African Perspectives of Research in Teaching and Learning Journal
Issue 3, Volume 8, 2024 Special Issue
ISSN Print: 2521-0262
ISSN Online: 2662-012X
ORIGINAL RESEARCH
https://doi.org/10.70875/v8i3article2

An etymologically based lexicographic approach for developing encyclopaedic pedagogical dictionaries in African languages

Celimpilo P Dladla

Department of Translation and Interpreting Studies, University of the Witwatersrand, Johannesburg, Republic of South Africa

***Corresponding author**: celimpilopiety.dladla@wits.ac.za*

Abstract

Bilingual dictionaries in previously marginalised indigenous African languages often provide lemmata equivalents without definitions as is the nature of most bilingual dictionaries. The structure of bilingual dictionaries needs to be improved to include definitions and etymological information. To this end, this paper investigates how bilingual dictionaries can be enhanced through a qualitative content analysis of lemmata from the Scholar's IsiZulu Dictionary by G.R Dent and C.L.S. Nyembezi (2009). A simple random sampling strategy was employed to select subject-specific lemmata that would contribute to the data analysed for the study. The microstructure of the resource was analysed using the Theory of Lexicographic Functions (Bergenholzt & Tarp, 2003) which considers the user profile, user needs, user situation, and lexicographic function. The element of user needs from this theory was used for this study, postulating that etymological data can enhance the acquisition of epistemological knowledge of users who speak African languages. This study revealed that an etymology-based dictionary structure does not only clarify scientific terminology to the user but also enhances the intellectual power of languages in education, thus increasing their potential of producing better education outcomes for students.

Keywords: Bilingual dictionaries; bilingualised dictionaries; epistemological knowledge; language hegemony; lexicography.

Introduction

This study focuses on the microstructure of bilingual English-isiZulu dictionaries, drawing samples from the Scholar's IsiZulu Dictionary (SZD). Bilingual dictionaries typically provide lemmata and their equivalents, and sometimes provide descriptive information if an equivalence is not available. It is not common for them to include definitions (Hartmann, 1994). The purpose of these lexicographic resources is to help users understand words in other languages. Users who seek definitions and etymological information to gain a deeper understanding of words rely on monolingual dictionaries (Laufer, 1995). In South Africa, these monolingual dictionaries are often English dictionaries, and attaining the required information may be a challenge if they are not fluent in the language. This challenge is more pronounced in pedagogical dictionaries, where the main purpose is to assist students in understanding words for educational purposes.

To address this issue, Hartmann (1994) proposed the idea of 'bilingualised dictionaries' which are translated dictionaries that blend features of both bilingual and monolingual dictionaries, offering equivalents and definitions to enhance the learning experience. This concept involves translating the complete structure of a monolingual dictionary to enrich the target language within a bilingual context, thereby elevating the content of dictionaries in the target language. This approach not only increases functionality but also ensures a deeper language immersion, a benefit recognized by Laufer and Hadar (1997) for its educational advantages.

This paper highlights the importance of considering new structures in lexicography that will be more functional to users in the multilingual context of South Africa. The Constitution of the Republic of South Africa (1996) affords all languages equal status; however, this is not reflected in epistemological practices and resources available to speakers of previously

marginalised languages (isiZulu, Sesotho, Xitsonga, Tshivenda, Siswati, Setswana, Sepedi, isiNdebele, and isiXhosa) (Taylor & von Fintel, 2016).

This paper presents a qualitative study in which dictionary entries from the field of Life Sciences were randomly selected from the Scholar's IsiZulu Dictionary (SZD) and updated. The lemmata were analysed in comparison to monolingual dictionaries in English and isiZulu. Laufer and Hadar (1997) suggested that bilingual users, proficient in both languages, use both monolingual and bilingual dictionaries to meet their lexicographic needs. Therefore, this paper examined how lemmata are treated in bilingual and monolingual dictionaries through a pragmatic lens, considering how current resources can be further improved by adapting them into other structures such as bilingual dictionaries. Just as the world is constantly changing, so is knowledge, and individuals should consider new approaches to practice based on solid frameworks; and enhance educational resources. Consequently, this paper assessed the selected dictionary in terms of user requirements using the Theory of Lexicographic Functions by Bergenholtz and Tarp (2003), which includes the needs of dictionary users, in this case being students who are instructed in a language other than their native tongue. The evaluation of the dictionary revealed deficiencies in bilingual dictionaries that prevent users from accessing information that could enhance their academic comprehension of concepts and contribute to the development of epistemologies in African languages.

