# European Master in Lexicography

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## "A critical review of a 21st-century Yoruba-English dictionary"

Master's Thesis

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# 1. Introduction

Since the publication of the first dictionary of the Yoruba language, *A Dictionary of Yoruba* in 1843, a handful of other dictionaries have appeared with varying degrees of commercial success. One of them is the *Yoruba Modern Practical Dictionary* (YMPD) by Kayode J. Fakinlede, which was first published in 2003. It takes pride in its comprehensiveness, claiming to contain over 26,000 dictionary articles and extensive outer texts that cover scientific measurements and rudimentary mathematical terminology. This thesis reviews this widely acclaimed dictionary in an attempt to evaluate its strengths, weaknesses, unique features and its position in relation to earlier Yoruba dictionaries from the 19th and 20th centuries. In doing this, this thesis draws inspiration from the criteria for dictionary criticism proposed by Svensen (2009) and Hütsch (2017), as well as other relevant scholarly contributions to dictionary criticism.

There is a shortage of academic reviews of Yoruba dictionaries. While David Olmsted's (1959) and Robert G. Armstrong's (1959) reviews of the *Dictionary of Modern Yoruba* (1958), as well as E. C. Rowlands' (1971) review of *A Dictionary of Yoruba Monosyllabic Verbs* (1969) stand out, they are brief, typically not longer than three pages and focused on isolated areas of criticism. Fagborun (1992) albeit belatedly takes a more holistic approach to review the *Dictionary of Modern Yoruba* (1958).

Furthermore, Adetoyese (2020) also reviews two pioneering Yoruba dictionaries, namely, *A Dictionary of the Yoruba Language* (1913) and *Dictionary of Modern Yoruba* (1958) - both from the 20th century respectively. Thus, it appears that in spite of the general shortage of academic reviews of Yoruba dictionaries, there seems to be a common tendency among reviewers to opt for reviewing the *Dictionary of Modern Yoruba* (1958), while neglecting other dictionaries. However, Adetoyese reviews the aforementioned in light of their roles and influence as pioneering dictionaries in their epochs. This motivates the author of this thesis to examine a Yoruba dictionary which, firstly is an influential work, secondly, belongs to a different period, and thirdly, also suffers from the lack of substantial academic review. Thus, the YPMD (2003) is reviewed in this thesis in terms of its contents and features and as a Yoruba dictionary for 21st-century users.

In order to provide ample background knowledge on the object of this thesis, the opening chapter reflects on the Yoruba language and Yoruba lexicography. The second chapter introduces the dictionary in focus, the YPMD. The third chapter reviews the existing literature on dictionary criticism and highlights the methods of dictionary criticism to be used in the thesis. The fourth chapter criticises the lexicographical aspects of the YPMD, namely macrostructure, microstructure, mediostructure, frame structure and typographical presentation. The fifth chapter gives an overall assessment of the dictionary and some recommendations for possible revision and improvement, while the sixth chapter concludes the thesis.

## 1.1 The Yoruba language

Yoruba, written as *Yorùbá* in the language itself, refers to both the language and its speakers. It comprises a large linguistic group, spread mainly across South-West Nigeria and parts of central Nigeria (Biobaku, 1973). Additionally, Yoruba communities of native origin can be found in neighbouring countries such as Benin, the Gambia, Ghana, Togo, and Sierra Leone, while notable Yoruba diaspora communities exist in Brazil, Trinidad, Puerto Rico, and Cuba (Solihu, 2015). Biobaku (1973) states that the Yoruba people share a common culture and claim a common origin in the city of Ile-Ife in Nigeria, in addition to their shared language. The Yoruba language has a significant number of native speakers, with a population of over 40 million (Onifade et al., 2018). Today, although Yoruba is used in several countries, the largest presence of Yoruba speakers is still in Nigeria. Oyo, Ogun, Osun, Ondo, Ekiti, Lagos, Kogi, and Kwara are the states in Nigeria where Yoruba speakers are predominantly located.

In comparison with other widely spoken African languages, written records of Yoruba did not appear until about two centuries later. Hair (1964) records that while many other African languages that are commonly spoken had significant amounts of vocabulary collected and published during the 17th and 18th centuries, the first collection of printed Yoruba words dates back to 1819. According to him, this collection was gathered by the English diplomatic agent Bowdich during his mission to Ashanti in 1817 and was included in his written account. However, the vocabulary in this collection only includes numerals. In addition, he proposes that the Yoruba language's delayed appearance in print

could be attributed to the fact that although the Portuguese had a stronghold on Afro-European interactions in West Africa from 1450 to 1630, Yorubaland did not receive frequent or extensive visits from Europeans until the 19th century.

The Yoruba language is made up of several dialects, but scholarly efforts have brought about a koine, known as Standard Yoruba. As a pluricentric language, the standardisation of the language and its orthography, and the development of a grammar for it, in order to arrive at the Yoruba language as it is known today, proved to be difficult. According to Olumuyiwa (2013), in the early days of Yoruba writing, diverse spelling conventions were utilised by writers, which led to disputes about the standards to be followed when transcribing the language into written form. The reason can be traced to Adetugbo's (1973) argument that all dialects spoken in the Yoruba linguistic region, including Standard Yoruba, form the Yoruba language and that the presence of common features in all dialects leads to mutual comprehension, making the Yoruba language an aggregate collection of dialects rather than a whole. He further notes that Standard Yoruba is notable because it is socially recognised, unlike other dialects that are limited to specific geographical regions. After decades of scholarly proposals and contributions to the standardisation of the language's orthography, dating back to Gollmer's proposal of orthography in 1847 and the Church Missionary Society's (C.M.S.) conference on Yoruba orthography in 1875, the Federal Ministry of Education set up a committee in 1973 to standardise the orthographies of some Nigerian languages, including Yoruba, by collecting and reviewing previous reports and recommendations before approving the Standard Yoruba orthography to be used in education and examinations (Olumuyiwa 2013).

Within the Yoruba-speaking communities, Yoruba is actively used in daily activities and commerce. It is taught as a subject in primary and secondary schools and can be registered for and taken in school-leaving examinations such as the Senior School Certificate Examination (SSCE) of the National Examinations Council (NECO) and the West African Senior School Certificate Examination (WASSCE) of the West African Examinations Council (WAEC) in Nigeria. In the media, there are broadcasters and publishers who use only Yoruba in their programmes and publications. For example,

*Alaroye* is a well-known Yoruba weekly newspaper and BBC Yoruba is one of the most popular online news providers in the Yoruba language. There is also a variety of private and state-owned Yoruba radio and television stations, as well as some stations that broadcast in both Yoruba and English. A thriving Yoruba film industry also regularly produces acclaimed films such as *Elesin Oba*, The King's Horseman (2022) and multi-award winning films such as *Aníkúlápó* (2022). The Yoruba language plays an important role in religion. In the traditional Yoruba religion, it is used for *Ifá* divination locally, as well as in the diaspora community in Brazil, Cuba, and some other Spanish Caribbean communities (Valdés, 2015). The first book printed in Yoruba was the translation of Romans in 1850 by Samuel Ajayi Crowther - a freed returned Yoruba slave who would later become the first African Anglican bishop - and the publication of the complete Yoruba Bible came 34 years later in 1884 (Hargreaves, 1965).

In spite of the considerable progress that has been made in the study of Yoruba, there seems to be a decline in the use of some Yoruba words and a lack of mastery of orthography. These pose a challenge, to whose solution lexicography and lexicographers can contribute. English, the official language of Nigeria, is also very popular among young people, partly to the detriment of other Nigerian languages, including Yoruba. On the one hand, the code-mixing of English and Yoruba is a common phenomenon among Yoruba speakers and has gradually led to the replacement of several words in the active vocabulary of many Yoruba speakers by English words, as can be seen in everyday speech, films and the media. In this situation, dictionaries can help to preserve the declining Yoruba vocabulary. On the other hand, Yoruba speakers often have no ready-made equivalents for new vocabulary from the field of science and technology. This often results in such users borrowing the said vocabulary into Yoruba. Where available, lexicographers should provide the Yoruba equivalents of foreign words in their dictionaries.

Although a revised Standard Yoruba orthography was approved in 1974 for use and teaching in schools, Olumuyiwa (2013) identifies a lot of inconsistencies in writing conventions used in print journalism, in religious texts, on notice boards, billboards and, on the Internet. He remarks that there are still several cases of the use of the old

orthography of 1875 and frequent cases of a mixture of the new and old orthographies. This is another situation where dictionaries can dispel users' doubts and help them with consistent and up-to-date orthography in text production situations.

## 1.2 Yoruba lexicography

The earliest record of Yoruba lexicography can be traced back to T. Edward Bowdich's (1819) *Mission from Cape Coast to Ashantee*, in which he collected the numerals of the Yoruba language. Bowdich, who was an English diplomatic agent, collected these numerals, with their English equivalents in Ashanti in 1817, and the publication of his book in 1819 also makes these numerals the oldest records of Yoruba words in print (Hair, 1964). However, the first dictionary of Yoruba did not appear until 1843, compiled by Samuel Ajayi Crowther and entitled *A Dictionary of Yoruba*. Another dictionary by the same author which was based on the earlier one was compiled as *A Vocabulary of the Yoruba Language* and was published in 1852. It was a unidirectional bilingual Yoruba-English dictionary. Crowther was a Yoruba clergyman and the first African bishop of West Africa who was captured in 1821 by Fulani slave raiders when he was 12 years old, but was freed from slavery by the Royal Navy's West Africa Squadron and resettled in Sierra Leone, where he adopted the name, Samuel Crowther, learnt English, and studied languages (The Sun News, 2021). He was ordained a minister in England, received a doctoral degree from Oxford University, and translated the Anglican Book of Common Prayer into Yoruba, created a Yoruba grammar, and worked on a Yoruba version of the Bible, among other language projects which covered other languages such as Igbo and Nupe (Dawkins, 2018). Crowther is one of the most influential promoters of Yoruba literacy, which was central to the furtherance of his evangelisation mission among the Yoruba.

Subsequently, other Yoruba lexicographers have emerged, making efforts to present the language in a more contemporary form in their respective eras. One such notable work is Roy Clive Abraham's *Dictionary of Modern Yoruba* (1958). Abraham was a linguist who worked on several Nigerian languages including Hausa, Tiv and Idoma. The dictionary was notable, among other things, for the period in which it was published. Abraham's *Dictionary of Modern Yoruba*, which was encyclopaedic in nature, signified the end of an

era and the start of a new one in Yoruba linguistic history, coinciding with Yoruba's emergence into more academic works and new roles in society (Fagborun, 1992). Olmsted (1959) remarks that the most significant part of Abraham's work is the lexical section, which features extensive ethnographic descriptions and illustrations, and that its main contribution is that it is the first African language dictionary to include tone markings throughout, adding great value to the literature on Niger-Congo languages.

Yoruba's socio-linguistic situation as a language that exists beside other languages spoken in the countries that are home to Yoruba-speaking communities impacts the typology of dictionaries produced as well. Most Yoruba dictionaries are bilingual dictionaries. The most common are English and Yoruba combinations, such as *A Dictionary of the Yoruba Language, A Vocabulary of the Yoruba Language* and *Dictionary of Modern Yoruba*. These are all bilingual dictionaries of Yoruba and English. However, there are other language pairs such as Yoruba-Spanish, Yoruba-French, and Yoruba-Portuguese, as seen in the following examples respectively; *Diccionario Castellano-Yorùbá* (2020) by Ade Akinfenwa, *Dictionnaire usuel yorùba-français* (2009) by Michka Sachnine, and *Dicionário Yorubá-Português* (2011) by José Beniste. There are other less common types of Yoruba dictionaries that can be described according to Engelberg and Storrer's (2016) dictionary typology. They include dictionaries for specific part-of-speech such as I. O. Delano's *A Dictionary of Yoruba Monosyllabic Verbs (1969),* and dictionaries of specific semantic fields such as dẹtayọ's *English-Yoruba Dictionary of Engineering Physics* (1993)*.

With the rise in the popularity of online dictionaries, Yoruba dictionaries can be found online. Some old printed Yoruba dictionaries are being retrodigitised and made available on the web, while there are also some newly designed online dictionaries and dictionary portals (cf. Engelberg & Storrer, 2016):

●      One such new online dictionary is the bidirectional *Glosbe Yoruba-English*[1] which runs on the *Glosbe* dictionary portal. *Glosbe* is a collaborative project where users can contribute and add missing dictionary articles. *Glosbe* claims to cover around six thousand languages. They source data from the Wiktionary and the OPUS - a collection

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[1] Retrieved April 15, 2023, from https://en.glosbe.com/

of multilingual parallel corpora among others[2]. The dictionary can also be accessed through the dictionary search engine (cf. Domínguez, 2017), *Lexilogos*[3]. It is also currently the Yoruba online dictionary with the most extensive microstructure, covering items giving the form of the lemma sign, items giving the translation equivalents, items giving the part-of-speech, audio files as items giving the pronunciation for the English lemmas, and items giving examples which are compiled from a parallel corpus of Yoruba and English. This dictionary stands out because most print and online Yoruba dictionaries do not provide example sentences, and most online Yoruba dictionaries do not offer audio files that indicate the pronunciation of the lemma in either English or Yoruba. The main criticisms of this dictionary can be highlighted in some erroneous lemmatisations, incorrect automatic translations, the occasional absence of tonal markings in lemmas, and example sentences that have no relation to the lemma, as discussed below.

