
The *Oxford Bilingual School Dictionary: Zulu and English* (henceforth OZSD) is the latest addition to the bidirectional English–isiZulu bilingual dictionary market and is based on the same successful and prize-winning formula used for the *Oxford Northern Sotho School Dictionary* (ONSD) published in 2007.

One could state at the outset that OZSD is an excellent dictionary — as in the case of ONSD it brings together what could simply be called all of the best lexicographic practices for isiZulu. The spirit of learn isiZulu and English runs throughout the entire work, whether consulting the central texts or reading the guidelines and Study Section — the compilers left no stone unturned to guide users in finding the information they are looking for.

The front matter of the OZSD gives a table of contents, a user-friendly explanation of the dictionary features and an introduction. The Study Section located between the isiZulu–English and the English–isiZulu components contains the mini-grammar as well as guidance to dictionary activities, writing of e-mails and letters, spelling and pronunciation, etc. The back matter consists of a Reference Section on animals, fruit and vegetables, the human body, etc. These plates and tables successfully bring together items decontextualised as an inevitable result of alphabetical ordering in dictionaries. Reading the Study Section is important in order to decode the information when looking up words in the OZSD.

Dictionary articles are elaborate and give information on, among others, frequency of use, part of speech, sense distinction, translation equivalents, examples of usage in source and target language — in a very user-friendly way. Consider the articles of the verb -fundela and the noun isihambi in (1) and (2) as typical examples.

(1) **-fundela** verb + applicative **-funda**

1 = learn; study • Vusi ufuna ukufundela

ubudokotela noma umbemli. Vusi wants to study either medicine or law. 2 = read for • Bakhuthazwe ukujwayela ukufundela

ukuzijabula. It is necessary that they be encouraged to get used to reading for enjoyment.

(2) **isihambi** noun 7/8 (pl. izihambi) **-hamba**

= traveller; visitor • Akekho osaziyo

isihambi lesi. Nobody knows this traveller.

Text or shade(d) boxes is an innovative feature for isiZulu dictionaries and enhance the quality of the treatment given in the OZSD. They give guidance in respect of nouns used as adverbs, grammar (especially past tense forms), combinations, spelling, word division, etc.
The presumed coverage of English and isiZulu by the OZSD (p. xii), i.e. 82% and 71%, is impressive.

The compilers decided to use English as the metalanguage for both components of the dictionary. Using isiZulu as metalanguage could also be considered as an option in future revisions. This decision is questionable — especially in a school dictionary where all other aspects and presentations are punctiliously done on an equal basis for the two languages.

The most innovative feature in OZSD is the lemmatisation of the full form of nouns instead of stem forms as has traditionally been done in isiZulu dictionaries, i.e. the abandoning of the stem tradition for the lemmatisation of nouns. Even frequent locative forms that are derived from nouns using the so-called e-/o-…-ini 'locativization strategy' have been listed (p. S18). Full forms of adjectives, relatives, adverbs and pronouns can also be directly looked up.

Compare OZSD's lemmatisation of umntwana and abantwana with the traditional way, e.g. as in Doke and Vilakazi's Zulu–English Dictionary (ZED) in (3) and (4) respectively.

(3) OZSD (word lemmatisation)

umntwana ... (pl. abantwana)
... child
abantwana ... pl. noun 1/2 See sg. UMNTWANA

(4) ZED (stem lemmatisation)

-ntwana (umntwana ... abantwana)
baby, small child ...

Although there has been some debate in the past decade regarding the applicability of lemmatising nouns according to their full forms, i.e. prefix plus noun, no lexicographer or lexicographic unit to my knowledge thus far dared to break this almost sacred tradition of stem lemmatisation for nouns. Stem lemmatisation is even regarded as the scientifically correct way of lemmatisation and this presumed superiority over word lemmatisation influenced dictionary compilation for African languages to such an extent that it has even been used in some dictionaries for disjunctively written languages such as Sepedi, Sesotho and Setswana where it was much more questionable than in dictionaries for conjunctively written languages such as isiZulu.

Many lexicographers have come to the erroneous conclusion that only the stem tradition is linguistically justified. Ziervogel … for example, claims that it is scientifically sound, and Ziervogel and Mokgokong … state categorically that it is the only scientific method. (Van Wyk 1995: 84)

A first typical argument against the lemmatisation of the full forms of nouns is that the alphabetical stretches into which the noun class prefixes fall will be overcrowded. This means that the vowel sections would be very large, e.g. words beginning with izi- (classes 8 and 10), um- (classes 1 and 3), aba- (class 2),
etc. will result in very long alphabetical stretches in the dictionary. In OZSD it is indeed the case that *i*- takes up 62 pages, representing 23.5%, i.e. almost a quarter of the dictionary, *u*- 40 pages, etc. but users are unlikely to find it disturbing in any way.

The second argument is that identification of the lemma entails the selection of a section from the complex orthographic word anyway — therefore why not then also cut the noun prefixes, see discussion below.