Literature review

Pedagogical lexicography practices refer to the development of dictionaries for students (Assam, 2006). These dictionaries often have a simple macrostructure and a microstructure with limited categories. The microstructure of these resources should meet the lexicographic functions of students in their education and should be free from linguistic limitations that may hinder the functionality of the resource. These limitations could result from language or text comprehension from students due to their language knowledge. Therefore, the microstructure should be aligned with the age and linguistic level of users.

The situation that South African students find themselves in is complicated and dynamic in that there are many studies conducted to help improve student outcomes from primary school level to universities through a reconsideration of how language is used in epistemological practices inclusive of Makalela (2016, 2017, 2019, 2022), Ngubane and Makua (2021) and Sefotho (2022), among others. Learning from these studies, this paper highlights the need for developing more resources to help students understand content being relayed to them by their teachers and for them to express themselves confidently in the lecture halls and in their written work. These resources include dictionaries which should have explanatory information in languages that the users understand. With the multilingual nature of South Africa and English being the preferred language of learning, teaching, and business, these dictionaries should have an extended structure.

Gouws (1993) posits that the development of student dictionaries should be founded on the needs of identified users for the resource to be functional among those users. To this end, Ranalli and Nurmukhamedov (2014, p. 1) maintain that:

"student dictionaries have been a source of considerable lexicographical innovation, particularly in the way a word's meanings and information about its usage are researched and presented. These innovations, supported by advances in computer technology and linguistic analysis, have influenced the compilation of other dictionary types."

There is a need to consider other structures for bilingual dictionaries focusing on students and as Taljard and Prinsloo (2019) rightly said, there is a need for more studies to be conducted in pedagogical lexicography to encourage the development of functional dictionaries and improve lexicographic practices dedicated to students.

The Department of Sports, Arts and Culture (DSAC) did tremendous work in developing lexicographic resources, available on their website (www.dac.gov.za). Among these great works are multilingual subject-specific lexicographic resources for Grades 4 to 6, which provide users with term equivalents in previously

marginalised languages. English serves as a source language and definitions are provided in English only. This deprives users of an opportunity to access meaning of the concepts in their mother tongues. In the same vein, the absence of definitions is understandable because terminology lists focus on terms and dictionaries provide definitions (see Alberts, 2001). With the absence of subject-specific dictionaries in many languages in South Africa and the reliance on terminology lists as a refuge, the need for bilingual and/or multilingual pedagogical lexicographic practices considering definitions is important.

Terminologists began good work which should be brought to completion by lexicographers through the production of definition-oriented dictionaries for students. Research should be conducted in pedagogical lexicography and lessons should be learnt from resources such as the Oxford Advanced Students Dictionary, Seventh Edition, examined by Mtallo (2015) and found some strengths and weaknesses. The weakness found was that some definitions used the word being defined in the definitions, and the strengths found were as follows:

"The Oxford Advanced Students Dictionary seventh edition is found to have number of qualities such as words with multiple concepts are clearly explained, the use of examples on how a word may be used in a particular context, the use of pictures, defining words according to their respective categories, words used in definitions are clearly defined somewhere else in the dictionary, the use of simple words in definitions, brevity and so forth. Words with multiple concepts are clearly explained, for example the word bank /bæŋk/ (noun, verb) is found to have different number of meanings which are well elaborated with the support of examples. The meanings were labeled as meaning one to eight with different definitions." (Mtallo, 2015, p. 85).

One may correctly argue that the aforementioned dictionary, is a monolingual dictionary which enables it to be comprehensive, however, this structure can be adopted for the development of a bilingual dictionary, inclusive of definitions as bilingualised dictionaries. This was discussed by Corrius and Pujol (2010) who developed an English bilingualised dictionary for Catalan speakers called the Easy English Dictionary with Catalan-English Vocabulary developed by Dídac Pujol (2004). As much as this was a bilingual dictionary, it was inclusive of monolingual characteristics. Lemmata were provided in English and defined in Catalan because the lexicographic needs being met by the resource were of Catalan primary and secondary students learning English. This helped users to be more confident when using the resource because they understood the meanings more easily and there was not much of a need to rely on other dictionaries for further explanations as often is the case with strictly bilingual dictionaries, without meanings (Laufer & Hadar, 1997).

Similarly in the South African context where most students are not mother tongue speakers of English, pedagogical lexicographic practices should be inclusive of the mother tongue of users for dictionaries to be more functional and help students attain freedom from and through linguistic considerations in epistemological practices. This can be possible if they are placed in an advantageous position as English and Afrikaans mother-tongue speakers of South Africa who have access to shelves of lexicographic resources in their languages.