Figure 1 shows a part of the dictionary article *Ada* from the *Glosbe Yoruba-English* dictionary, and the translation equivalent provided in English as cutlass.
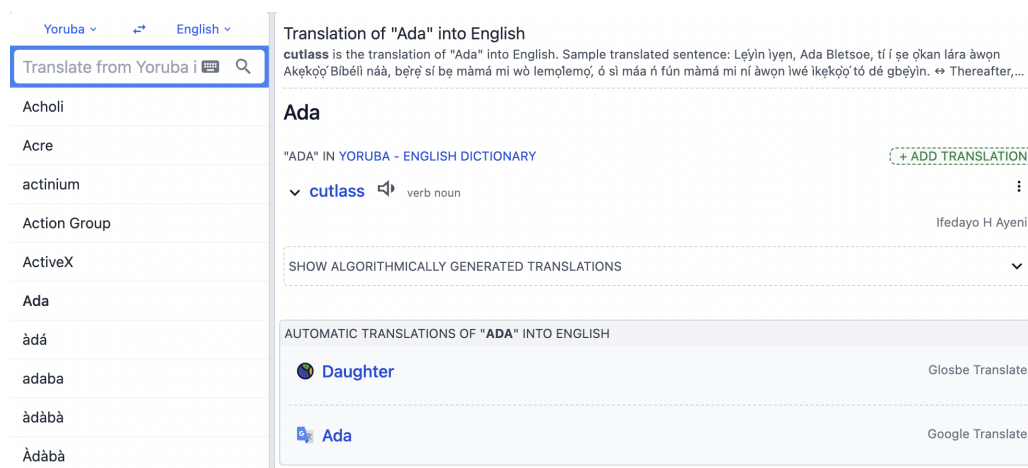


Figure 1: Excerpt from the article *Ada* in Glosbe Yoruba-English

This is a case of a wrong translation and an erroneous lemmatisation, because *Ada* is a proper noun, as can be seen from the initial capital letter, and is a female name which does not mean cutlass in Yoruba. While *Ada* is a common name for first daughters in the Igbo language — another major language in Nigeria — and as such is semantically

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[2] Retrieved April 15, 2023, from https://en.glosbe.com/partners
[3] Retrieved April 15, 2023, from https://www.lexilogos.com/english/yoruba_dictionary.htm

related to *daughter*, which is provided as an automatic translation for *Ada* in the dictionary article, it does not have this meaning in Yoruba and would not be a typical lemma candidate in a Yoruba dictionary. However, it could have been confused with the word *àdá*, which is the next lemma after *Ada* on the alphabetical lemma list in Figure 1. This is the actual word for *cutlass* in the Yoruba language as correctly indicated in the dictionary article in Figure 2.
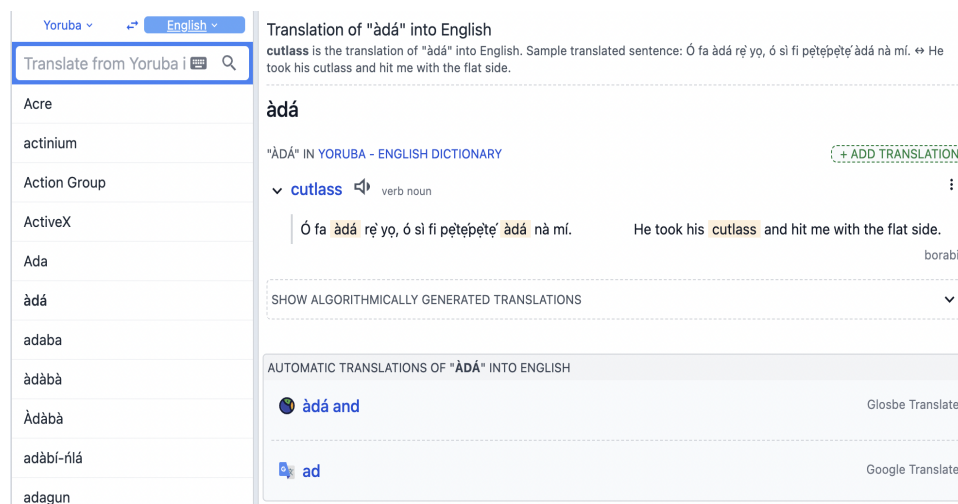


Figure 2: Excerpt from the article *àdá* in Glosbe Yoruba-English

It has the correct tonal markings and because it is not a proper noun, it does not begin with a capital letter. Therefore, one sees a case of double lemmatisation, where the first lemma is erroneous and the second is correct. Also, the automatic translations of *àdá* from *Glosbe Translate* and *Google Translate* into English (as shown in Figure 2), are simply incorrect, as the English translation would be *cutlass*. Speculatively, this might have been caused by an oversight on the part of the editor or might be an unreviewed computer-generated article.

Another case of multiple lemmatisation can be found in the lemma list in Figure 2, where *adaba*, *àdàbà*, and *Àdàbà* are lemmatised separately, whereas an examination of the three articles shows that they refer to the same translation equivalent, *dove*, whose correct orthography in Yoruba is *àdàbà*. In a tonal language like Yoruba, tonal markings are essential in guiding the dictionary user to achieve the correct pronunciation of a word and to differentiate between minimal pairs. The high tone is marked by an acute accent as in *ní* (to have), the low tone is marked by a grave accent as in *sùn* (to sleep), and the

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mid-tone is indicated by the absence of an accent like in *jẹ* (to eat). If a dictionary omits tonal markings such as in *adaba*, which should be *àdàbà* or *adagun* (see Figure 2), which should be *adágún* (lake), this could pose challenges to effective communication for an unwarned dictionary user.

Lastly, some of the example sentences bear no correlation to the lemma. Take for example the lemma *ẹ̀gbọ́n* which means an older sibling in Figure 3. The lemma does not appear in the example sentences, nor does its translation equivalent appear.



Figure 3: Example sentence from the article *àdá* in Glosbe Yoruba-English

Normally, the occurrence of a lemma and its translation equivalent in an example sentence in this dictionary is highlighted as shown in Figure 4.



Figure 4: Example sentences from the article *àdàbà* in Glosbe Yoruba-English

If the lemma does not appear in the examples, the examples do not provide the dictionary user with any contextual information about how the lemma can be used. Thus it is doubtful that these example sentences in Figure 3 are beneficial to the dictionary user.

● *YorubaDictionary.com* is another online bilingual dictionary of Yoruba and English. It is a unidirectional online English-Yoruba dictionary compiled by Pamela Olúbùnmi Smith, a scholar and translator, and Adebusọla Ọnayẹmi, executive director of a Yoruba language multimedia publishing company and the publisher of a Yoruba language primer and a Yoruba magazine[4]. The dictionary contains a small selection of lemmas and is missing many words that could be considered basic vocabulary. For example, searches for the lemmas *food*, *eat*, *house*, and *language* in this dictionary do not return any results.



Figure 5: Macro- and microstructure of *YorubaDictionary.com*

Figure 5 shows the overview of the macrostructure and the microstructure of some dictionary articles under the letter I. The macrostructure can be navigated by means of a search bar or by browsing alphabetically. The microstructure on the other hand consists of a lemma list alongside the items indicating the part-of-speech and the respective translation equivalent(s). Thus, considering the potential amount of additional useful information such as collocations, pronunciations, examples, and so on that online dictionaries can offer to their users, *YorubaDictionary.com* could be said to offer almost the bare minimum.

● *Aroade* is a unidirectional English-Yoruba dictionary that comprises a simple layout and an alphabetically arranged wordlist of over 200,000 lemmas[5]. However, the lemmas are all in English.

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[4] Retrieved June 11, 2023, from https://www.yorubadictionary.com/pages/about
[5] Retrieved April 15, 2023 from http://aroadedictionary.com/about.html

**Each**

Each *pron.* / ọkọkan, olúkúlùkù, ẹyọkọkan.
Eager *adj.* / nítara, níwára.
Eagerly *adv.* / pẹ̀lú nítara, pẹ̀lú níwára.

Figure 6: Excerpt from *Aroade* dictionary

Similar to *YorubaDictionary.com*, *Aroade* replicates the adoption of the typical alphabetical macrostructure ordering in print dictionaries and restricts its lemma treatment to include only parts-of-speech and translation equivalents (see Figure 6).

While there are a few other online Yoruba dictionaries, they largely share identical problems with the aforementioned, which can be summarised as follows. Most dictionary articles include a very limited selection of items: usually only the lemma sign, the part-of-speech, and the translation equivalent. Other potentially useful items for language learners and other potential users of bilingual dictionaries, such as pronunciation, collocations, and example sentences are usually absent. Furthermore, given that one of the main advantages of online dictionaries over print dictionaries is access to more space for including more features such as multimedia resources and external links to the dictionary, one can argue that many of the online Yoruba dictionaries do not maximise this advantage. Instead, as seen in *Aroade* and *YorubaDictionary.com*, they even tend to retain the alphabetical macrostructure that is often found in print dictionaries.

However, while the *Glosbe* dictionary has more features than the others, such as audio files for pronunciation of English lemmas, and example sentences and their translations from a parallel corpus, it still has a lot to improve on. This includes incorrect lemmatisation, multiple lemmatisation of the same word, some missing tonal markings, and example sentences that are unrelated to the lemma.

**2.      Yoruba Modern Practical Dictionary**

Arguably the most significant Yoruba language lexicographic product of the 21st century, the YMPD (2003) otherwise known as the *English-Yoruba/Yoruba-English Modern Practical Dictionary*, is a bidirectional bilingual dictionary authored by Kayode J. Fakinlede. Fakinlede is a Nigerian of Yoruba descent who is employed as a research

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chemist and resides in the United States. He possesses a strong passion for the Yoruba people and their language, evident through his authorship of various books and has written other books such as *Wealth of the Yoruba People* (2000) and *Beginner's Yoruba with Online Audio* (2018), a book designed to help beginners learn the Yoruba language.

As advertised on the back cover, with a comprehensive approach, the dictionary covers various aspects of the Yoruba language, such as its alphabet and tonal system, and offers more than 26,000 dictionary entries covering a broad range of subjects, such as medical terminology, fundamental elements, plant and animal taxonomy, idiomatic expressions, and examples. The book also includes a grammar section with a breakdown of sentence structures and parts of speech, a list of word roots, prefixes, and suffixes in both Yoruba and English languages, as well as an appendix that features rudimentary mathematical terminology and scientific measurements.

Fakinlede (2003) identified the three target user groups at which his dictionary is aimed. Firstly, it aims to provide individuals who are not familiar with the Yoruba language but have a reasonable grasp of the English language, with the necessary knowledge to comprehend the Yoruba language. Secondly, it serves as a reference for authors who intend to write books in the Yoruba language for students in various educational levels including primary, secondary, and tertiary institutions, to meet their needs in this era of technological advancements. Lastly, students of the Yoruba language who have a limited understanding of the English language can use the dictionary as a helpful tool in their studies of the English language. Thus, he adapted the dictionary specific to the potential needs of these target user groups.

Bola Ige (2003), a Yoruba leader, former Attorney-General of the federation and Minister of Justice of Nigeria, praised the dictionary in the foreword for its novelty and comprehensiveness. He further remarked that he did not know of any Yoruba or Nigerian author who had compiled a dictionary with such a broad scope since the publication of Abraham's *Dictionary of Modern Yoruba* (1958), which was written by a foreigner. Despite a lack of detailed academic review, Fakinlede's dictionary is widely considered a masterpiece. The closest approximation to a review that can be found on it are comments from verified purchasers on online bookselling platforms. The author of this thesis has

therefore decided to undertake the task of reviewing this widely acclaimed work using academic dictionary review criteria (see section 3).

## 3. Dictionary criticism

Dictionary criticism, also known as dictionary reviewing and review, is a subset of dictionary research that examines the design features of dictionaries being evaluated (Swanepoel, 2017). Dictionary criticism is an important part of dictionary research because it helps to check, among other things, the quality and effectiveness of dictionaries in meeting the needs of dictionary users. Gouws (2017) argues that because lexicographers have a responsibility to society as compilers of lexicographic products which the users consider to be authoritative utility tools, in carrying out dictionary criticism, dictionary critics have the responsibility of evaluating the works of lexicographers to determine whether they have fulfilled their duty. Wiegand (1993) crucially points out that it is crucial to recognise that criticism can include both positive and negative evaluations of a particular piece of work, not just negative feedback. Also, the process of reviewing a dictionary ought to provide input for the development and creation of new editions of the same dictionary (Nielsen 2009). When it comes to dictionaries with previous editions, a dictionary review can play a crucial role in identifying enhancements as well as any deterioration in the dictionary's quality. Thus, one can deduce that dictionary criticism aims to examine and identify both the positive and negative aspects of a dictionary, ascertain whether lexicographers produce dictionaries that meet the needs of their target users, determine whether newer editions of dictionaries are better than their older editions, and make recommendations for the improvement of dictionaries.

Although one can clearly see the usefulness of dictionary criticism, its status has not always corresponded to its relevance. Gouws (2017) proposes that criticisms and reviews are a crucial aspect of scientific writing and hold great significance in academic conversation, thus analysing a scientific publication in a scientific manner should be recognised as a complete scientific pursuit on its own. Some of the factors contributing to the low ranking of dictionary reviews have been identified. According to Nielsen (2009), the reason why dictionary reviews receive low recognition in academic discussions is

because the analysis, description, and evaluation of dictionaries in reviews lack a consistent set of theoretical and methodological guidelines. Furthermore, Swanepoel (2017) points out that reviews frequently fail to provide readers with insight into the design of the dictionary, often serving as mere repetitions of promotional content created by publishers or their representatives. Additionally, he maintains that reviews tend to lack evaluations of the dictionaries being reviewed and fail to disclose the criteria used by reviewers in their assessments.

The search for all-inclusive evaluation criteria has been a difficult one. Some evaluation criteria have been found to be one-sided, for example, a checklist of evaluation criteria for dictionary criticism was thought by Nielsen (2009) to be "too linguistic" (as cited in Swanepoel, 2017, p.82). The problem with such evaluation criteria is that they tend to be overly focused on some aspects of the dictionary while neglecting other areas. However, Akasu (2013) opines that it is actually unattainable to establish a universal set of evaluation criteria applicable to all types of reviews. If a universal set of evaluation criteria is deemed impossible, reviewers should instead develop and utilise evaluation criteria that align closely with their objectives, as well as the needs and interests of potential readers of their reviews.

As for how to review dictionaries, scholars have made propositions on how to approach the issue. Gouws (2017) argues that the primary objective of dictionary review should not only be focused on quantitative aspects, such as the number of words included, but should also prioritise the qualitative assessment of how well the dictionary reflects the lexicographer's responsibility in providing accurate language, valid subject field data, and ensuring appropriate semantic-pragmatic interpretation. In other words, a dictionary review should be reflective of quantitative and qualitative information. Ripfel (1989), as referenced in Swanepoel (2017), outlines four essential components that an academic review should encompass, which are: providing a description of the design features of the reviewed dictionary, evaluating these design features, substantiating evaluations by referring to the underlying theories and methods, and presenting a definitive conclusion, whether positive, negative, or mixed, about the reviewed dictionary. With the aid of

Ripfel's proposition, one can achieve a reliable review, which combines a descriptive and evaluative approach.