What is important, however, is that OZSD, by lemmatising full forms of nouns, manages to avoid a number of lemmatisation problems resulting from certain phonological processes such as aspiration (cf. Van Wyk 1995). For example, stem identification is very problematic in cases such as *intaba*, *intombi*, *inkosi*, *inkabi*. The user would not know that the stem form of *intaba* is *ntaba* but for *intombi* it is *thombi*, for *inkosi* *khosi* and for *inkabi* *nkabi* in order to look it up in a traditional isiZulu dictionary. In OZSD the problem is avoided by the lemmatisation of the full nominal forms *intaba*, *intombi*, *inkosi* and *inkabi*.

If viewed from the angle of the user, it is true that when, for example, the teacher instructs him/her to write an essay on *umsebenzi* he/she would be best served by an isiZulu dictionary giving the natural (full) form *umsebenzi* as lemma. The problem arises when the need for look-up entails complex words in the learner’s prescribed literature. The core of the problem is that verbs as well as nouns often occur with huge clusters of circumfixes: prefixes, suffixes, conjunctives, etc. Consider the arbitrary selection from the hundreds of verbal and nominal forms found in the corpus pertaining to the verb *-sebenza* ‘work’ or one of its verbal or nominal derivations. The OZSD offers numerous articles, for the lemmas *abasebenzi*, *ekusebenzi*, *ekusebenzin*, *ekusetshenzisweni*, *emisebenzi*, *emsebenzini*, *imisebenzi*, *isisibeni*, *izisebenzi*, *-sebenzi*, *-sebenzisa*, *-sebenzisana*, *-setshenziswa*, *-setshenzwa*, *ukusebenza*, *ukusetshenziswa*, *umsebenzi*, but the challenge for the user is to identify the appropriate lemmas from the complex orthographic words in (5). (Note, however, that the frequency of occurrence of many of these forms is low.)

(5) ababasebenzelayo, bayasebenza, belusebenzisa, bengasawasebenzisi, emsebenzini, komsebenzi, kusebenze, lomsebenzi, lusebenzisa, msebenzi, nasemsebenzi, nwumsebenzi, nemisebenzi, okuzisebenzela, olisebenzisayo, olungasenamsebenzi, ozokuwasebenzisa, sengisebenzele, sesizozisebenzisa, ubuzakungisebenzela, zomsebenzi

Although lemmatisation of the full forms of isiZulu nouns goes a long way in easing the problem of stem identification, the problem of lemma identification is by no means solved and will never be in paper isiZulu dictionaries. The need to identify even full forms of isiZulu nouns for look-up remains problematic in some instances especially for the inexperienced user. Consider also *umuntu* ‘human being’ in this regard. Once again, if the user is confronted with the noun in isolation as in the case of *umsebenzi* above, there is no problem and it is much more natural and easy not to have to remove the *umu*- in order to look up *-ntu* in OZSD, in contrast to traditional dictionaries. However, in cases
where the user is confronted with complicated orthographic forms containing/involving *umuntu* such as *njengomuntu, ngingumuntu, lowomuntu* in (6), the target user could find it difficult to identify the lemma *umuntu*. From a frequency point of view (frequencies indicated between brackets), it has to be noted that the noun itself, i.e. *umuntu* in this case, is overwhelmingly more frequent in an isiZulu corpus than the other orthographic forms. With a little experience, and using the user guide of OZSD, the user will probably be able to restore the missing pre-prefix in order to look up -*muntu* under *umuntu*.


So, although the many virtues of lemmatisation of full nominal forms is not disputed, it does not mean that a golden solution has been found to noun or noun stem identification. OZSD guidelines are, however, honest and clear on this issue in trying to give guidance in dealings with 'howevers' and 'furthermore', e.g. p.517, in cases such as -*muntu* in (6).

A potential problem lies within the lemmatisation of infinitives. OZSD correctly lemmatised full forms of a number of frequently used infinitive nouns such as *ukudla* 'food', *ukuhamba* 'departure' and *ukukhuluma* 'speaking' in the alphabetical stretch *uku-* and treated them appropriately for their nominal meanings. These infinitive nouns, however, stand in contrast with the infinitive verbs *ukudla* 'to eat', *ukuhamba* 'to walk/go' and *ukukhuluma* 'to speak' in isiZulu. *Ukudla, ukuhamba* and *ukukhuluma* have therefore also correctly been lemmatised in OZSD under their stem forms -*dla,* -*hamba* and -*khuluma* with applicable treatment for their verbal meanings. However, for looking up verbs in isiZulu dictionaries users become used to also looking up infinitive verbs under their stem forms. Thus removing the infinitive prefix *uku-* by default prior to look-up, could result in a problem where the user does not consider the possibility that he/she should also check under *uku-* for the possible existence of an infinitive noun with the same stem. I believe that a cross-reference is required from the articles of the verb stems to the full nouns in such cases. Consider the following examples. Say for instance the user is confronted with the infinitive noun *ukujula* 'depth' but looks it up as for an infinitive verb, i.e. under -*jula,* he/she will find the meaning 'consider carefully' which is not applicable in this case. A cross-reference from -*jula* to *ukujula* would have solved the problem. Inserting such cross-references would of course require additional space in the dictionary. The alternative should be to warn users in the guidelines to check for possible nominal forms when looking up infinitives. If the same line of argumentation is followed for *ukuthi*, the user might not find the
meaning of the most frequently used word in isiZulu, the conjunctive *ukuthi* 'so that' in the absence of a cross-reference from -*thi*... *verb*... *say*... to *ukuthi*.