Etymological considerations in lexicography

Lexicography, as with other disciplines working in languages such as translation, has been arguably considered an art and not a science (see Landau, 2001; Atkins & Rundell, 2008; Béjoint, 2010) which was refuted by Tarp (2008, 2012) providing evidence of the science behind lexicographic practices. He explained the methodologies involved in the development of dictionaries and the sizeable research and knowledge required from lexicographers. Margalitadze (2018, p. 248) explains the research required in modern lexicography as follows:

"Modern lexicography is a complex, multidisciplinary field incorporating multiple components, viz. semantic theories, corpus-based methods, methods and techniques for natural language processing, e-lexicography, research in dictionary use, etymology and so on. Consequently, claims that working on a dictionary does not constitute a scientific activity, or that

lexicography has no theory, seem to be an unbelievable misunderstanding."

Among the components mentioned above is etymology which is the study of the historical traits of a word. Hashemi and Aziznedhaz (2011) explained that etymology helps users link words with similar components, thus helping them decipher new words more easily. Mailhammer (2014, p. 1) states that etymology requires one to study the history of a word to the time when it was first formed and explain the changes that it went through since then. This type of research takes researchers, often linguists, on a journey beautifully travelled observing developments taking place and shifts shaping the word to its current meaning.

Monolingual dictionaries are well-versed in providing etymological information of words and this is not so common in bilingual dictionaries. This paper argues that a consideration of etymological information in bilingual dictionaries is much needed. This is where it is needed most as users learn from dictionaries. Their learning should not amount to memorising words in the languages concerned but they should be allowed to acquire linguistic knowledge that they can apply when encountering new words with similar components. An example of this need can be observed in affixes, once a user understands that the English prefix a- is a negator they may be able to decipher other words formed with this prefix. A bilingual dictionary can segment words when explaining etymological information, thus building a teachable moment for the user as in the example from the IsiZulu Life Sciences Dictionary (unpublished)[1].

Asexual reproduction. *mv*. Greek *a-* okuphikisayo + Latin *sexus* okuqondene nocansi noma ukukhiqiza + Latin *producere* ukukhiqiza.

This example has *mv*, an abbreviation for the isiZulu word *imvelaphi* (clearly explained in the front matter of the resource) which means etymology. The English term 'asexual reproduction' is then segmented and the components that build the word are translated with the language where they originate. This way, a student may understand the concept better and may be able to understand these segments when used in other words such as 'abiotic' in comparison to 'biotic' where the negating prefix 'a-' would mean the latter has life and the former does not have life. They would have learnt the prefix used in another word and carried that knowledge to another word.

Waite (2005) as an editor of the Oxford South African Pocket Dictionary (OSAPD) provides etymological traits which are the language of origin, the original form, and the meaning of the original form of the lemmata.


engrained adj. var. of **ingrained**.
engrave v. (**engraves, engraving, engraved**) **1** carve words or a design on a hard surface. **2** cut a design as lines on a metal plate for printing. **3** (**be engraved on** or **in**) be permanently fixed in the mind.
■ **engraver** n.
– ORIGIN: from **en-** + former *grave* 'engrave'.
engraving n. **1** a print made from an engraved plate or block. **2** the process or art of cutting or carving a design on a hard surface.
engross /in-grohss/ v. (**be engrossed in**) be completely involved in.
■ **engrossing** adj.
– ORIGIN: from Latin *in grosso* 'wholesale'.
engulf v. **1** (of a natural

Figure 1*: Sample of etymology from the OSAPD (2005, p. 293)*

This sample shows the lemmata 'engrave' and 'engross' with their etymology labelled as original, which is easier for target users to understand the etymological information which adds to the explanation of the meaning of a word. As mentioned already in this paper, a bilingualised dictionary as a translated dictionary has an extended structure as it adopts the structure of a monolingual dictionary. Lessons can be learned from that dictionary and implemented in pedagogical dictionaries targeting previously marginalised languages, recognising that learner dictionaries should be aligned with the curriculum (see Webb, 2004) for them to meet their needs and be enhanced with scientific lexicographic practices.

[1] This unpublished dictionary was developed while conducting my PhD studies at the University of the Witwatersrand.

Theoretical framework

The theory of lexicographic functions stipulates that dictionaries should match the profile of users, their characteristics, their needs, and the function of dictionaries (Tono, 2010). The SZD records its primary users as students and speakers of isiZulu and English at various proficiency levels, including Home Language, First Additional Language, and Second Additional Language; it is also aimed at students and individuals speaking other languages who require insight into isiZulu vocabulary, along with their corresponding English translations (Dent & Nyembezi, 2009). These users should be characterised, and their needs should be indicated during the planning process of dictionary development (Tarp, 2003). This paper considers users as all people who are learning English and/or isiZulu, users of both languages, and language practitioners working between the two languages. These users search the dictionary to help them understand words for various reasons. Therefore, the encyclopaedic needs of users should be met in both languages. As there are limited resources for isiZulu, bilingual dictionaries should have a structure that edifies its users. Thus, the function of bilingual dictionaries should be extended to include definitions and etymological data.