In light of the above recommendations, in order to review the YMPD, this thesis adopts a descriptive and evaluative approach, as well as providing quantitative and qualitative information. For the scope of what should be reviewed, the thesis will draw on Hütsch's (2017) breakdown of areas that should be reviewed in general bilingual dictionaries. She bases her recommendations on a case study of the critical analysis of fifty expert reviews of bilingual dictionaries. In a dictionary review, she distinguishes between lexicographical and methodological aspects. The lexicographical aspects include the macrostructure, the microstructure, the mediostructure, the frame structure and the typographical presentation, while the methodological aspects consist of a comparison of the dictionary with similar bilingual dictionaries, a presentation of usage problems, and an overall assessment of the dictionary. The evaluative part is based on Svensen's (2009) recommended method for evaluating dictionaries. Svensen's (2009, pp.484-485) so-called "desktop method" lists some guidelines for a dictionary reviewer. The guidelines include:

● Familiarising yourself with the dictionary by reading its preface and user's guide.

● Exploring the dictionary by browsing various dictionary article types and examining the additional content provided at the back.

● Evaluating both the outer and inner selection of the dictionary's content, considering how well it aligns with its intended function(s) and target audience.

● Randomly choosing a diverse set of dictionary articles in terms of size, content, and structure, while conducting spot checks to assess the treatment of different data types throughout the dictionary.

● Giving careful consideration to the structure of the dictionary, encompassing elements such as microstructure, macrostructure, access structure, and the efficacy of cross-references.

● Comparing the design of similar dictionaries in the market to the one being reviewed, if possible.

- Evaluating the findings from the analysis and providing a comprehensive assessment of the dictionary, with a particular emphasis on its ability to fulfil its intended functions.

While both Hütsch's (2017) and Svensen's (2009) recommendations have some overlapping elements, the combination of the two complements the areas that one does not cover. Furthermore, Svensen's (2009) step-by-step guidelines provide the reviewer with a practical aid that can easily be reflected upon from time to time during the course of the review.

In light of this, I propose the following criteria, which combine the evaluation of lexicographic and methodological aspects (cf. Hütsch, 2017), for the evaluation of the YMPD. The evaluation criteria (see Table 1) are formulated as questions and arranged thematically similarly to Kemmer (2010) and will be completed with the corresponding assessment (section 6).

| Lexico-graphic aspect | Evaluation criteria | Assess-ment |
|---|---|---|
| Macro-structure | Are the lemma selection criteria provided? | |
| | Does the dictionary offer a broad vocabulary (macro-structural breadth of coverage)? | |
| | Does the scope of lemma selection align with the (potential) needs of the target users? | |
| | Is the lemma ordering presented in a clear and consistent way? | |
| Micro-structure | Does the dictionary offer a wide range of content in individual dictionary articles? | |
| | Are items presented in a consistent way? | |
| | Are structural indicators presented in a consistent way? | |

| | | Do the article structure and type of microstructure facilitate information retrieval? | |
|---|---|---|---|
| | Medio-structure | Does the dictionary make use of internal cross-reference addresses? | |
| | | Does the dictionary make use of external cross-reference addresses? | |
| | | Does the dictionary make use of dictionary external cross-reference addresses? | |
| | Frame structure | Does the dictionary provide outer texts? (what types) | |
| | | Does the dictionary provide outer texts instructions for use? | |
| | | Is the user's guide comprehensive? | |
| | Typo-graphical presentation | Is the text in the dictionary lucid and legible? | |
| | | is the text free of typographical errors? | |
| | | Does the layout support easy readability? | |

Table 1: Evaluation criteria

## 4. Lexicographical aspects of the *Yoruba Modern Practical Dictionary*

As discussed in Chapter 2, based on Hütsch's (2017) recommendation of areas that should be reviewed in general bilingual dictionaries, the lexicographical aspects of the YMPD will be reviewed under the following sections:

● Macrostructure: Lemma selection, lemma gaps, lemma ordering

● Microstructure: Type of microstructure, article structure and data categories

● Mediostructure: Use of cross-references

● Frame structure: Front and back matter

● Typographical presentation: Typography and page layout

I propose a descriptive and evaluative approach to this analysis (cf. section 3; Svénsen, 2009).

## 4.1  Macrostructure

In the words of Svensén (2009, p. 368), "the term macrostructure is used to denote the relationships between the lemmas included in a certain lemma list." He further affirms that the purpose of the macrostructure is to assist users in finding the specific lemma they are looking for.

In the criticism of the macrostructure of a dictionary, Hütsch (2017) recommends reviewing the scope of the macrostructure — including checking the lemma selection, identifying lemma gaps and cross checking the number of lemmas by using representative extrapolations — as well as evaluating the method of arrangement presented in the macrostructure. The following criticism of the macrostructure applies these recommendations.

### 4.1.1 Lemma selection

The process of selecting lemmas and the decision about which lemmas to include in a dictionary are important methodological steps because they have a direct bearing on which articles will eventually be compiled in a dictionary. The lemma selection in a dictionary should align with its intended functions — for example text reception or text production — and type, ensuring that words relevant to the intended language usage are adequately represented within the dictionary (Gouws & Prinsloo, 2005). Also, the language skills of the users should be taken into consideration so that the dictionary is tailored to the linguistic needs of the users.

This is also a challenging endeavour, and consequently, it is unlikely for any dictionary to encompass every word in a language. Although, in online dictionaries, such an achievement may seem feasible, print dictionaries face limitations due to spatial constraints. Moreover, incorporating new editions of the dictionary would incur additional expenses. One way in which a lexicographer might approach this problem is by defining the scope of the dictionary and clearly identifying the target user group. This would help the lexicographer to narrow down the areas and topics that need to be covered

in the dictionary, and to maximise resources and attention to produce a thorough and well-compiled dictionary that actually meets the needs of its target users, rather than trying to cover every area of a language without being able to cater for them adequately, resulting in some poorly treated lemmas, or omitting or excluding some lemmas that might be sought by certain dictionary users or user groups.

In the preface to the YMPD, the author, Fakinlede (2003) explains the purpose of the dictionary, which can be summarised in three ways.

i.   It aims to provide non-Yoruba speakers who have a reasonable grasp of the English language with an introduction to the Yoruba language.

ii.  It enables authors to write Yoruba language books for students in primary, secondary, and higher education institutions, catering for students' needs in the digital era.

iii. Yoruba students, who have a limited grasp of the English language, will find it beneficial in their English studies.

It can be inferred that the dictionary is addressed to English-speaking learners of Yoruba, Yoruba students who are learning or want to improve their English, and writers who want to write for Yoruba students. For the authors, two things are worth noting with regard to the lemma selection in this dictionary. Firstly, given the objective of assisting in the creation of books for students at different educational levels (primary, secondary, and tertiary), the dictionary should encompass a broad spectrum of vocabulary, ranging from basic to advanced, including technical and specialised terminology. Secondly, to meet their needs in the digital age, a dictionary that reflects society's technological progress is expected. This is especially important because the mainstream of new vocabulary related to technology or the Internet is in English, and this requires translation into Yoruba and other Nigerian languages.

Although the dictionary advertises on its back cover that it contains over 26,000 dictionary articles, in order to evaluate the scope of the dictionary, one can apply Svensen's (2009) proposition of randomly selecting a diverse set of dictionary articles in terms of size, content and structure. After conducting different random searches in the dictionary, one could observe the extensive scope of the lemmas included in the

dictionary, covering several fields, and there are noticeable differences in the levels of difficulty to which these articles would belong in the lexicon of a language. An example of this can be found under the letter N, as shown in Figure 7.
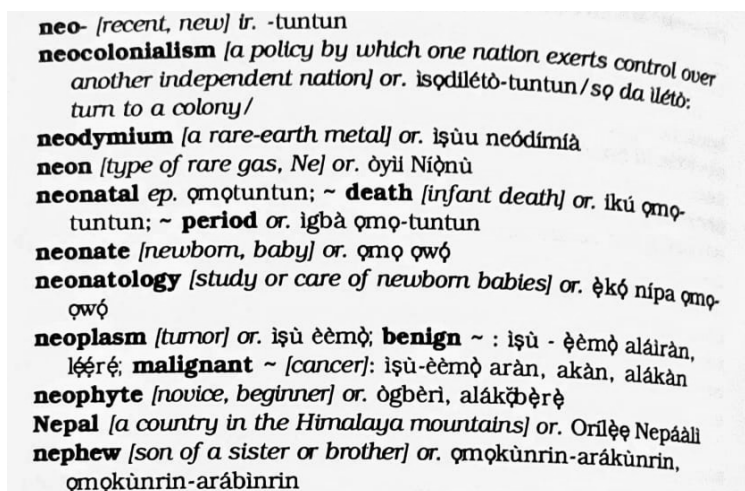


Figure 7:  *neo - nephew* in YMPD

The excerpt begins with the lemma *neo-*, which is a prefix that can be used to form compound words, followed by *neocolonialism*, which can be used as a sociopolitical term. The chemical elements *neodymium* and *neon* come next. The subject changes at the next lemmas *neonate* and *neonatology*, which pertain to infants, while *neoplasm* refers to an illness, *neophyte* to a person, *Nepal* to a country and *nephew* to a familial relation. Within these eleven articles, six distinct semantic fields become apparent: politics, chemistry, health, geography, persons, and family relations. This observation partially reflects the expansive scope of the dictionary. Furthermore, a noticeable disparity emerges in the difficulty levels and technicality of the lemmas. For instance, *neoplasm*, a technical term from the field of medicine, could be perceived as more challenging than a country name like *Nepal*. Moreover, while lemmas pertaining to family relations, such as *nephew*, commonly appear in Yoruba bilingual dictionaries such as the *Dictionary of Modern Yoruba*, chemical elements and countries are rarely included. Nevertheless, considering that this dictionary caters for students at secondary and tertiary levels, the inclusion of chemical elements becomes relevant and useful.

In contrast, if one looks up the lemma *neon* in *A Dictionary of the Yoruba Language* (see Figure 8), not only is the lemma not found, but it is also obvious that potential lemma

candidates *neo-*, *neocolonialism*, *neodymium*, *neon*, *neonatal*, *neonate*, *neonatology*, *neoplasm*, *neophyte*, and *Nepal*, which are lemmatised in the YMPD, are not included in the lemma list of *A Dictionary of the Yoruba Language*. This attests to the wider scope that is covered by the YMPD, in line with its aim of serving primary, secondary and tertiary students, as well as language learners and authors.

**Neigh,** *v.i.* yán bi ẹṣin. *n.* yiyán.
**Neighbour,** *n.* aládũgbò.
**Neighbourhood,** *n.* adugbò, ìlú, sakáni, gbẹ́gbẹlẹ̀.
**Neighbourly,** *adj.* bi aládũgbò, bi ti òrẹ́.
**Neither,** *conj.* bẹ̀ni, kì.
**Nephew,** *n.* ọmọ arákunrin tabi arábinrin ti o jẹ ọkunrin.

Figure 8:  *Neigh - Nephew* in *A Dictionary of the Yoruba Language*

### 4.1.2 Lemma gaps

To identify any gaps in lemmas, Hütsch (2017) suggests a systematic approach of comparing the occurrence of lemmas in the dictionary with newspaper text corpora or the lemma sections of a monolingual reference dictionary. However, since there is a lack of monolingual Yoruba dictionaries, the comparison was conducted using a monolingual English dictionary. The *Cambridge Advanced Learner's Dictionary* was chosen because it is a monolingual English reference dictionary and also addressed to learners, who constitute a part of the target user of the YMPD. to time limitations, this method was combined with Svensén's (2009) method of randomly selecting different sets of dictionary articles. After comparing the lemma lists, it was found out that in the YMPD missing several articles are missing. These include: *ablution*, *accentuate*, *addendum*, *bludgeon*, *Bluetooth*, *breech*, *earmark*, *earring*, *effrontery*, *intensive*, *intelligible*, *interface*, *the internet*, *lieutenant*, *line-up*, *paw*, *PC*, *PDF, redact*, and *redeploy*. These missing articles were identified through the comparison process, as explained above.

Upon a quick review of the listed lemmas, it becomes evident that some lemmas related to digital media stand out, such as *Bluetooth*, *interface*, *the internet*, *PC*, and *PDF*. One plausible explanation could be that the YMPD was originally published in 2003, prior to

the widespread adoption of some of these terms. However, it is worth noting that the dictionary had its seventh printing in 2021, which suggests that either no revisions have been made or they have not adequately addressed these digital-related lemmas. Considering the stated aim of assisting students and other users in navigating language difficulties in the digital era, it becomes apparent that there is a need for regular updates and improvements to the dictionary in order for it to remain relevant and useful for fulfilling its aim.

The lemma selection criteria and process for the YMPD are not explicitly disclosed by the dictionary publishers. As Kemmer (2010) notes, the use of corpora in compiling dictionaries has become standard practice, and it is generally expected that dictionaries be based on lexicographic evidence from one or more corpora. However, the specific corpus and criteria used for lemma selection in this dictionary are not specified. Unfortunately for dictionary reviewers, dictionary publishers do not always disclose their database and lemma selection criteria. In an effort to gain more information about the lemma selection process and criteria, the author of this thesis reached out to the publishing house, Hippocrene Book Inc. to establish contact with Dr. Kayode J. Fakinlede, the author of the YMPD. This was done with the intention of directly inquiring about the lemma selection process and criteria. The company has assured the author that the request will be forwarded to Dr. Fakinlede. However, at the time of writing this chapter, the request has not been granted.

### 4.1.3 Number of lemmas

In establishing the total number of lemmas in a dictionary, Hütsch (2017) proposes that the dictionary reviewer should not simply copy the number provided in the dictionary publisher's data, rather, it is recommended to verify the number of lemmas through representative extrapolations. Since it is impractical to read or count every lemma in the dictionary before making a judgement, Mann and Schierholz (2014) discuss three quantitative methods of analysis and estimation that can be used, which are summarised as follows:

i. In smaller dictionary volumes, the lemmas are counted across 30 pages, and in the larger ones across 50 pages. For each letter, either one or two arbitrary pages were counted. Further restrictions of both arbitrariness were: if two pages were counted per letter, the pages to be counted could not be in one with a range of prefixes. All counted lemmas were arithmetically averaged, the average was multiplied by the number of pages and the result was rounded down or up to one thousand.

ii. Another method is to count a certain lemma section (e.g. section I) and then extrapolate how many lemmas are contained in the dictionary on the basis of the known ratio of the individual lemma sections to each other. On the basis of the number determined in this way, a judgement can be made about the coverage of the vocabulary worked on in the dictionary relative to a basic group of a language/variety - which is assumed to be known.

iii. A possible and systematic method of evaluation is to include the first dictionary article on every 20th page in the sample to be analysed, starting on page 2. The procedure should then be repeated, starting on page 12. In this way, two equally large samples are obtained, so that all the analyses that result can be tested for their reliability using an equally large data set. This procedure can also be adapted to the extrapolation of the lemma number or similar tasks.

