in science and language education when Gamo is introduced as MOI. The data demonstrate that the major semantic extension mechanisms used in Gamo are metaphor and semantic broadening.

The words *lamme* ‘change’, *femppo* ‘rest’, *č’atfifa* ‘a stopping mark’ and *dentsto* ‘pick up’ in their original meaning have become extended to refer to ‘variable’, ‘chapter’, ‘punctuation mark’ and ‘subtraction’, respectively. However, the existing words are not arbitrarily extended to include new concepts. There is a perceived conceptual relationship that can be taken as a slight or loose metaphorical connection between the old and the new concepts. For instance, *č’atfifa* originally refers to a mark that shows where something stops. It is applied to refer to punctuation marks that primarily indicate where a sentence or an idea pauses or ends up.

The original meanings of some of the words like, *kaara* ‘roof’, *herega* ‘determine’, *hup’e* ‘head’ and *ayipe* ‘eye’ have clear metaphorical relationships to the new concepts they represent. The word *kaara* ‘roof’ refers to the upper part of a house or other structure. Similarly, a ‘topic/title’ is placed on top of a text. The two concepts ‘roof’ and ‘topic’ have spatial relationship that makes it easy to understand the meaning of the new term.

Previously, the word *herega* meant ‘determine’ a price for something. According to the consultants, the same word *herega* was given to mirror based on the functional relationship between the object and the word. The purpose of a mirror is to look at one’s image and evaluate or give value for oneself. The word *herega* ‘determine’ the value or price of something was taken to identify the object ‘mirror’. Here, the idea of determining the value of an object is transferred to mean ‘mirror’. Metaphor is, in fact, used inversely here from the abstract concept ‘determine’ to the concrete object ‘mirror’. Since the two terms ‘determine’ and ‘mirror’ come from different domains, based on Lujan’s (2010: 289) criteria of metaphor, the meaning extension can be taken to be a metaphor.

The other word *hup’e* ‘head’ was extended to mean ‘key’ or ‘major’ points. The head comes on top of a person’s body, and this meaning is transferred to key concepts that come on top or ahead of other related ones in their importance. Similarly, the word *ayipe* ‘eye’ was used to designate the concept ‘key’ or ‘main’, as in *ayipe k’aalata* ‘key words’. It can be seen from these examples that metaphor was applied as a means to use concrete objects to understand abstract concepts.

On the other hand, allocation of the word *ayipe* to mean ‘key’ or ‘main’ is controversial because, as mentioned in Gebreyohannes (2000: 13), the word *ayife* with the plural morpheme *-ta*, *ayifeta*, metaphorically means ‘dangerous people’, ‘leaders of a bad action’. With these metaphorical impressions, using the word *ayipe* in a language classroom to mean ‘major words’ or ideas distracts from communication. One can also observe the orthographic inconsistency between the



textbooks and the dictionary (Gebreyohannes 2000: 13). This mismatch between the spelling *ayipe* in the textbooks and *ayife* in the dictionary is another cause of confusion to learners.

#### e. Initialism

Initialism is a word formation process in which ‘the initial letters of words in a phrase are pronounced as letters (Brinton, 2000: 99)’. When writing, initialisms are often written with ‘periods between the letters’. In Gamo, initialism is used as one of term formation mechanisms as shown in the following three examples:

Gamo	English
h.h.m	etc. (etcetera)
M.L	E.C (Ethiopian Calendar)
E.P.M	According to European Calendar

In the first initialism, *h.h.m* ‘etc.’, the first two letters *h. h.* are clipped from the re-duplicated words *hessa* ‘such’ *hessa* ‘such’ and the third letter *m.* is taken from the first letter of the word *mala* ‘kind’. The three clipped forms *h.h.m* ‘etc.’ all together represent the long speech *hessa hessa mala* ‘such such kind’.

The term *M.L* is formed from the first letters of *marotetsta* ‘mercy’ and *laytsta* ‘year’. It seems that the Amharic term *amätä* ‘of a year’ and *mihirät* ‘mercy’, which is used to refer to the Ethiopian Calendar, is translated to *laytsta* ‘year’ and *marotetsta* ‘mercy’, respectively, and gives *marotetsta laytsta* ‘E.C’.

The other initialism *E.P.M.* ‘according to European calendar’ is formed by clipping *E.* from *Eropa* ‘Europe’, *P* from *paydo* ‘number’ and *M* from *mala* ‘kind’. Hence, *E.P.M.* stands for *Eropa Paydo Mala*, which can be translated in to English as ‘according to European calendar’.

#### f. Paraphrasing

Paraphrase in linguistics refers to ‘an expression of the meaning of a word or phrase using other words or phrases, often in an attempt to make meaning easier to understand (Richards & Schmidt 2002: 384)’. Gamo represents few concepts by paraphrasing or illustrating an object or idea, and two concepts formed with this method are:

Gamo	English
<i>mole oyketsan ak'iza asa</i>	fisher
<i>bila doona awa</i>	philosopher

We can note from the examples that the word ‘fisher’ is paraphrased as *mole oyk’etsan ak’iza asa*. This explanation contains four words *mole* ‘fish’, *oyk’etsan* ‘by catching’, *ak’iza* ‘live’ and *asa* ‘person’. More literally, *mole oyk’etsan ak’iza asa* means ‘a person who lives by fishing’. One can consider here that a new word that exactly states ‘fishing’ as a profession was not created by either of the other methods. Rather, it seems that a description of the activity a fisher does to make a living was given.

The second paraphrase is *bila doona awa* ‘philosopher’. As we can see, three independent words are used to explain the concept in Gamo. The first part, *bila* means ‘wisdom’, the second *doona* is literally ‘mouth’, but which in this context means ‘language’, and the last component *awa* is ‘father’, which also seems to denote a well-known person. The rationale appears to be that a philosopher is one whose speech is filled with wisdom or one who philosophises or speaks in a very attractive or persuasive language. Therefore, the terminologists paraphrased the concept by considering how a philosopher can be perceived in society.

## 5. Conclusion

This paper tried to describe term-formation methods in Gamo by collecting data from six textbooks and from interviews. The data show that a variety of techniques were used to form terms that could facilitate the teaching and learning process in the Gamo language. Among the methods, borrowing was widely used, followed by compounding as the second most-used term-formation method. Terms that cover concepts in different areas were also formed by semantic extension and blending, but a very few examples were found to show initialism and paraphrasing techniques.

The initiative taken to form terms for education in Gamo must be commended in that it contributes a lot to modernize the lexis of the language. In addition, there was a great effort to adapt borrowed terms into the linguistic system of the language to make them easily acceptable by the learners. Further terminology research might help to find additional data on term-formation methods in Gamo, but the shortage of new science and technology terms in the language is obvious. A great deal of more work needs to be done to standardise the lexis of Gamo for science and technology education, as shortage of terms may deter students’ and teachers’ motivation to learn and teach in the language.

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## Online resources

<<https://glosbe.com/gmv/am>> Glosbe: Gamo Amharic Dictionary Online.