This paper adopts a pragmatic lens in examining this dictionary looking at it more objectively to reveal something new from what was already believed to be absolute because there is always something new that can be discovered from what is already known (see Yefimov, 2004; Creswell, 2009; Shannon-Baker, 2015). As already explained, students rely on bilingual resources without definitions in their languages and must consult other dictionaries with meaning provided in English, thus a pragmatic lens is required in investigating lexicographic practices targeting users of previously marginalised languages. These practices will result in not only functional dictionaries that meet user needs, but in resources that will be aligned with the curriculum, thus serving as a knowledge-enhancing instrument in educational settings and beyond. In the same vein, this paper revisited the SZD to illustrate how a revised structure would meet user needs if it were to be more comprehensive.

Methods

This was a qualitative content analysis study, involving an examination of randomly selected lemmata commonly found in the field of Life Sciences in the Scholar's IsiZulu Dictionary (SZD) by Dent and Nyembezi (2009). The dictionary contains many words across 583 pages, and any listed word could have been chosen for the study, but the researcher randomly selected four samples. This type of sampling can be used when all members of the group (lemmata) have an equal chance of being selected and will yield similar results due to shared traits among the members (Noor et al., 2022). In this resource, all lemmata share similar characteristics, including the lemma, part of speech, and an equivalent or description (sometimes examples of usage). The selected words—cell, coma, embryo, and mammal—are also available in the English dictionary for comparison purposes in the field of life sciences. These words were analysed thematically and compared to their treatment in the Oxford South African Pocket Dictionary by Waite (2005). The analysis contrasts the provision of etymological data in the latter dictionary with its absence in the former dictionary, highlighting gaps in isiZulu dictionaries that could be addressed through etymological considerations in lexicography.

Images from dictionary entries are provided and a suggested microstructure is given below them. Equivalents and/or descriptions in the microstructure are presented and discussed in comparison with the suggested microstructure which is aligned with the Oxford South African Pocket Dictionary by Waite (2005).

Results

Dictionaries have the outside, front, middle, and back matter; and had the samples for the new student dictionary been recorded in an actual dictionary, the abbreviations would be explained clearly in the front matter. For purposes of this paper, the abbreviations used are as follows:

- *bz.* – *ibizo* (noun)
- *mv* – *imvelaphi* (etymology)

The SZD abbreviates parts of speech in English throughout the resource while the target users could be speakers of both languages of the

dictionary. The entire front matter is explained in English only. This structure was presented differently in the Oxford Bilingual School Dictionary: IsiZulu & English by Gilles-Maurice de Schryver (2015) where the front, middle, and back matter are written in both languages. The bilingual dictionary adopts a different structure too in that it targets users who are isiZulu speakers only and explains everything in isiZulu. It is only the entries that are in English.

A) Cell

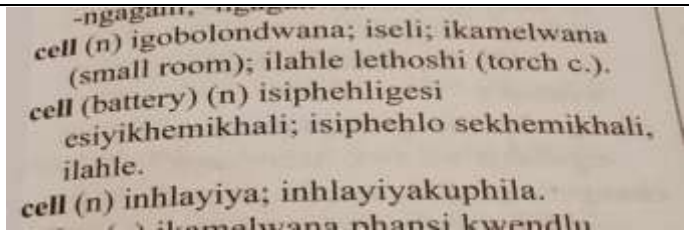


Figure 2: Sample from the SZD (2009, p. 41)

cell. bz. 1. yigumbi elincinyane. 2. iqenjana elingaphansi kwelinye iqembu. 3. yinhlayiya ephilayo ekwazi ukwenza okwahlukahlukene. 4. insiza ekwazi ukukhiqiza amandla kagesi ngekhemikhali noma ngokukhanya. (mv. Latin: *cella* – igumbi lokugcina impahla)

The above entry is recorded three times in the SZD with each entry given a different sense that the lemma cell has. In Lew (2013, p. 1) Piotrowski (1994, p. 21) defines sense as "one of the main divisions of the entry, usually marked typographically by consecutive letters or numbers." In other words, sense refers to more than one meaning/equivalent given to an entry, and this is marked in the OSAPD which gave cell four senses. The latter resource also gave the lemma the etymology of the word, which is *cella* from Latin, meaning a 'storeroom'. When considering the SZD microstructure the original meaning has been captured in the first entry, especially in *ikamelwana* which is a small room. The developmental senses from the word found in the second and third entries are aligned with the OSAPD senses.