These quantitative methods provide a means to estimate the total number of lemmas in a dictionary without requiring a complete reading or counting of all articles. Among the three quantitative methods mentioned, the first method is chosen for estimating the total number of lemmas in the dictionary. This decision is arbitrary, but it serves the purpose (see Table 2). For this method, 30 pages are selected for both the English-Yoruba section and the Yoruba-English section. It is important to note that when selecting pages, where two pages are counted per letter, those with a range of prefixes will be excluded. For the English-Yoruba section, the selected pages where two pages are counted per letter are: a, b, c, and m, while for the Yoruba-English section, they are: a, b, i, gb, and t. The number of lemmas on these pages will be counted, and the average will be calculated. This average will then be multiplied by the number of pages for each respective section. Finally, the result will be rounded down or up to the nearest thousand.

| S/N | Letter | Page number | Number of lemmas |
|---|---|---|---|
| 1 | a | 42 | 30 |
| 2 | a | 50 | 36 |
| 3 | b | 70 | 35 |
| 4 | b | 87 | 27 |
| 5 | c | 116 | 24 |
| 6 | c | 122 | 32 |
| 7 | d | 131 | 30 |
| 8 | e | 149 | 25 |
| 9 | f | 165 | 34 |
| 10 | g | 178 | 33 |
| 11 | h | 195 | 26 |
| 12 | i | 209 | 28 |
| 13 | j | 222 | 33 |
| 14 | k | 226 | 29 |
| 15 | l | 232 | 25 |
| 16 | m | 252 | 27 |
| 17 | m | 253 | 29 |
| 18 | n | 272 | 28 |
| 19 | o | 286 | 29 |
| 20 | p | 323 | 26 |
| 21 | q | 338 | 26 |
| 22 | r | 347 | 24 |
| 23 | s | 371 | 29 |
| 24 | t | 432 | 25 |

| 25 | u | 443 | 25 |
| 26 | v | 450 | 27 |
| 27 | w | 464 | 26 |
| 28 | x | 466 | 26 |
| 29 | y | 468 | 31 |
| 30 | z | 469 | 29 |
| **Total** | | | **854** |

Table 2:  *Number of lemmas on selected pages in the English-Yoruba section*

To calculate the average number of lemmas per page in the English-Yoruba section, the total number of lemmas from the selected pages (854) is divided by the number of selected pages (30). This yields an average of **28.46** lemmas per page.

Additionally, it is noted that the English-Yoruba section starts on page 37 at letter *a* and ends on page 469 at letter *z*, encompassing a total of 433 pages. Multiplying the 433 pages by the average of 28.46 lemmas per page results in a total of approximately 12,323.18 lemmas. Rounding this figure down to the nearest thousand, the estimated total number of lemmas for the English-Yoruba section is **12,000** lemmas.

| S/N | Letter | Page number | Number of lemmas |
|---|---|---|---|
| 1 | a | 474 | 34 |
| 2 | a | 476 | 26 |
| 3 | b | 507 | 31 |
| 4 | b | 509 | 30 |
| 5 | d | 516 | 32 |
| 6 | e | 517 | 34 |
| 7 | e | 523 | 30 |
| 8 | ẹ | 529 | 26 |

| 9 | f | 540 | 27 |
|---|---|---|---|
| 10 | g | 545 | 32 |
| 11 | gb | 548 | 29 |
| 12 | gb | 550 | 31 |
| 13 | h | 551 | 33 |
| 14 | i | 553 | 24 |
| 15 | i | 554 | 33 |
| 16 | j | 585 | 32 |
| 17 | k | 591 | 34 |
| 18 | l | 596 | 30 |
| 19 | m | 602 | 36 |
| 20 | n | 605 | 35 |
| 21 | o | 607 | 33 |
| 22 | ọ | 626 | 35 |
| 23 | p | 637 | 37 |
| 24 | r | 643 | 32 |
| 25 | s | 648 | 32 |
| 26 | ṣ | 651 | 34 |
| 27 | t | 655 | 36 |
| 28 | t | 656 | 31 |
| 29 | w | 659 | 32 |
| 30 | y | 660 | 27 |
| **Total** | | | **948** |

Table 3: *Number of lemmas on selected pages in the Yoruba- English section*

Applying the same method used for the English-Yoruba section, the average number of lemmas per page in the Yoruba-English section is determined (see Table 3). The total

number of lemmas from the selected pages (948) is divided by the number of selected pages (30), resulting in an average of **31.6** lemmas per page. Considering the Yoruba-English section, which starts on page 473 at letter *a* and ends on page 661 at letter *y*[6], there are a total of 229 pages. Multiplying the 229 pages by the average of 31.6 lemmas per page gives a total of 7,236.4 lemmas. To simplify, this figure can be rounded down to the nearest thousand, resulting in an estimated **7,000** lemmas for the Yoruba-English section.

When the estimated number of lemmas in the English-Yoruba section (12,323.18) and the Yoruba-English section (7,236.4) are added together, the total is 19,559.58. Rounding this figure up to the nearest thousand gives an estimated total of **20,000** lemmas. However, this estimated total is still significantly lower than the advertised number of 26,000 lemmas mentioned on the back cover of the dictionary.

A notable observation is the substantial disparity in size between the English-Yoruba and Yoruba-English sections. The extrapolations indicate that the English-Yoruba section contains over 12,000 lemmas, while the Yoruba-English section is estimated to have around 7,000 lemmas. This shows that the English-Yoruba section is almost twice as large as the Yoruba-English section. Without access to the lemma selection criteria (as discussed in section 3.1.2), it is difficult to draw definitive conclusions regarding the reasons for this discrepancy. However, one could assume that it may indicate that the author focused more attention on the English-Yoruba section.

### 4.1.4 Lemma ordering

Gouws and Prinsloo (2005) argue that dictionary users typically do not critically evaluate the ordering of lemmas as long as they can easily locate the desired lemma within the expected section of the dictionary. However, it is not a given that dictionary users will find the desired lemma where they expect it. Lexicographers must carefully consider and make decisions on the macrostructure of a dictionary to ensure a smooth consultation process for users. Haas (1962, p.48) describes a good dictionary as "one in which you can find the information you are looking for – preferably in the very first place you look." This highlights the importance of users being able to quickly and easily find the lemma

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[6] Y is the final letter of the Yoruba alphabet.

they are looking up, without the hassle of first having to check several parts of the dictionary before arriving at the intended lemma. The practicality and user-friendliness of the macrostructure are important. The practicality and user-friendliness of the macrostructure play a significant role. Hütsch (2017) suggests that when reviewing the macrostructure of a bilingual dictionary, it is crucial to evaluate the arrangement of lemmas in accordance with the user instructions. This evaluation should consider whether the method of arrangement presented in the user instructions contributes to the findability of compounds or multi-word units.

### 3.1.4.1 User Instruction

The user guide or user instruction is a very useful tool for dictionary users to optimally benefit from a dictionary. The user guide typically contains instructions and explanations from the author(s) of a dictionary, in order to improve the user experience. The user guide covers various aspects, such as the lemma ordering, the use of abbreviations, the meaning of symbols or colours, and more. Gouws and Prinsloo (2005, p.39) emphasise that "User-friendliness does not only relate to the central text but also to the front and back matter of the dictionary, especially the user's guide." It is the responsibility of modern lexicographers to ensure clarity in the user guide, enabling users to easily find the desired lemma(s) in the dictionary, so that their dictionary is truly user-friendly. Nevertheless, Domínguez et al (2013) find via a survey that users often do not read introductory texts in dictionaries. Svénsen (2009) proposes however, that to tackle this the section should be visually distinguished from the rest of the dictionary, either by printing them on coloured paper or utilising a coloured strip along the outer edges of the pages.

In the YMPD, information about the macrostructure is found within the *Introduction* section in the front matter of the dictionary. In its presentation, it is mixed with other types of information including information about spelling and symbols, so one has to read through the entire introduction to access it. It can be summarised as follows:

i. The dictionary presents its lemmas in bold font and organises them in alphabetical order.

ii. The English-Yoruba section (Part A) is ordered alphabetically in English, while the Yoruba-English section (Part B) follows the standard Yoruba alphabet.

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iii. The word *láti* which roughly translates to the English word *to* is not used before lemmatised infinitive verbs.

The user instructions in the YMPD guide users in efficiently identifying lemmas through the use of typographical features, such as bold font, which distinguishes the lemmas. The alphabetical order is also highlighted as the basis for lemma arrangement. Additionally, the instructions inform users that when the infinitive form of a verb is lemmatised, it will appear without the word *láti*. This decision by the lexicographer is crucial to prevent an imbalance in the distribution of verbs across the dictionary. Otherwise, all infinitive forms of verbs would occur under the letter *L*. By providing this information, users are equipped with the knowledge to avoid wasting time searching for infinitive verbs under the wrong section.

However, while the inclusion of these instructions is beneficial, this user guide does not provide comprehensive macrostructural guidance. About lemma ordering, it only states that the ordering is alphabetical in the respective languages. It lacks further explanations or specific details about the applied alphabetical ordering technique that is used for listing compound words and multi-word units, such as nesting. Take for instance the treatment of compound nouns, as shown under the lemma *oil* (see Figure 9), where several compound words that can be formed with **oil** are listed along with their translation equivalents.

> **oftentimes** *[ofttimes, often, frequently]* as. ọ̀pọ̀lọ́pọ̀-ìgbà
> **ogle** *[to view with side glances]* is. láti ṣojú sí (obìnrin)
> **oil** *[any of the various, unctious, combustible substances obtained from animal, vegetable and mineral sources]* or. epo; **butterfat** ~: epo òrí; **castor** ~: epo-láàrà; **cocoa butter** ~: epo-kòkó; **corn** ~: epo àgbàdo; **cottonseed** ~: epo kérèwú; **linseed** ~: epo ògbọ̀; **palm** ~: epo ọ̀pẹ; **palm kernel** ~: epo èkùrọ́; **peanut** ~: epo ẹ̀pà, òróró; **rapeseed** ~: epo ìrapé; **soybean** ~: epo sóyà; **tallow** ~: epo ara-ẹran; **whale** ~: epo ara-àbùùbùtán; ~ *[to lubricate; to supply with oil]* is. láti fi epo sí (nkan), láti tọ́ epo sí (nkan)

Figure 9: A section of the macrostructure under letter *o* in YMPD

A naive user who may have only been informed that the lemma list is ordered alphabetically might look up the lemma *castor oil* under the letter *C,* when they do not find it listed there, they may assume that the lemma is not included in the dictionary. To

improve the macrostructural instruction of the dictionary, it would be beneficial to provide more detailed explanations in the user guide. This could include clarifying the specific alphabetical ordering techniques used, providing guidance on the treatment of compound nouns, and addressing any other unique features or considerations that users should be aware of.

Besides, for the Yoruba-English, a desirable kind of information would be what role tone plays in the alphabetic ordering if it does play any role at all. A curious user might wonder if there is a consistent sequence or pattern for ordering homonyms by tone, if the order is random, or/and if the dictionary users have to figure it out for themselves. For example, information on how the lemmas, *oye* (title), *oyè* (amount), and *òye* (knowledge) would be arranged within the lemma list is worth including in the user guide because there are numerous instances of such homonyms in the Yoruba language and the lexicographer should be mindful to treat them in a deliberately consistent way.

Finally, for ease of retrieval, information about the macrostructure should be clearly separated from other types of information and not mixed together. In *A Dictionary of the Yoruba Language*, the explanation of the macrostructure is included in the general introduction and mixed with details relating to other aspects of the dictionary. However, if users have difficulty looking up some of the lemmas in the central list and refer back to the user's guide, it would be easier for them to find the type of information they are looking for in easily identifiable segments or under an easily identifiable heading, such as "How to Look Up a Word" or whatever the lexicographer deems suitable, rather than having to read the entire introductory text to find the same information.

### 4.1.4.2 Types of lemma ordering

Svensén (2009) distinguishes between two main types of macrostructure: systematic macrostructure and alphabetical macrostructure. He explains that systematic macrostructure in specialised dictionaries involves organising concepts into thematic groups and conceptual systems, with each lemma being assigned a unique label to determine its position within the macrostructure, and that systematic macrostructure is commonly found in technical dictionaries and specialised dictionaries such as thesauri. It

is a less common type of macrostructure. It can otherwise be called thematic ordering (cf. Gouws & Prinsloo, 2005).

Alphabetical macrostructure, on the other hand, is, as the name suggests, a macrostructure that is sorted in an alphabetical order. It relies on the collection of characters (graphemes) that make up the alphabet of the entry language in the dictionary (Svénsen, 2009). For example, the characters *ẹ, gb, ọ*, and *ṣ* are considered distinct letters of the Yoruba alphabet and have their own sections in the macrostructure of Yoruba dictionaries. Svénsen (2009) distinguishes between a strict alphabetical macrostructure and a non-strict alphabetical macrostructure. He describes the former as a macrostructure that arranges all the lemmas based on the access alphabet, and the latter as a macrostructure that deviates from strict alphabetical order, and is typically combined with grouping. In this type of macrostructure, a group of lemmas within an entry block is called a nest, and the process of creating nests is known as nesting. This is the type of macrostructure used in the YMPD. Figure 10 shows an example of a non-strict alphabetical macrostructure in the dictionary.

òmìméjì: simultaneous equation *(see* agbo ọ̀mì*)*
ọmọ *[ọmọ] n.* offspring, progeny, baby; ~ **adìẹ** *[òròmọndìẹ]*: chicken; ~ **adúláwọ̀**: an African; ~ **àgádágodo**: key to a padlock; ~ **àgùntàn**: lamb; ~ **àgbàbọ́** *[~ àgbàtọ́ ]*: foster child; ~ **àìpọ́jọ́** *[ọmọ àìgbó]*: premature infant, preterm infant; ~ **ajá**: puppy; ~ **aládé**: prince, princess; ~ **aláìlóbí**: orphan; ~ **àlè̀**: bastard; child born out of wedlock; ~ **aráyé** *[ọmọ adámọ̀, ọmọ ènìyàn, ènìyàn]*: human, human being, homo sapiens; ~ **ìléèwé**: schoolchild; ~ **ọba**: prince or princess; ~ **ọmú**: suckling; ~ **ọwọ́** *[ìkókó, ọmọtuntun]*: newborn, neonate, baby
ọmọbíbí *n.* childbirth; *person's child*

Figure 10: A section of the macrostructure under the letter *ọ* in YMPD

The alphabetical order can be observed in the sequence of the lemmas *ọ̀mìméjì, ọmọ*, and *ọmọbíbí*. However, a deviation from the strict alphabetical order occurs in the sublemmas under *ọmọ*. This is well illustrated by the last sublemma in the nest, *ọmọ ọmú*, which is then followed by *ọmọbíbí*, because in a strict-alphabetical macrostructure, *ọmọbíbí* would precede *ọmọ ọmú*. Furthermore, the sublemmas in the nest are morphologically related, being compounds formed with *ọmọ*. As a method of managing space in print dictionaries, the stem *ọmọ* is replaced by a tilde "~". Also, the sublemmas are ordered alphabetically.