Lemmatising both singular and plural forms of nouns is especially recommended for learners’ dictionaries. This, however, comes at a huge price in terms of redundancy of space taken up by lemmatising the other member of the pair, usually the plural forms. Once again the compilers of the OZSD took the best option, that is, lemmatising the plural forms, and instead of treating them, they supplied a cross-reference to the singular form as in (7).

Lemmatising plural forms with cross-referencing to the singular forms results in an overuse of the mediostructure (cross-referencing) as lexicographic device, rendering sections as in (7) that consist entirely of cross-references in OZSD.

(7) izimpendulo * pl. noun 9/10 See sg. IMPENDULO
izimpi * pl. noun 9/10 See sg. IMPi
izimpiko pl. noun 11/10 See sg. UPHIKO
izimpilo pl. noun 9/10 See sg. IMPilo
izimpisi pl. noun 9/10 See sg. IMPISI
izimpondo pl. noun 11/10 See sg. UPHONDO
izimpophoma pl. noun 9/10 See sg. IMPOPHOMA
izimpukane pl. noun 9/10 See sg. IMPUKANE
izimu noun 5/6 (pl. amazimim) = cannibal • Izimu baliyikwa imihla evuyayo. They gave the cannibal a pot with a hole in it.
izimvu pl. noun 9/10 See sg. IMVU
izindela *** pl. noun 9/10 See sg. INDELELA
izindlovu pl. noun 9/10 See sg. INDLovU
izindlu ** pl. noun 9/10 See sg. INDLu
izindondo pl. noun 9/10 See sg. INDONO
izindonga pl. noun 11/10 See sg. UDONGA
izinduku pl. noun 9/10 See sg. INDUKU
izinduna ** pl. noun 9/10 See sg. INDUNA
izindwangu pl. noun 9/10 See sg. INGWANGU
izindwani pl. noun 11/10 (sg. udwani) = grass blades • *dla izindwani = be overflowing; be in flood • Ngiyapho ngifika eKwiti, ngawufika udlza izindwani. When I came to the Kwiti River, I found it to be in flood.

This, however, is defensible and OZSD in my view even understates the value of its lemmatisation of plural forms of nouns in saying that ‘the only information you will find there is a cross-reference to the singular form’ (p. 515). In (5), reconstructing *imisebenzi* from *nemisebenzi* and actually finding *imisebenzi* as a lemma in the dictionary is firstly a confirmation of successful lemma identification, secondly frequency of use information, thirdly noun class information and finally a cross-reference to the singular where full treatment is given. These are all important bits of information given with lemmatised plural forms of nouns in OZSD.

As in the case of ONSD, it is not clear what the exact title for reference purposes of OZSD should be: the outside cover refers to Oxford, *ISIZULU–ISINGISI, ENGLISH–ZULU, Isichazamazi Sesikole, School Dictionary* and the first title page to *Isichazamazi Sesikole Esinzezilimi Ezimbili, ISIZULU NESINGISI, Esishicilelewe abakwa-Oxford, Oxford Bilingual School Dictionary, ZULU AND ENGLISH*. Sticking to this complicated naming template was probably done to be on a par with the other dictionaries in the series but the practical value is questionable. Colour, font and layout do, however, contribute to the readability of the title, see
Affordability is a limiting factor for African language dictionaries. Bidirectional dictionaries bridging English with an African language in South Africa are currently caught up in a triangulation of number of lemmas versus exhaustiveness of treatment versus price, cf. Prinsloo (2009). This simply means that 500 to 600 pages are the default limit within which the compiler can operate as prescribed by the publishers. In principle, these limitations leave the compiler with two basic options: the inclusion of a large number (e.g., 20 000 to 30 000) of lemmas with limited (e.g., 1 to 2 lines double column) treatment, or a limited number (e.g., 10 000) of lemmas with more exhaustive (e.g., 5 to 7 line) treatment. The market price is normally limited to R100 per dictionary. The OZSD provides extended/exhaustive treatment but consequently the number of lemmas is limited to 5 000 in the Zulu to English section and 5 000 lemmas in the English to Zulu section.

Conclusion

In the past decade, a number of studies have been undertaken to establish best practices in terms of lemmatisation, balancing of alphabetical stretches, combating inconsistencies, compilation of corpus-driven dictionaries for African languages, etc. The problems inherent in lemmatisation are real. These studies were performed against the background of the user-perspective. School dictionaries must, by definition, be easy to use. It can be concluded that publication of the OZSD represents a new era for isiZulu–English lexicography because the latest insights, lexicographic tools, an isiZulu corpus and a state-of-the-art dictionary writing system have been utilised. The OZSD succeeds in its aims to offer support in the key areas of helping learners choose the right translation, giving frequently used translations, showing how words are really used, the inclusion of new words from across the curriculum as well as the incorporation of useful additional components such as a mini-grammar.
References


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