In the revised dictionary structure, the entry has been given four senses, and each of the senses is numbered. The first entry is directly from the etymology of the word because that is where the conceptualisation of the word began. This should be the entry point to unpacking the meaning of a word. The entries are translated as follows:

- a small room
- a fraction of a group/party
- a living organism that can have various functions
- a device that can generate electronic power by chemicals or light

Etymological information is provided at the end with the language of origin, the word of origin, and its meaning in isiZulu. This information complements the senses given to the lemma in that all senses refer to something that has the ability to contain something just like a small room. Etymological information adds encyclopaedic knowledge to the user and helps them understand the lemma better and be able to retain the knowledge of these words and meaningful learning, especially for second language students (Pierson, 1989). Bilingual dictionaries with an expanded structure benefit users as this historic information empowers them as they continue to learn the language and use the words.

B) Coma

Following the traditional structure of a bilingual dictionary, the SZD did not explain the term but gave it an equivalent *isihlwathi* which Mbatha (2006, p. 280) defines as:

ubuthongo besikhashana [a short-term sleep]

The interpretation of the SZD appears to be in direct contradiction to that of the OSAPD which defines it as 'prolonged consciousness and a deep sleep' as supported by the etymological

information from Greek which means 'deep sleep'.

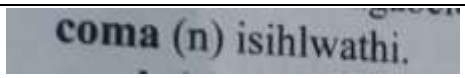


Figure 3: Sample from the SZD (2009, p. 52)

coma bz. yisimo sokulala uzumeke kakhulu isikhathi eside ngokwedlulele ngenxa yokugula noma ukulimala. (mv. Greek: *kōma* – ukulala zwi).

Stringer (2019) holds that sense is the idea that is created in the mind when a person encounters a word and etymological data enhances a person's interpretation of a word. The inclusion of an equivalent that does not convey meaning can be bridged through definitions and etymological information. Thus, a different interpretation that is aligned with the Greek meaning 'a deep sleep' is provided in the revised version as 'a condition where one falls into deep sleep for a prolonged time because of illness or injury'.

This interpretation in the current sense provided distinguishes the difference between sleeping out of free will and sleeping because of health conditions, which is absent in the SZD as a traditional bilingual dictionary. The Mirriam Webster online dictionary adds a second sense saying that when a person is in a coma they are in "a state of mental or physical sluggishness" meaning that it is not only the body that is affected but the mental state of that person at that time is affected. It is for this reason that the prolonged time is added to the new definition. A resource cannot record the entire meaning associated with a word for various reasons (Piotrowski, 1994), including the lexicographic function of the resource and the user needs. Etymological consideration opens-up the lemma to be associated with other words that can be connected to the origin of the word, which is beneficial to users, especially for second language users. This is because etymological information drawn from a dictionary can be interposed into the original context to realise the power of that information (Pierson, 1989) which enhances the epistemological knowledge of students.

C) Embryo

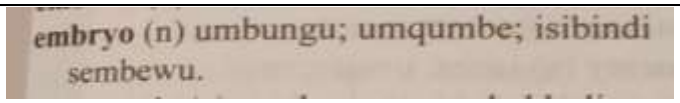


Figure 4: Sample from the SZD (2009, p. 95)

embryo. bz. 1. yisilwane esingakazalwa esisasesigabeni sokuqala sokukhula. 2. yingane esasesigabeni sokuqala sokukhula esibelethweni sikanina. 3. yisibindi sembewu esikhula sibe yimbali. 4. yinto esasesigabeni sokuqala sokukhula. (mv. Greek: *émbryon* – ukukhukhumala ngenxa yokukhula/ukukhula ngaphakathi)

The SZD provides three equivalents that align with the etymological meaning of the lemma. These interpretations are as follows:

- umbungu – embryo
- umqumbe – bud
- isibindi sembewu – seed embryo

These equivalents of the lemma are conveyed and as stated by Laufer and Hadar (1997), words in a bilingual dictionary often compel users to consult other resources to understand their meaning. The inclusion of etymological information based on the source language would eliminate the need for the immediate necessity of a secondary resource because users would understand that the lemma refers to 'something that is developing on the inside' as defined in the four senses provided in the revised version.

- an animal that is in the early stages of development which is yet to be born
- a baby that is in the early stages of development in its mother's womb
- a bud that is still growing to become a flower
- something that is in the early stages of growth

These definitions provide more clarity which is edified by the inclusion of the origin of the word. Pierson (1989) explains the importance of linking information with internalising ideas and enabling students to make connections independently. These connections are enabled by etymology as users can recognise the underlying meaning of words and can use them creatively with greater understanding (ten Hacken, 2018).