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The lexicographer's choice of nesting in the macrostructure is advantageous for several reasons. It groups morphologically related words together. This may expose a curious dictionary user to other compounds related to the lemma they are looking up, which they may find useful. It is also space efficient. Instead of listing each sub-lemma vertically, grouping them in a cluster saves space in the dictionary. The alphabetical order of the sublemmas also makes it easier for the dictionary user to search.

Hütsch (2017) suggests that when evaluating lemma arrangement, the user guide should be taken into account in order to check whether the method of arrangement presented there contributes to the findability of compounds or multi-word units, for example. As discussed in Section 3.4.1.1, the user guide indicates that lemmas are arranged alphabetically in the dictionary. However, no specific reference was made to compounds or multi-word units. In the previous paragraph, it was shown that sublemmas, i.e. compounds, appear alphabetically in the dictionary. Nevertheless, two instances of non-alphabetically ordered nesting are found in Figure 11. Firstly, *iye t'ààrín* appears before *èèkàa t'ààrín*, i.e., here *i* comes before *e*. Similarly, *ààrín ọpọlọ* occurs before *ààrín oṣù-kan ọmọ-titun*. In the same way, a sublemma beginning with *ọ* occurs before one beginning with *o,* even though the letter *o* comes before *ọ* in the Yoruba alphabet.

**ààrín** /*ààrín: inter-, mid, median, meddle* / *n.* center, middle; (lá * àrín*/*ní ~*] *adv. in the middle*); **iye t'~**: median value; **èèkàa t'~**: median number; **~ etí** *n.* middle ear, tympanic cavity; **~ igbà**: interval *(time elapsed between two occurrences)*; **~ ọpọlọ**: midbrain, mesencephalon; **~ oṣù-kan ọmọ-titun** *n.* neonatal period

Figure 11: Example of non-alphabetical ordering in YMPD

If the macrostructure is to genuinely guide the user to find a lemma they want to look up, the ordering should be clear and consistent because the consistency of the macrostructure enables the user to assuredly consult the dictionary, knowing where and how to locate a lemma. If a lemma is not found at the expected location, based on the ordering system disclosed in the user's guide by the lexicographer, users should be able to safely conclude that the lemma is not included in the central list. It is crucial for users to trust the ordering in the dictionary while searching for a lemma, as any lack of trust can hinder their ability to access desired data and utilise the dictionary effectively.

The user guide in the YMPD does not address the question of whether tones play a role in the ordering of homonymous lemmas. However, upon closer examination of selected examples, the answer becomes apparent. Table 4 presents five randomly selected monosyllabic examples of homonymous lemmas with tonal differences, arranged in the order in which they are lemmatised in the dictionary.

| 1 | bà (to land) | bẹ́ (to puncture) | jẹ̀ (to graze) | jó (to burn) | lè (can) |
|---|---|---|---|---|---|
| 2 | bá (to encounter) | bẹ (to peel) | jẹ (to eat) | jo (to force-feed) | le (to be tough) |
| 3 | ba (to hide) | bẹ̀ (to apologise) | jẹ́ (to be called) | jò (to leak) | lé (to remain) |

Table 4: A selection of monosyllabic lemmas according to their order in the macrostructure.

In each example, the three tones — high, indicated by the acute accent as in á, mid indicated by lack of an accent, and low indicated by the grave accent as in à — are represented. The first lemmatised form in the examples is either a high or low tone, the second lemmatised form is mostly the form with the tone (with the exception of *bá*), while the third lemmatised form could be high, low or mid. The rather mixed occurrence of the tones in the first, second and third positions suggests that tones do not play a role in the ordering of the lemmas. Consequently, it may be not necessary to include this information in the user guide.However, including it could help address the curiosity of users who may have doubts. Finally, it is also worth considering whether a lexicographer should adopt a consistent pattern for ordering tones in the treatment of homonyms, in order to achieve a sort of uniformity in the presentation of homonyms in the macrostructure.

## 4.2 Microstructure

According to Gouws and Prinsloo (2005), a typical dictionary article contains two main components: a macrostructural element that serves as a lemma, and several microstructural entries that are presented alongside the lemma as constituents of the lemma treatment. They argue that in order to ensure user-friendliness in a well-structured

dictionary, microstructural entries should be organised systematically, allowing knowledgeable users to anticipate the types of information and their locations within an article based on their familiarity with the dictionary's system and presentation of data. This alludes to the structure and consistency of the articles used in a dictionary. The individual entries within a dictionary article should help the dictionary user to retrieve information from the dictionary with ease and be consistent with the aim or purpose of the dictionary. In examining the microstructure of the YMPD, the type of microstructure (4.2.1), article structure and data categories (4.2.2) are analysed.

### 4.2.1 Type of Microstructure

While metalexicographic studies have developed models for various microstructures, not all of these models are applicable to general dictionaries. However, lexicographers face a choice between two main types of microstructures, integrated and non-integrated, when planning a new dictionary (Gouws & Prinsloo, 2005). One way to describe a microstructure is by analysing the position of illustrative examples within it.

In a bilingual dictionary, Svénsen (2009) states that an article is structured with an integrated microstructure when each translated example is assigned to a specific meaning or sense of the lemma. In an integrated microstructure, there is a notable spatial closeness between the position of a cotext or context entry (cf. Domínguez & Gouws, 2023) and its corresponding translation equivalent in the dictionary article (Gouws & Prinsloo, 2005). This closeness is best illustrated in polysemous lemmas, where multiple senses are present and the organisation of cotexts or context entries becomes evident. In treating polysemous lemmas, illustrative examples that serve as cotext or context entries are sorted immediately after the translation equivalent they contextualise.

On the other hand, in an unintegrated microstructure, the cotext or context entries are not positioned right after their respective translation equivalents. Instead, different subcomments on semantics are typically grouped together in a text block, followed by a separate text block containing contextual entries (Gouws & Prinsloo, 2005). Additionally, Svénsen (2009) identifies a third type, which is a partially integrated microstructure. He explains that Some dictionaries adopt a middle-ground approach by assigning clear cotext and context entries to appropriate senses of the lemma, while gathering additional cotext

and context entries that cannot be easily assigned to a specific sense into a separate section, often labeled with headings such as *phraseology* or *phrases*.

Overall, the choice of microstructure in a dictionary has implications for the organisation and presentation of illustrative examples, particularly in relation to their spatial proximity to the corresponding translation equivalents and the sorting of entries within the article.

**bear** *[disseminate]* is. láti jíhìn; láti ṣèròhìn; ~ *[to give birth to]* is. láti bí (ọmọ); ~ *[to produce, to yield]* is. láti so (èso); ~ *[to contain]* is. láti gba (nkan); ~ *[to suffer, endure]* is. láti farada (ìjìyà)

Figure 12: *bear* in the YMPD

Figure 12 depicts the polysemous dictionary article for the word *bear* in the YMPD. The article covers five senses: to disseminate, to give birth to, to produce/yield, to contain, and to suffer/endure. However, there is no indication of cotexts or contexts that provide illustrative examples of how the lemma is used. Upon cross-checking twenty other polysemous lemmas[7], no occurrence of illustrative examples was found in the English-Yoruba section of the dictionary. The selected lemmas include *apparatus*, *bank*, *bomb*, *sing*, *side*, *needle*, *letter*, *copper*, *right*, *double*, *entry*, *style*, *skirt*, *front*, *focus*, *spend*, *habit*, *home*, and *leaf*. As a result of this absence of cotext and context entries, it is impossible to categorize the microstructure of these articles into any of the three types discussed above.

However, in the Yoruba-English section, some examples were found. Figure 13 illustrates the polysemous lemma *gba* under three senses, followed respectively by an item providing an example and an item providing the translation of the example. This structure aligns with the integrated microstructure.

**gba** (nkan) *v.t.* to receive something, to accept; Títí ~ ọrẹ̀ mi: Títí accepted my gift; ~ (ibì kan) *v.t.* to envelope, to take over (a place); omí ~ ilé: water took over the house; ~: to require (time for completion); iṣẹ́ yĩ á gba ọdún kan: this job will require one year to complete;

Figure 13: The article *gba* in the YMPD

Adopting an integrated microstructure in a dictionary offers advantages for users, as it allows for easy and efficient access to items giving examples and their equivalents. By placing these items directly after the corresponding sense, users can compare the sense

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[7] Selected from Javed, Ahmed (n.d.) Polysemic words.
https://englopedia.com/polysemic-words-with-examples-and-detail/ retrieved on 26.06.2023.

and the example side by side without the need to read through the entire dictionary article to locate the examples. Also, this reduces the risk of users losing track of the relevant sense they had previously read and eliminates the need for a back-and-forth reading sequence, which could occur with a non-integrated microstructure.

### 4.2.2 Article structure and data categories

The structure of a dictionary article consists of two main components: a comment on form and a comment on semantics, with the lemma serving as the guiding element (Gouws & Prinsloo, 2005). Within each article, there are two types of entries: items and structural indicators. For clarity, *entry* as used here denotes each individual component in a dictionary article. Gouws and Prinsloo (2005) differentiate between two types of entries; items and structural indicators.

Structural indicators assist dictionary users in perceiving and understanding the article structure by highlighting relevant excerpts that aid in identifying, differentiating, and systematically locating information, thereby enabling users to find the desired information more efficiently (Wiegand, 1989; Engelberg & Lemnitzer, 2009). An example is the bold typeface used in indicating the lemma sign *listen* in Figure 14. Engelberg and Lemnitzer further distinguish between typographic and non-typographic structural indicators. They explain that typographic structural indicators are used to highlight specific text segments through variations in font or font style, while non-typographic structural indicators encompass non-linguistic symbols and commentary-language symbols that contribute to organising and structuring dictionary articles.

On the other hand, items in a dictionary are the individual entries that provide information relevant to the specific subject matter of the dictionary (Gouws & Prinsloo, 2005), such as the paraphrase of meaning *a form of prayer* to the lemma *litany* (see Figure 14). In the case of a bilingual dictionary, the subject matter would be the general lexicon of the source language, and the treatment of the lemmata would encompass various types of data such as translation equivalents, pronunciation, and morphology. Each entry that presents data representing one of these categories is considered an item.

All the different data categories within the microstructure — which will be discussed below — fall under either the comment on form or the comment on semantics. In the YMPD, a diverse range of articles has been selected to effectively highlight the respective data categories being discussed. The treatment of different data categories within the microstructure will be examined under the comment on form (4.2.2.1) and the comment on semantics (4.2.2.2).

## 4.2.2.1 The comment on form

### 4.2.2.1.1 Orthography

Dictionary users often consult the dictionary, among other reasons, to confirm or verify their own hypothesis — as confirmed in Müller-Spitzer et al. (2019) — which can include what they consider to be the standard spelling of a word. To do this, they check the form lemmatised by the lexicographer, i.e. the lemma sign. The inclusion of the lemma sign in the comment on the form is essential, as it provides information about the spelling of the unit being treated.

> **listen** *[hear, hark] is.* láti fetísílẹ̀
> **listless** *[lacking interest] ep.* aláìfarabalẹ̀
> **litany** *[a form of prayer] or.* lítáánì

Figure 14: The articles *listen, listless* and *litany* in the YMPD

In the YMPD, the lemma sign is represented by boldface type font, as shown in Figure 14 for the dictionary articles of *listen*, *listless*, and *litany*. This practice applies similarly to the Yoruba-English section of the dictionary. However, some peculiarities are observed.

> **kàn-nga** *[kọ̀-nga] n.* well
> **kàn-nkàn** *n.* Porifera, sponge
> **kápá** *v.t.* to have power over (someone)

Figure 15: *kàn-nga*, *kàn-nkàn*, and *kápá* in the YMPD

Figure 15 shows the lemma *kàn-nga*, which means *a well* in English. The lemma sign is followed by an entry giving an alternative spelling of the lemma enclosed in italicised square brackets. This is noteworthy because the introduction to the dictionary explains that italicised square brackets contain synonyms or a short definition to show what sense the lemma has when translated. This indicates a different use for the italic square brackets

than the one mentioned in the introduction or in the user's guide. Some other similar examples in this dictionary are:

    **ehín** *[eyín]* n. tooth

    **kán-ún** *[kán-wún]* n. potassium

    **ìmàle** *[ìmọ̀le]* n. Muslim

Due to the diversity of Yoruba dialects across Yoruba-speaking communities, it is not uncommon to find different spelling variations for the same lemma and this is reflected in the dictionary (see examples above), such as *ehín* and *eyín*. However, in the dictionary's introduction, the author explains how he intends to approach the issue of orthography (Fankinlede, 2003, p. 9).

> "Many words in the Yoruba language have more than one acceptable spelling. I have, however, tried to use only one in the hope that, with time, it can gain currency as a standard form and gradually help in eliminating the tonal signs."

He clearly expresses his aim to help create a homogeneous standard orthography where there have been discrepancies by adopting a single spelling in the dictionary. It could be argued that providing alternative spellings next to the lemma sign when the intention is to use only one form and eliminate alternatives is, quite simply, counterproductive. A more effective option would be to adopt one spelling and exclude the alternatives from the dictionary. However, the question of adopting one spelling variety raises the question of the criteria for including one spelling variety and excluding others; this applies both to cases where double spelling varieties are proposed and to single spelling forms. This information is unfortunately not available in the dictionary for the purposes of this review.

The following examples in Figure 16 show how different compound words built from the same root/stem are lemmatised but how their orthography differs in the dictionary. All three lemmas are formed from the stem *ojú*. All three compounds are noun-noun constructions. However, in the orthography suggested by the dictionary, the first and third compounds, i.e. *ojú àgbàrá* and *ojú àlá*, are written with a space in between, whereas

*ojú-ayé* is hyphenated. The dictionary does not explain when to hyphenate and when not to.