D) Mammal

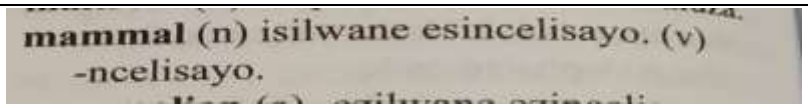


Figure 5: Sample from the SZD (2009, p. 178)

mammal bz. isilwane esinegazi elifudumele, esinoboya noma izinwele, esizalayo futhi esikhiqiza ubisi lokuncelisa, esinegazi elifudumele, esinenhliziyo emigudumine (mv. Latin: *mamma* – imibele/mabele).

The word **mammal** has been given the equivalent *isilwane esincelisayo* which means 'an animal that breastfeeds.' Indeed, all dictionaries have this component of the meaning of the lemma, but it is not the only one provided because 'breastfeeding' is the only component that can be used to define a mammal. The OSAPD adds that it is a warm-blooded animal with hair or fur and gives birth to its young. These components are part of encyclopaedic data that should be provided to users through definitions.

It is important to note that the origin of the word is from 'breasts' which are the basis of the equivalent provided. This equivalent is the only one available form in all English-isiZulu bilingual dictionaries. Lexicographers should avoid bias towards one part of meaning when describing a word but must consider it wholistically.

Lexical semantics seems to be trapped in a paradoxical situation: on the one hand, it seems natural to associate lexical items with stable meanings; on the other hand, whenever one tries to describe these meanings in a generalized and principled form there seems to be no viable way out. All attempts in this direction have turned out to be unsuccessful, starting with the strict compositional models of structural semantics and up to the rather more flexible prototypical models that however cannot manage to cope adequately with the problem of context. Since meaning is always to some extent underdetermined, semantic models seem always either too rich and constrictive, or too poor and simplistic.

Confronted with such a dilemma, in both semiotics and cognitive semantics the notion of Encyclopedia has recently become fashionable. The complexity of word meanings cannot be represented by any kind of closed model but must be seen as connected to a very broad and open repertoire of all kinds of knowledge, including contextual information. (Violi, 2015, p. 89)

It is for this reason that encyclopaedic information becomes crucial where lexicographers explain lemmata in detail extending definitions commonly used in most resources. The OSAPD provides a definition inclusive of more than 'breastfeeding' in its definition and the same can be adapted to isiZulu dictionaries to provide users with a

more functional resource as translated from the revised version:

- a warm-blooded animal with fur or hair that gives birth and produces milk for breastfeeding. It has a heart with four chambers.

This definition paints a clearer picture of a mammal rather than a consideration of one component. The equivalent provided in the SZD is helpful to a minimum because of the absence of the definition. This reiterates the need for providing dictionaries with definitions enhanced by etymology.

Discussion

Equivalents are not enough when developing resources for students who are second-language speakers of a language. The need for resources that explain information cannot be reemphasized in the South African context where the language of learning and teaching from Grade 4 through to university is not the mother tongue of users. The absence of encyclopaedic resources in their mother tongues further limits the possibility of immediate conceptualisation of educational content. This can be improved by the development of comprehensive dictionaries that do not deviate from the language of learning in their microstructure but provide a microstructure that is beneficial to the users' socio-cognitive abilities. "The socio-cognitive dimension is omnipresent in etymology" (Karali, 2022, p. 4) and lexicographers should consider this aspect for them to provide resources aligned with user needs. Of course, the need to further consult more resources may always be there (Odendaal, 2021) but lexicographers should minimise it by providing as much information as possible for users, including etymology.

As shown and explained in the results in this paper, the lexicographic function of a dictionary can be extended through a reconsideration of the structure with the inclusion of etymological data of the source language and definitions for the benefit of users. Etymology is an enhancement tool for lexicographers which helps them decipher meaning from its origin and develop equivalents that will convey the meaning as correctly as possible to users. It also helps users recognise and understand words; it further helps them discover ownership of the words and capacitates them to use them in other contexts (Pierson, 1989). Encyclopaedic resources can benefit bilingual users because they have an opportunity to analyse information in a language that places them at an advantage and with the etymological information, they learn how to manipulate words to help them decipher new words. Currently, this is lacking in bilingual dictionaries, which calls for a paradigm shift in lexicographic practices.

Conclusion

Bilingual dictionaries do not contain definitions as is the nature of terminology lists. The difference between bilingual dictionaries and terminology lists is the list of words, where dictionaries can contain words from various or general fields as compared to terminology lists which focus on specific domains. The function of bilingual dictionaries and terminology lists can be aligned in terms of providing equivalents of words in the target language of each resource, but bilingual dictionaries can be stretched to take a new shape which is an extended bilingual dictionary structure and include more than a record of words with equivalents or descriptions. They can include etymologies, definitions, extra-lexicographic data, and examples of usage. Adding this information to lexicographic resources, especially in languages that do not have many documented lexicographic resources, would contribute much to language intellectualisation. It would teach people the meaning of words in their languages and enable more usage of these words with a greater understanding due to the etymological information that would be provided. Therefore, adopting an etymological approach in developing pedagogical dictionaries in countries where the language of learning and teaching is a second language, will contribute to dictionaries that are more functional to the user. As noted and demonstrated in the samples in this paper, there is a gap in bilingual dictionaries and extending the structure of bilingual dictionaries will contribute to a new set of dictionaries that will enhance encyclopaedic knowledge of students and general users.