**ojú àgbàrá** *n.* gutter, path made by a flow of water after a rain
**ojú-agbo** *n.* center of a crowd
**ojú àlá** *n.* period in which a dream takes place

Figure 16: *ojú àgbàrá, ojú-ayé* and *ojú àlá* in the YMPD

There are other similar examples where hyphenation is irregularly applied to similarly formed compounds. These include:

**ojú-ọjọ́** *n.* weather

**ojú ọ̀run** *n. sky*

**ọmọ ọba** *n.* prince, princess

**ọmọ-ọmọ** *n.* grandchild

A final point is that the lemmatisation of contractible verb-noun combinations is inconsistent. Contraction is a common phenomenon in the Yoruba language and is reflected in the YMPD. However, the inconsistent way in which it is treated in terms of orthography in the dictionary should be highlighted. Consider the following example in Figure 17.

**júbà** */jẹ́ ìbà/ v.* to acknowledge the superiority of; to pay respect
to

Figure 17: *júbà* in the YMPD

There, the lemma sign *júbà,* is derived from the contraction of the verb *jé* and the noun *ìbà,* — as indicated by the following slashes //, — and the contraction is adopted as the recommended orthography. However, Figure 18 shows the opposite treatment of such a contraction. The verb *dá* and the noun *àrà,* are lemmatised as *dá àrà,* while it is also indicated that they can be contracted to form *darà.*

**dá àrà** *[darà] v.i.* to invent (*àrà:* an invention)

Figure 18: *dá àrà* in the YMPD

The use of the forward slash in the YMPD, as observed from Figure 17 and subsequent examples, is not explicitly addressed in the user's guide. This lack of explanation leaves users to interpret its application based on speculative assumptions. However, based on the

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examples provided, it appears that the forward slash is used to indicate word formations, specifically the full form of a contracted lemma. Similarly, the italicized square brackets, as seen in Figure 18, seem to serve the opposite function in this situation. They may be used to indicate the contracted form of the lemma. Here are other examples of lemmatised verb-noun contractions and non-lemmatised verb-noun contractions.

  **kéèwì** /ké ìwì/ *v.i.* to recite a poem…

  **dúpẹ́** /dá ọpẹ́/ *v.i.* to be thankful…

In line with the goal of achieving a homogeneous orthography for the Yoruba language, as mentioned by the author of this dictionary in the introduction, an inconsistent approach to lemmatisation - such as providing different spelling variants and lemmatising a mixture of contracted and uncontracted verb forms - as observed above, is unlikely to result in a homogeneous orthography. Instead, it could create doubt and uncertainty in the minds of language learners about when and whether to use one form or the other. On the contrary, a more consistent approach to lemmatisation and orthography is more likely to yield a homogenous result and can help language learners confidently use the language without doubts or uncertainties.

**4.2.2.1.2 Pronunciation**

Dictionary users consult dictionaries for pronunciation information, which falls under the comment on form as it pertains to the sound form of lexical items, with the typical treatment emphasising phonetic representation and stress pattern (Gouws & Prinsloo, 2005). Items giving pronunciation are a common feature in bilingual dictionaries as they provide language learners and other dictionary users with support on how lemmas are articulated.

However, in the English-Yoruba section of the YMPD, pronunciation information for English lemmas is not provided in the microstructure. Additionally, the front matter of the dictionary does not address or explain the issue of pronunciation for English lemmas. Among the three target user groups discussed in section 3.1.1, Yoruba students with a limited understanding of the English language, who consult the dictionary to complement their English studies, are most likely in need of instruction on the pronunciation of English lemmas. The absence of phonetic items for English lemmas means that users

interested in the pronunciation of English lemmas will have to consult another reference work, such as a monolingual learner's dictionary, for that purpose.

However, in the Yoruba-English section, while there is no dedicated item providing phonetic information or a pronunciation guide within the microstructure, the dictionary does provide information about tonal pronunciation in the lemma sign. This is highly instructive because users who are unfamiliar with a given lemma may struggle with its pronunciation due to the fact that each syllable can be pronounced with at least three distinct tones. An incorrect tonal assignment could lead to the realisation or vocalisation of a different word with a similar orthography but a different meaning, or the production of a completely unintelligible word. Figure 19 illustrates an example of four homonymous words differentiated only by their tones. The inclusion of tonal information helps dictionary users discern meaning in text reception situations and express themselves correctly in text production situations.

òwò̀ n. respect, honor (Ẹ̀ni-òwò̀ Adéṣidà: Honorable Adeṣida)
òwó̩ n. subspecies, race; group; ~ ẹran: herd of animals; ~ ẹyẹ: flock of birds; ~ :series; ~ èèkà: number series; ~ èèkà-olóòkà: finite series
ọwò̩ [òṣùṣù-ọwọ̀, ìgbálè̩] n. broom
ọwó̩ n. hand (àtẹ́lẹwọ́: palm of the hand; ọrùn-ọwọ́: wrist); ~ ọ̀tún: right hand; ~ ọ̀tún lílò: dextrality, right-handedness; ~ òsì [ọwọ́ àlàáfíà]: left hand; ~ òsì lílò: sinistrality, left-handedness; ~ ríro̩: withered hand

Figure 19: Four homonymous lemmas with tonal marks in the YMPD

Nonetheless, considering that one of the target user groups of the dictionary, as mentioned in the front matter, is non-Yoruba speakers, one might question whether tonal information alone is sufficient for learners of Yoruba to achieve the correct pronunciation of desired words. Additional assistance for pronunciation, however, can be found in the front matter of the dictionary. Under a section titled *Letters and Tones*, the author explains the Yoruba alphabet, Yoruba consonants and vowel sounds, and highlights the peculiar nature of nasal vowels and the consonant sounds /k͡p/ and /g͡b/, which have no equivalents in English and often pose difficulties for learners. The author also justifies the omission of tonal signs on the nasal vowels *m* and *n*, stating that including tonal signs on them adds complexity to writing the language, while their absence does not significantly impact pronunciation or word meanings in cases where they could potentially be used.

Indeed, the absence of additional items providing pronunciation of lemmas, other than the lemma sign itself, can be compensated for by the explanations provided in the front matter. However, in comparison to other bilingual dictionaries of different languages such as the *Collins Spanish Dictionary*, *Pons Kompaktwörterbuch Spanisch*, and many others, one can argue that additional phonetic items, such as phonetic transcriptions, could be included alongside the existing phonetic information in the lemma sign. For Yoruba dictionaries, this would involve indicating tones, while for English dictionaries, it could involve stress and syllabification using hyphens. This criticism is not unique to the YMPD, as Yoruba dictionaries often provide only tonal markings as phonetic items in the microstructure to guide users in pronunciation. It is worth considering in newer dictionaries, both in print and electronic formats, whether alternative orthographic transcriptions, the International Phonetic Alphabet (IPA), and/or playable audio files, where applicable, would better serve the needs of users.

### 4.2.2.1.3 Morphological data

Some dictionaries include morphological data in the treatment of lemmas. For nouns, this may involve providing an item for the plural form(s) and the diminutive form, while for verbs, it may include items showing different conjugation forms. In the English-Yoruba section of the YMPD, examples of the inclusion of morphological data can be found in pluralisation and word formation. However, in this section of the dictionary, it is challenging to find examples of items giving the singular or plural form of a lemma. However, one example was found, as well as instances of items providing the root of a lemma.

Figure 20 illustrates an example of the lemma *phalanges*, followed by the typographical structural indicator *sing.* and the singular form of the lemma in italicised parentheses. This is a rare case where morphological information was provided regarding the word's form in terms of number. Ironically, it is the plural form of the word that is lemmatised, while the singular form is provided additionally.

**phalanges** *(sing. phalanx) [digital bones of hand] or.* eegun ika ọwọ́, eegun ika ẹsẹ̀;

Figure 20: The article *phalanges* in the YMPD

It is worth noting that the noun *phalanx* adheres to an irregular plural formation pattern. Upon examining the English-Yoruba section of the YMPD, the lack of plural or singular forms of nouns for lemmas within the microstructure becomes apparent. To further investigate whether this type of morphological information is predominantly provided for irregular nouns such as *phalanx,* a selection of 44[8] irregular nouns was examined in the dictionary.

> **fungi** *[plural of fungus] or.* àwọn alára-osun
> **lice** *[plural of louse] or.* iná-orí, iná-ara
> **louse** *[..., sing. of lice]* or. iná ara, iná orí

Out of the 44 articles, only two of them, *lice*/*louse* and *fungi*, include the relevant morphological information. The scarcity of included irregular forms raises questions about the criteria for inclusion or exclusion. Additionally, considering that the dictionary is aimed at language learners as well, the omission of irregular pluralisation is a deficiency as language learners often require this type of information.

In the case of the lemma that includes an item giving the root of the lemma, Figure 21 presents the article for *dermatitis*, along with the word root *derm-* and its translation equivalent in Yoruba. The typographical structural indicator *ir.* is appropriately marked, indicating *irìn ọ̀rọ̀*, meaning *root* in English.



**dermatitis** /derm- ir. iwo-ara-/ [inflammation of the skin] or. iwọ̀-ara wíwú

Figure 21: The article *dermatitis* in the YMPD

The abbreviation of typological structural indicators is explained in the front matter of the dictionary, providing users with a clear understanding of their meaning. In the Yoruba-English section, similar inclusion of morphological data can be observed, as demonstrated in the dictionary article for *àbọ̀-ọ̀rọ̀* in Figure 22. This article indicates that "àbọ̀-ọ̀rọ̀" is formed with the root *àbọ̀*, which can be translated as *incomplete* in English.

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[8] Collected from Grammarly: *Irregular Plural Nouns—Learn Patterns to Remember the Tricky Ones* https://www.grammarly.com/blog/irregular-plural-nouns/, retrieved on 28.06.2023

**àbọ̀-ọ̀rọ̀** /àbọ̀: incomplete/ n. phrase (ọ́rọ̀: sentence ẹ̀ka-ọ̀rọ̀: word)

Figure 22: The article *àbọ̀-ọ̀rọ̀* in the YMPD

The inclusion of word roots allows users to decipher compounds that they may not be familiar with and that are not listed in the lemma list. It also enables the target users; students, language learners and writers to attempt their own compound constructions. Although not part of the dictionary's target group, translators may also find this useful in their work.

In the Yoruba-English section, morphological data related to word formation from contractions can also be found, as discussed with examples in section 3.2.2.1.1. However, including plural forms in the microstructure for Yoruba is redundant because plural formation in Yoruba does not involve a change in the lemma form. Plurals are formed by placing *àwọn* (some) in front of the nouns to be pluralised. For example, combining *àwọn* with *ọmọ* (child) yields *àwọn ọmọ*, meaning *children*.

### 4.2.2.1.4 Part of speech

Dictionary users frequently refer to dictionaries to confirm the part of speech of a word indicated by the lemma sign, and lexicographers must provide a clear indication of how extensively they present part of speech information in the planning of their dictionaries, taking into account factors such as dictionary type, data distribution structure, functions, users, situations of use, and the nature of the language being treated (Gouws & Prinsloo, 2005). The part of speech helps the dictionary user to know in what way a word can be used in text production. For example, the lemma *set* in English can function as a noun, a transitive verb, and an intransitive verb. The way parts of speech are presented in a dictionary should be one that is relatable to the users and easy to understand.

Table 5 presents in a tabular form the parts of speech that are presented in the YMPD.

| English-Yoruba Section | | Yoruba-English | |
|---|---|---|---|
| **Abbrevia-tion** | **Part of speech** | **Abbrevia-tion** | **Part of speech** |

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| ak. | àkópọ̀ | conj. | conjunction |
|---|---|---|---|
| ap. | àpèlé | pr. | pronoun |
| as. | àṣelé | adv. | adverb |
| ep. | ẹ̀pọ́n | adj. | adjective |
| ip. | ipò | prep. | preposition |
| is. | ìṣe | v. | verb |
| – | – | v.i. | verb intransitive |
| – | – | v.t. | verb transitive |
| iy. | ìyanu | interj. | interjection |
| or. | orúkọ | n. | noun |

Table 5: Parts of speech in YMPD

In this dictionary, different parts of speech and their abbreviations are presented in both languages. In the English-Yoruba section, the parts of speech are listed in Yoruba, while in the Yoruba-English section, they are listed in English. While this might seem like a given, since users who consult the Yoruba-English section would be assumed to be those whose L1 is English, and vice versa, earlier Yoruba dictionaries such as *A Dictionary of the Yoruba Language* presented the parts of speech in English in both the English-Yoruba and Yoruba-English sections. In this regard, the YMPD presents the part of speech in the L1 of the user in a text reception situation, which contributes to ease of use and faster retrieval of information.

However, the table reveals that the dictionary does not make any distinction between transitive and intransitive verbs in English. All English verbs are equally identified as *ìṣe* or *is*. The reason for this is unclear, and this differentiation between the transitivity and intransitivity of verbs is a vital piece of information for language learners, which has somehow been omitted in the YMPD.

**4.2.2.2 Comments on Semantics**

Of all data types to be found in a dictionary, dictionary research shows that dictionaries are primarily sought for semantic data more frequently than any other type of data (Gouws & Prinsloo, 2005). This shows that most users consult dictionaries to uncover the meanings of unfamiliar or challenging lexical items. In a bilingual dictionary, this information is typically found in the translation equivalent of the lemma in the dictionary's target language. Also, user studies show that in bilingual dictionaries, translation equivalents are most frequently looked up in both directions (cf. Domínguez et al., 2017; Domínguez & Valcárcel, 2015).

Translation equivalents are the most frequently looked up in both directions

However, there are other types of semantic items that can be included in a dictionary. As listed by Engelberg and Lemitzer (2009), common types include items giving meaning, items giving synonym, items giving antonym, items indicating polysemy, items giving illustration (picture or video file), and items giving a translation equivalent. They also classify items giving examples and items giving collocations as types of syntactic-semantic items. The type of semantic items to be included in a dictionary depends on the type of dictionary and the intended user group. In the context of the microstructure of the YMPD, the following items are identified and discussed: items giving meaning, items giving synonym, items giving a translation equivalent, items indicating polysemy, items giving examples and items giving collocations.

**4.2.2.2.1 Items giving paraphrase of meaning and items giving synonyms.**

In contrast to monolingual dictionaries that typically provide paraphrases of meaning, bilingual dictionaries are known for presenting translation equivalents. However, in the English-Yoruba section of the YMPD, there is a distinctive treatment of the lemma that includes items providing paraphrases of meaning for the lemma or a synonym in the source language.

**overpayment** *[amount paid more than proper amount]* or. àsanlé
(owó)
**overplay** *[exaggerate]* is. láti bùmọ́ (ọ̀rọ̀); láti sọ àsọdùn
**overpower** *[to overcome, to subdue]* is. láti borí (ènìyàn); láti ṣẹ́gun
(ènìyàn)

Figure 23: *overpayment, overplay* and *overpower* in the YMPD

In Figure 23 of the dictionary, the treatment of the lemmas *overpayment*, *overplay*, and *overpower* is depicted. Overpayment is accompanied by a paraphrase of meaning, while *overplay* and *overpower* are provided with a synonym and two synonyms, respectively. This kind of treatment is prevalent in the English-Yoruba section of the dictionary. While such synonyms and paraphrases also occur in the Yoruba-English section, they are less frequent compared to the reverse section. The reason for this is unclear. Figure 24 displays the lemma sign *Sátidé*, followed by a paraphrase of meaning *ọjọ́kéje ọ̀ṣẹ̀*, which literally translates to *seventh day of the week*.

**Sátidé** *[ọjọ́kéje ọ̀ṣẹ̀] n. Saturday*

Figure 24: *Sátidé* in the YMPD

As stated in the introductory text of the dictionary, the items providing the meaning of the lemma serve the purpose of indicating which sense of the word is being translated. However, these meaning items, along with synonyms in the source language, enhance the versatility and functionality of the dictionary. By including the meaning of the lemma in the source language, the dictionary can be consulted as a monolingual dictionary. Since the majority of English lemmas in the dictionary are treated in this manner, it can be used as an English-English, English-Yoruba, and Yoruba-English dictionary. This offers several benefits to dictionary users. Firstly, it allows for seamless switching between bilingual and monolingual consultation, eliminating the need for multiple dictionaries. Additionally, using a single dictionary provides greater convenience and portability compared to carrying or referring to two separate dictionaries. Lastly, it can be more cost-effective for users to purchase a single dictionary that serves both as a monolingual and bilingual resource, rather than having to buy two separate dictionaries.

### 4.2.2.2.2. Translation equivalents and Polysemy

According to Gouws and Prinsloo (2005), the organisation of subcomments on semantics within the comment on semantics should adhere to a systematic approach, employing well-defined criteria to present the polysemous senses of a word in a dictionary. By meticulously selecting criteria, the dictionary user can go through multiple entries within the microstructure smoothly. Different methods can be used to present this information. For instance, Svénsen (2009) suggests using a comma to separate semantically equivalent translation equivalents in bilingual dictionaries, while a semicolon is used to differentiate between different shades of meaning. However, the lexicographer ultimately has the discretion to choose typographical and non-typographical structural indicators for the dictionary, with the goal of achieving clarity, consistency, and practicality in their application.

**object** *[purpose]* or. ìdí-pàtàkì; ~ *[a thing that can be seen or touched]* or. ohun-dídání; ohun-rírí; ~ *[noun or noun equivalent]* or. ọ̀ṣẹ́ (ọlọ́ṣẹ́: subject); ~ *[to oppose something]* is. láti ní àríyànjiyàn pẹ̀lú(nkan); láti tako(ọ̀rọ̀ kan); láti kọ(nkan)

Figure 25: *object* in the YMPD

In the YMPD, typographical structural indicators are employed in three different ways to separate translation equivalents. The first method involves using semicolons to mark the end of a sense, followed by another sense. For example, in Figure 25, the first semicolon appears after the translation equivalent *ìdí-pàtàkì*, indicating the end of the first sense. The second usage of typographical indicators is seen in using semicolons to separate semantically equal translation equivalents. Under the second sense of the lemma *[a thing that can be seen or touched]*, semicolons are used to separate the translation equivalents *ohun-dídání* and *ohun-rírí*, as well as marking the end of the second and third senses. Similarly, semicolons are used to separate translation equivalents under the fourth sense *[to oppose something]*. While there are various characters that can be used as typographical structural indicators, assigning dual functions to the semicolon in this context can create ambiguity, and hinder readability and easy data retrieval for users. In print dictionaries, where text condensation is applied and text is densely packed, using distinct typographical structural indicators is recommended.

**obesity** *[the quality of being obese]* or. ìsanrajù, sísanrajù
**obey** *[to comply with requirements]* is. láti gbà; láti gbọ́ran; láti ní
 ìtẹríba; láti tẹríba

Figure 26: *obesity* and *obey* in the YMPD

**pass** *[to succeed in an examination]* is. láti yege; láti mókè; ~ *[a
 ticket giving permission to go without charge]* or. ìwé-ìyọ̀ọ̀da; ~
**by** is. láti kọjá, ~ *[to die]* is. láti fayésílẹ̀, láti rọ̀run; láti kú; ~
*[to go by or past]* is. láti kọjá

Figure 27: *pass* in the YMPD

Figure 26 demonstrates another method of using typographical structural indicators to separate translation equivalents in the YMPD. In the article about *obesity*, the translation equivalents are separated by commas, while in the subsequent article about *obey*, semicolons are used for separation. This inconsistency is further exemplified in Figure 27, where the typographical structural indicators used to separate translation equivalents in the YMPD exhibit inconsistency. The first sense of the lemma *pass* uses semicolons to separate translation equivalents, while the end of the sense is marked by a semicolon. The second sense has only one translation equivalent, and its end is also marked by a semicolon. However, for the third sense with a single translation equivalent, the end of the sense is marked by a comma. In the fourth sense, both commas and semicolons are used to separate translation equivalents, and the end of the sense is marked by a semicolon. There is no explicit explanation for the choice of these specific typographical structural indicators (comma and semicolon), and their inconsistent and interchangeable usage in the dictionary can create ambiguity for users. To address this issue, adopting a consistent use of typographic structural indicators, such as using commas to separate semantically equal translation equivalents and semicolons for polysemy, could provide clarity. Additionally, introducing bold font with cardinal numbering to clearly indicate the start of a new sense in a dictionary entry could facilitate accessibility and sense identification for users.

### 4.2.2.3 Items giving meaning and items giving collocation

Piotrowski (2000) suggests that dictionaries typically do not provide explicit definitions for what qualifies as an example. Instead, they often group together sentences or phrases that contain the lemma being addressed, encompassing idioms and collocations that may

warrant separate treatment with additional pragmatic labelling. Examples and collocations are particularly valuable in bilingual dictionaries that aim to assist users in their text production efforts. However, the YMPD does not provide any specific information regarding its treatment of examples and collocations. As mentioned in section 3.2.1, examples are scarce in the English-Yoruba section. Nevertheless, occasional instances of collocations such as *to be in style* and t*o be out of style* can be found in the entry for *style*, along with their translations into Yoruba (see Figure 28). This offers Yoruba-speaking users insights into frequently occurring word combinations in English that may not be immediately apparent or obvious to English learners.

**style** *[way of doing something]* or. àṣà; **to be in** ~: láti wà l'áṣà;
**to be out of** ~: láti kúrò l'áṣà: ~ (flower) *[the slender
prolongation of the ovary carrying the stigma]* or. ìjẹ̀-òdòdó

Figure 28: *style* in the YMPD

The scarce occurrence of lemmas in the English-Yoruba section of the YMPD is unsatisfactory as learners could greatly benefit from their inclusion, particularly for honing their text production skills. Another example highlighting this issue is taken from the article *fond*.

**fond (to be ~ of)** *[loving] is.* láti níìfẹ́ **(**ènìyàn**)**

However, in contrast, although they are also few in number, examples do appear in the Yoruba-English section.

**bá** (nkan) **mu** *v.t.* to fit, to be complementary (to something); A bá
B mun: A is complementary to B
**bá** (ènìyàn) **mu** *v.t.* to drink with somebody *(ó bá mi jẹ, bá mi
mun: he was very friendly with me)*

Figure 29: *bá mu* in the YMPD

Figure 29 illustrates two identical lemmas, *bá (nkan) mu* and *ba (ènìyàn) mu*, which are actually collocations, i.e. phraseological combinations (Hausmann, 2004) that frequently occur together. The distinction between them lies in the former being used with a thing (*nkan*), while the latter is used with a person (*ènìyàn*). These collocated lemmas and their corresponding examples are highly valuable in helping users differentiate the usage and meanings of these specific combinations. Since these lemmas share the same orthography

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and tones, providing examples effectively demonstrates how they are used and how they can be distinguished.

The presence of more collocations and examples in the Yoruba-English section of the dictionary can be attributed to the aim of assisting authors in writing books in the Yoruba language. This focus on facilitating the work of authors explains the emphasis on collocations and examples in that particular section. Furthermore, the abundance of examples in the Yoruba-English section serves the target user group, aiding them in their writing endeavors in the Yoruba language.

## 4.3 Mediostructure

A cross-reference in a dictionary serves as an accessibility aid, guiding users to different locations within the dictionary or external sources, as mentioned by Svénsen (2009). It assists users in finding the desired information or providing additional information beyond what they have already found. It establishes connections among the knowledge components depicted in various sections of the dictionary across multiple levels of lexicographic explanation, creating a network (Wiegand, 1996). The primary function of cross-references in print dictionaries is often seen as managing the use of space, as mentioned by Engelberg and Lemnitzer (2009). Instead of duplicating information in multiple locations, references are utilised to direct users to the specific location where the desired information can be found.

In the YMPD, cross-references are scarcely used. However, two forms of cross-references can be identified: explicit cross-references and implicit cross-references, as described by Svénsen (2009). Explicit cross-references use typographic indicators, such as symbols or text, to indicate the cross-reference. An example of an explicit cross-reference is illustrated in Figure 30.

**mice** *see* mouse

Figure 30: *mice* in the YMPD

The lemma *mice* represents the plural form that uninformed users may look up, possibly unaware that the singular form "mouse" is also included as a separate lemma. In this scenario, a cross-reference is necessary because the lemma *mice* does not contain any

comments on form or semantics. Therefore, the user must follow the cross-reference and consult the cross-reference address to find the relevant information.

**mouse** *[small rodent] or.* èkúté

Figure 31: *mouse* in the YMPD

At the cross-reference address for *mouse* (see Figure 31), the comments on semantics provide a paraphrase of meaning and a translation equivalent. However, the comments on form can be criticized for lacking coherence in the reference system. According to Hütsch (2017), the information retrieved at the cross-reference address should complement each other, and in the case of *mice* and *mouse*, the relationship between these lemmas should be indicated. Currently, users who are cross-referred from *mice* to *mouse* can access information about *mouse* but remain uninformed about the meaning of *mice*. This issue can be resolved by adding an item under the comments on form, explicitly indicating that *mice* is the plural form of *mouse*.

On the other hand, implicit cross-references, do not have a specific marker and are typically embedded within an entry, either at the lemma level or within the subcomments of the dictionary article. The use of implicit and optional cross-references is beneficial for dictionary users as it allows for quick retrieval of information. While similar information may be found in different locations within the dictionary, users can find information on the lemma without being redirected or having to conduct another search for the cross-referenced lemma. It also gives users the choice to explore further information through the cross-reference at their own discretion. Below are two examples of implicit cross-references from the YMPD:

> **lice** *[plural of louse] or.* iná-orí, iná-ara
> **louse** *[crab louse, sing. of lice]* or. iná ara, iná orí

In the first example, the lemmatised form indicates that it is the plural form of another lemma, providing users with access to another form of the looked-up lemma and the possibility of finding additional information. This is an optional cross-reference since users can immediately retrieve comments on form and semantics without having to

consult the cross-reference address. In the second example, the singular form is lemmatised but with an indication that directs users to the plural form as well. Again, this is an optional cross-reference as users can access information on both forms without needing to consult the cross-reference.

Regarding the failure to appropriately use cross-referencing, Gouws and Prinsloo (2005) emphasise the importance of not missing out on valuable opportunities to employ a cross-referencing system, especially when there is potential for an effective cross-reference address. One such opportunity lies in the outside matter of a dictionary, where relevant topics are treated but without cross-references suggesting to users that they can find additional information on these topics within the dictionary. The YMPD can benefit from maximising this potential by incorporating cross-references to topics discussed in the outside matter, such as the number system, measurement, and time, among others.

## 4.4 Frame structure

The frame structure is a term used to describe the entire collection of outer texts in a dictionary, consisting of both the front matter texts located before the central list and the back matter texts located after the central list (Engelberg & Lemniter, 2009). The classification of these outer texts within a dictionary is primarily determined by their physical position, as suggested by Svénsen (2009). However, Svénsen proposes an alternative perspective that he believes offers a more productive approach by classifying the outer texts based on their functions. Thus, he categorises them as components that provide information about the object language(s), components that serve a metafunction by offering information about the dictionary itself, components that contribute to the access structure of the dictionary, and components that serve other specific functions.

i.      **Components providing information about the object language**

In the YMPD, these include various aspects such as pronunciation, morphology, orthography, and collocation, among others. Some of these components consolidate information that could have been dispersed throughout individual entries into one location, enhancing the user's experience with additional information. For instance, the

YMPD includes a section on word roots in Yoruba and English with examples and translations in the front matter, despite the roots also being lemmatized in the central list. Although the inclusion of such information is not mandatory, it can enrich the user's understanding. Specific components providing information about the object language in the YMPD encompass:

- Morphology: Sections on word roots in Yoruba and English.
- Pronunciation: Sections on Yoruba letters and tones.
- Yoruba Grammar: Sections on elisions, question types, negation, parts-of-speech, greetings, conjugations, and definitions of grammatical terms.

While these components can be highly beneficial to certain users, it appears that there is a bias towards two target user groups: English-speaking learners of Yoruba and authors who want to write in Yoruba (cf. 4.1.1). This bias is evident in the lack of corresponding information on English grammar and pronunciation, which may disadvantage Yoruba-speaking learners of English.


### ii. Components having a metafunction

These components come in the form of a preface, a description of the dictionary as a product, and/or a user's guide. Svénsen (2009) states that information on the general features of the dictionary - its purpose, intended user group, general approach, organisation, and scope - should be provided in a way that non-experts can understand. He also recommends that dictionaries include a descriptive section primarily aimed at linguists, particularly teachers, to assess the dictionary's suitability for educational use by offering a technical account of its design, approach, underlying theories, selection principles, and sources employed.

The YMPD, in its preface, offers insights into its aims, target group, and intended scope (cf. 4.1.1), with a specific emphasis on its goal to handle complex scientific and mathematical terms, which can be considered achieved. However, information about the methodology, underlying theories, and selection criteria - aspects of particular interest to lexicographers, linguists, and dictionary reviewers - is omitted.

While there is no specific section in the outside matter called a user's guide, the introductory text in the dictionary provides insights that offer some guidance and explanation about the dictionary, including lemma ordering and the use of various typographical and non-typographical structural indicators, such as boldface font for lemma signs and italicized square brackets for synonyms and definitions. However, the user guide is not comprehensive, as it fails to explain certain typographical structural indicators, such as // and ~, which are frequently used in the dictionary.