Recommendations

This paper recommends that the structure of bilingual dictionaries be reconsidered with a focus on developing bilingual dictionaries for learners and general users that will have an extended structure. It further recommends that the development of these dictionaries include domain-specific dictionaries in addition to dictionaries for general purposes.

ORCID

Dladla CP - https://orcid.org/0000-0001-6299-7385

References

Alberts, M. (2001). Lexicography versus terminography. *Lexikos, 11*,71-80.

Assam, N. B. (2006). Dictionaries as teaching instruments for mother tongue education: the case of Fang in Gabon [Unpublished Doctoral Dissertation]. Stellenbosch: University of Stellenbosch.

Atkins, B. S., & Rundell, M. (2008). *The Oxford guide to practical lexicography.* Oxford: Oxford University Press.

Béjoint, H. (2010). *The lexicography of English: from origins to present.* Oxford: Oxford University Press.

Bergenholtz, H., & Tarp, T. (2003). Two opposing theories. On HE Wiegand's recent discovery of lexicographic functions. *HERMES-Journal of Language and Communication in Business,, 31*, 171 - 196.

Corrius, M., & Pujol, D. (2010). A bilingualised English dictionary for Catalan speakers. *Lexikos, 20*, 109-122.

Creswell, J. M. (2009). Mapping the field of mixed methods research. *Journal of mixed methods research, 3*(2), 95-108.

de Schryver, G. M. (2015). *Oxford Bilingual School Dictionary: isiZulu and English/Isichazamazwi Sesikole Esinezilimi Ezimbili: IsiZulu NesiNgisi.* Oxford: Oxford University Press Southern Africa.

Dent, G. R., & Nyembezi, C. (2009). *Scholar's IsiZulu Dictionary* (4th ed.). Pietermaritzburg: Shuter and Shooter.

Department of Sports, Arts and Culture. (2023). *www.dsac.gov.za*. Retrieved November 01, 2023, from https://www.dsac.gov.za/

Department of Basic Education. (2020). *National Senior Certificate 2020 Diagnosis Report Part 1 Content Subject.* Pretoria: Department of Basic Education. Retrieved February 28, 2021, from https://wcedeportal.co.za/eresource/196376

Dladla, C. P. (2023). An analysis of domain-specific terminology for pedagogical lexicographic resources: towards a comprehensive English-IsiZulu life sciences dictionary [Unpublished PhD thesis]. Johannesburg: University of the Witwatersrand.

Gouws, R. H. (1993). Afrikaans Learner's Dictionaries for a Multilingual South Africa. Lexikos,. *Lexikos, 3*, 29-48.

Gouws, R. H., & Tarp, S. (2012). School Dictionaries for FirstLanguage Learners. *Lexicos, 22*, 333-351.

Hartmann, R. R. (1994). Bilingualised versions of learners' dictionaries. *Fremdsprachen Lehren und, 23*, 206-220.

Hashemi, M., & Aziznedhaz, M. (2011). Etymology: A word attack strategy for learning the English vocabulary. *Procedia - Social and Behavioral Sciences* , 102-106.

Hashemi, M., & Aziznezhad, M. (2011). Etymology: A word attack strategy for

learning the English vocabulary. *Procedia-Social and Behavioral Sciences, 28*, 102-106.

Humblé, P. (2001). *Dictionaries and language learners.* Frankfurt: Haag & Herchen.

Karali, M. (2022). Etymology and cognitive semantics. Thessaloniki, Greece: Conference: 3rd International Conference on Etymology.

Landau, S. I. (2001). *Dictionaries: The Art and Craft of Lexicography* (2 ed.). Cambridge: Cambridge University Press.

Laufer, B. (1995). A case for a semi-bilingual dictionary for productive purposes. *Kernerman Dictionary New, 3*, 2-4.

Laufer, B., & Hadar, L. (1997). Assessing the Effectiveness of Monolingual, Bilingual, and "Bilingualised" Dictionaries in the Comprehension and Production of New Words. *The Modern Language Journal, 81*(2), 189-196.

Lew, R. (2013). dentifying, ordering and defining senses. In J. Howard (Ed.), *The Bloomsbury Companion to Lexicography* (pp. 284-302). London: Bloomsbury Publishing.

Liu, X., Lyu, J., & Zheng, D. (2021). For a better dictionary: revisiting ecolexicography as a new paradigm. *Lexikos, 31*, 283-321.

Mailhammer, R. (2014). Etymology. *The Routledge handbook of historical linguistics*, 423-442.

Makalela, L. (2016). Ubuntu translanguaging: An alternative framework for complex multilingual encounters. *Southern African Linguistics and Applied Language Studies,, 34*(3), 187-196.

Makalela, L. (2017). Bilingualism in South Africa: Reconnecting with ubuntu translanguaging. *Bilingual and multilingual education, 3*, 297-310.

Makalela, L. (2019). Uncovering the universals of ubuntu translanguaging in classroom discourses. *Classroom Discourse, 10*(3-4), 237-251.

Makalela, L. (2022). To be and to know: towards a Decolonized Multilingual University. *Language and Institutional Identity in the Post-Apartheid South African Higher Education: Perspectives on Policy and Practice Springer International*, 149-161.

Margalitadze, T. (2018). Once again why lexicography is science. *Lexikos, 28*(1), 245-261.

Mbatha, M. (2006). *Isichazamazwi SesiZulu.* Johannesburg: South African Heritage Publishers.

Mtallo, G. R. (2015). A Critical Study of the Word meanings in Dictionaries: a case of Oxford Advanced Learners Dictionary. *Journal of Literature, Languages and Linguistics, 11*, 84-87.

Ngubane, N., & Makua, M. (2021). A Critical Discourse Analysis of the Language Policy for Higher Education from the Social Justice Perspective. *Journal of Educational Studies, 20*(1), 113-129.

Noor, Shagofah & Tajik, Omid & Golzar, Jawad. (2022). Simple Random Sampling. *International Journal of Education and Language Studies*, 1(2), 78-82.

Odendaal, H. (2021). A Machine Learning Approach to Domain Specific Dictionary Generation: An Economic Time Series Framework. Stellenbosch: Department of

Economics, University of Stellenbosch.

Pierson, H. D. (1989). Using etymology in the classroom. *ELT Joumal Volume, 43*(1), 57-63.

Piotrowski, T. (1994). Problems in bilingual lexicography. Uniwersytet Wrocławski: Uniwersytet Wrocławski.

Ranalli, J., & Nurmukhamedov, U. (2014). Learner Dictionaries. In C. A. (ed.) (Ed.), *The Encyclopedia of Applied Linguistics* (pp. 1-7). New Jersey: Wiley-Blackwell.

Sarmento, M. S. (2005). Por Uma Ecolexicografia. *Confluências, 2*, 84-97.

Sefotho, M. P. (2022). Ubuntu translanguaging as a systematic approach to language teaching in multilingual classrooms in South Africa. *Journal for Language Teaching, 56*(1), 1-17.

Shannon-Baker, P. (2015). "But I wanted to appear happy": How using arts-informed and mixed methods approaches complicate qualitatively driven research on culture shock. *International Journal of Qualitative Methods, 14*(2), 34-52.

Stringer, D. (2019). Lexical semantics: Relativity and transfer. In M. Erdogan N & Wei (Ed.), *Applied linguistics for teachers of culturally and linguistically diverse learners* (pp. 180-203). Hershey, PA: IGI Global.

Taljaard, E., & Prinsloo, D. (2019). African Language Dictionaries for Children – A Neglected Genre. (E. a.–A. Taljaard, Ed.) *Lexicos, 29*, 199-223.

Tarp, S. (2008). The third leg of two-legged lexicography. *HERMES-Journal of Language and Communication in Business, 40*, 117-131.

Tarp, S. (2012). Do we need a (new) theory of lexicography? *Lexikos, 22*, 321-332.

Taylor, S., & von Fintel, M. (2016). Estimating the impact of language of instruction in South African primary schools: A fixed effects approach. *Economics of Education Review, 50*, 75-89.

ten Hacken, P. (2018). On the Interpretation of Etymologies in Dictionaries. *Lexicography in Global Contexts*, 763-773.

The Republic of South Africa. (1996). Constitution of the Republic of South Africa. Pretoria: Government Printing Works.

Tono, Y. (2010). A critical review of the theory of lexicographical functions. Lexicon. *Lexicon, 40*, 1-26.

Violi, P. (2015). Global and local: Encyclopedic meaning revisited. *Semiotica, 206*, 89–108.

Waite, M. (2015). *Oxford South African Pocket Dictionary* (4 ed.). Oxford: Oxford University Press Southern Africa.

Webb, V. (2004). African languages as media of instruction in South Africa: Stating the case. *Language problems & language planning, 28*(2), 147-173.

Yefimov, V. (2004). On Pragmatist Institutional Economics. Munich: Munich Personal RePEc Archive.