**iii.    Components being elements of the access structure of the dictionary**

Svénsen (2009) explains that dictionaries may feature an index that serves as an additional entry point, transforming them from monoaccessible to polyaccessible (cf. Bergenholtz & Gouws, 2008). In general-purpose dictionaries, the index may list idioms and word combinations, while technical dictionaries require term indices or graphical representations. Bilingual and multilingual dictionaries use indices to access lexical items in different languages. Such indices are however not used in the YMPD, hence they will not be discussed.

**iv.    Components having other functions**

As the name implies, these components can encompass various other types of content not covered by the previous classifications. They often take the form of appendices and typically contain encyclopedic information. The decision of what to include in these appendices is at the discretion of the lexicographer and the publisher. These components can cover a wide range of topics, such as cultural information, weights and measurements, or guides on writing letters or emails, among many other possibilities. Svénsen (2009) suggests that the inclusion of these appendices in dictionaries is often driven by marketing purposes, and their necessity can be a subject of debate. In the case of the YMPD, the back matter of the dictionary includes a section dedicated to science and mathematics. This section provides detailed explanations and translation equivalents for topics such as the number system, mensuration, mathematical operations, averages, and factorials. This inclusion aligns with the dictionary's aim and intended scope. The dictionary concludes with a final page that promotes another book by the author,

specifically aimed at beginners in Yoruba. Additionally, there is an advertisement for other dictionaries of African languages published by the same publishers.

## 4.5 Typographical Presentation

Hütsch (2017) recommends that the typography and page layout of a dictionary should be evaluated in terms of readability and the available orientation possibilities. To determine the typeface used in the YMPD, an excerpt of text from the dictionary was captured and uploaded to MyFont[9], a digital font distributor, for typeface detection. The platform generated a shortlist of similar-looking typefaces, including Riacho, ITC Bookman, and Roman Script Std. To further validate the findings, the article on medication in the YMPD was compared with the results from the platform, and it was confirmed that the typeface in the YMPD corresponds to the ITC Bookman typeface (see Figure 32 & 33). In the comparison, only the typeface was taken into account, not the font style, such as italics, regular, or bold, as the platform automatically generated the results with predetermined styles that could not be manually changed. Nevertheless, the differences in the typefaces could still be observed regardless of the style. ITC Bookman, the identified typeface, is clear and legible, and the chosen font sizes for headings, the central list, and outer texts contribute to a pleasant reading experience.
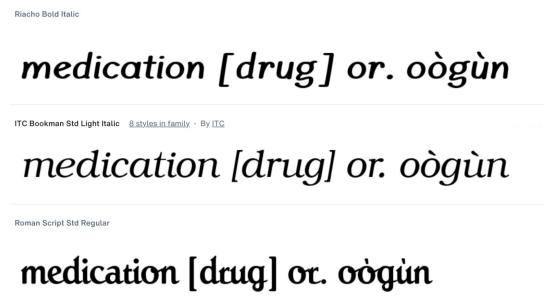
Riacho Bold Italic

*medication [drug] or. oògùn*

ITC Bookman Std Light Italic    8 styles in family · By ITC

*medication [drug] or. oògùn*

Roman Script Std Regular

medication [drug] or. oògùn

Figure 32: Typeface comparison in MyFonts

**medication** *[drug] or.* oògùn; ~ *or.* gbígba oògùn

Figure 33: Excerpt from the article *medication* in the YMPD

Notably, there is noticeable typographical differentiation of various elements in the dictionary. Lemmas and sublemmas are listed in bold, synonyms and short definitions are

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[9] Retrieved June 06, 2023, from https://www.myfonts.com/

italicised within square brackets, additional explanations are italicised within parentheses, while other types of information are presented in regular font. This typographical differentiation can aid users in quickly locating items of interest.

A few typographical errors were identified in the YMPD, which are discussed below:

i.       Erroneous spacing: In certain instances, there are occurrences of spacing within certain parts of words that are normally written together. For example, in the article *toil* (see Figure 34) in the YMPD, the second translation equivalent, *láti ṣíṣ ẹ́* [sic], appears with a space within its second lexeme. However, as indicated by the subsequent item, the lexeme is derived from the contraction of *ṣẹ́ ìṣẹ́*. Therefore, the lexeme should be written without a space to maintain consistency and accuracy.

**toil** *[to labor hard]* *is.* látì ṣe wàhálà; látì ṣíṣ ẹ̀  /ṣẹ́ iṣẹ́/; látì ṣe
        àṣekú iṣẹ́
**toilet** *[bathroom]* *or.* ilé-ìtọ̀, ilé-ìgbọns ẹ̀, ṣálá-ngá

Figure 34: The article *toil* and *toilet* in the YMPD

Likewise, the second translation equivalent *ilé-ìgbọnsẹ̀* also appears with an erroneous space before its final letter. This type of erroneous spacing can be observed in other lemmas and sublemmas such as *ìgbà-ẹ̀dà*, *ìgbà-ẹ̀rẹ̀ kan*, *ìgbà-ẹ̀rùn*, and *pectoral*. It is important to rectify these typographical errors in future editions of the dictionary to avoid users unintentionally adopting them as correct spellings.

ii.       Missing tonal accent: Kola(nut) is wrongly lemmatised in the Yoruba-English section of the dictionary as *obi* without the appropriate tonal mark. However, in the English-Yoruba section under the lemma *kola*, it is correctly marked as obì.

**obi** *n.* kolanut

Figure 35: *obi* in the YMPD

The consequence of the missing tonal mark is that users may mispronounce the lemma. However, it is an isolated case of missing accent and can be corrected in future editions.

In certain sections of the dictionary, there is an irregularity in the use of boldface type. Specifically, some characters that should be displayed in boldface appear as regular text. This issue is more prevalent in lemmas that contain special characters such as ọ, ṣ, and ẹ. Figure 36 displays a section of lemmas that are affected by this irregularity.

**ọsán** *n.* leather string for bow
**òsán** *[igbà ~] n.* daylight, afternoon
**ọsàn** *[òronbó] n.* orange; **igi** ~: orange tree
**ọsàn-wẹ́wẹ́** *n.* lime, lemon
**òsẹ̀** *n.* week *(~ kan: one week; ọjọ́-òsẹ̀: Sunday)*
**òsin** *[ohun-~, ẹran ~] n.* domestic animal
**òsọ̀òsẹ̀** *adv.* every week, weekly
**ọsẹ** *n.* soap, saponification product *(láti sọdọsẹ́: to saponify; isọdọsẹ́: saponification)*

Figure 36: Excerpt showing lemmas from *ọsàn* to *ọsẹ* in the YMPD

Another isolated example is **ìgbà ìrọyin**. While this issue may be considered purely aesthetic and does not significantly impact the user's ability to locate the lemma, it is advisable to correct it in order to maintain consistency and uniformity in the typographical presentation throughout the dictionary.

With regard to the page layout, the dictionary articles in the YMPD are presented in a single-column format with ample line spacing, which enhances readability and allows users to navigate through the dictionary with ease, similar to reading a regular book. The dictionary also uses headers to ease users into the access structure of the dictionary (see Figure 37). One header can be found on the top of each page. At the top left corner of each left-hand page in the YMPD, the first lemma of the page is prominently displayed in a large bold font.

**while**                    464

**while** *[length of time] or.* ìgbà pípẹ́ díẹ̀; ~ *[during the time that] ak.*
    nígbàtí, ní àkókò tí
**whip** *[to flog; to strike with a lash] is.* láti na (ènìyàn) lọ́rẹ́; ~ *[a flexible rod for whipping] or.* ọrẹ́, ẹgba, pàsán

Figure 37: Excerpt of a section showing the layout of the YMPD

Similarly, at the top right corner of each right-hand page, the last lemma on the page is also presented in a large bold font. This design feature serves as a helpful visual cue for users, allowing them to quickly identify the range of lemmas covered on every two-page spread of the dictionary. It assists users in locating their desired lemma more efficiently, enhancing their overall search experience.

## 5. Overall assessment and recommendations

According to Jackson (2002), academic reviews of dictionaries have the capacity to make valuable contributions to lexicographic research. Scholars in lexicography largely agree that a dictionary review should ultimately include a description of potential solutions to the issues identified during the evaluation process (cf. Swanepoel, 2017; Nielsen, 2009; Svensén, 2009). Thus, having described and evaluated different aspects of the YMPD, this review will provide a general assessment of the dictionary and make recommendations for potential improvements. It is hoped that this review can contribute positively to lexicographical practice in the Yoruba language.

The YMPD has numerous commendable and outstanding features, as well as areas that can be improved upon. The overall presentation of the text in the dictionary is legible and well-differentiated, with the application of distinct typographical and non-typographical structural indicators to facilitate information retrieval for users of the dictionary. A few typographical errors were found and addressed in Section 3.5. They should be corrected in future editions of the dictionary. Additionally, the dictionary demonstrates versatility by being able to function simultaneously as a monolingual and bilingual dictionary. Due to the inclusion of short definitions and/or synonyms in the dictionary articles of the English-Yoruba section, the dictionary can be consulted as an English-English, English-Yoruba, and Yoruba-English dictionary, making it a 3-in-1 dictionary. Furthermore, the dictionary has a comprehensive scope, as it covers over 20,000 lemmas in total. The diversity of fields from which the lemmas are collected, including science, medicine, and mathematics, as well as the inclusion of technical terms and word roots, and the extensive coverage of outer texts on Yoruba grammar, alphabet, tones, and special field vocabulary, surpasses other prominent Yoruba dictionaries, including *A Dictionary of the Yoruba language*.

However, the most notably lacking feature is information on the methodology. This includes information concerning the underlying theories used, the lemma selection criteria, the sources used, the criteria for selecting and including examples, the criteria for including or excluding plural forms, and the criteria for lemmatizing certain orthographic forms where multiple exist. Svénsen (2009) states that it is preferable for such

information to be provided for linguists and for teachers to determine the suitability of the dictionary for teaching. This information is also useful for dictionary reviewers as it gives them a valuable insight that is useful for evaluating the dictionary. For example, in analysing lemma gaps in a dictionary, the lemma selection criteria may help in understanding the justification for the exclusion of certain potential lemma candidates. It can also help to clarify any cases where inconsistent treatments appear in the dictionary. Therefore, it is recommended that information on the methodology applied in the dictionary be provided. Although the front matter of the dictionary is replete with several types of information, it has some shortcomings. The detailed information on language is overwhelmingly one-sided and focused on the Yoruba language alone. Since the dictionary is also aimed at Yoruba-speaking learners of English, including information on the English language is worth considering.

Also, the user instruction needs to be improved to make it easier for users to access and benefit from. The user's guide should be appropriately named, i.e., in a way that is easily recognisable by the user. Currently, the user's guide to the dictionary is not called a user's guide but rather an introduction. A naive user or beginner may not know to seek the user's guide under the introductory text. Furthermore, there is a need to segment the user's guide in a way that facilitates quick retrieval of information. The introductory text — which is entirely in English — is written as text bodies in paragraphs. In order to retrieve information on how to look up a lemma, for example, the user has to read stretches of paragraphs that address a range of information, not all of which is related to finding a lemma. Instead, the user's guide can be divided into segments that treat specific types of instructions, such as "How to look up a lemma," "Cross-references," "Style labels," etc. Besides, the user's guide should include and clarify the use of all symbols, i.e., the typographical structural indicators used, and they should be applied with consistency. In the YMPD, only the use of italicised square brackets and italicised parentheses are explained. However, in the dictionary, other symbols including forward slashes, tildes, colons, semicolons, and commas are used as structural indicators without explanations to the user on how to interpret them. Finally, the instructions on how to look up lemmas should be more detailed. It only says that lemmas are listed in alphabetical order. The treatment of compounds, homonymy, and tone in the lemma ordering, as well as the use

of both alphabetical and non-alphabetical nesting (as identified in section 3.1.4.2), should be included and explained in a way that a lay user can understand.

With regards to lemma treatment, some adjustments are recommended. Having discussed his intention of establishing a standardised orthography for words that have more than one spelling variant by lemmatising only one form, the author's inclusion of the spelling variants in the space for definitions and synonyms seems counterproductive because instead of making users less likely to use those spelling variants, it draws the user's attention to them. This practice should be discarded. Also, the sparse inclusion of examples and collocations is an area that should be considered for improvement. They are beneficial to users for text production purposes. Learners can also benefit from the inclusion of more plural forms, especially for irregular plural formations. For the sake of Yoruba-speaking learners of English, including items giving pronunciation such as stress markers or IPA transcriptions could be useful. As Gouws & Prinsloo (2005) suggest, lucrative opportunities to use cross-references should not be ignored. In the dictionary, cross-references are used to link lemmas that are formally related, like plural forms, albeit sparingly. They should be used more frequently and used to direct the user to the rich resources provided in the outside matter as well.

In addition to the above recommendations enumerated above, plans should be made for the retrodigisation of the dictionary. In the current lexicographic climate, online dictionaries are popular and offer their peculiar advantages over print dictionaries, including portability, absence of spatial limitations, inclusion of multimedia options, and the flexibility afforded by being usable on different types of devices.

Lastly, the assessment is summarized based on the evaluation criteria applied in this thesis (see Table 6) using the following scale: *Yes* to indicate full compliance, *No* to indicate non-compliance, and *partially* to indicate partial compliance.

| Lexico-graphic aspect | Evaluation criteria | Assess-ment |
|---|---|---|
| Macro-structure | Are the lemma selection criteria provided? | No |

| | Does the dictionary offer a broad vocabulary (macro-structural breadth of coverage)? | Yes |
|---|---|---|
| | Does the scope of lemma selection align with the (potential) needs of the target users? | Parti ally |
| | Is the lemma ordering presented in a clear and consistent way? | Parti ally |
| Micro-structure | Does the dictionary offer a wide range of content in individual dictionary articles? | Yes |
| | Are items presented in a consistent way? | Parti ally |
| | Are structural indicators presented in a consistent way? | No |
| | Do the article structure and type of microstructure facilitate information retrieval? | Parti ally |
| Medio-structure | Does the dictionary make use of internal cross-reference addresses? | No |
| | Does the dictionary make use of external cross-reference addresses? | Yes |
| | Does the dictionary make use of dictionary external cross-reference addresses? | No |
| Frame structure | Does the dictionary provide outer texts? | Yes |
| | Does the dictionary provide outer texts instructions for use? | Yes |
| | Is the user's guide comprehensive? | No |
| Typo-grapical present-ation | Is the text in the dictionary lucid and legible? | Yes |
| | Is the text free of typographical errors? | No |
| | Does the layout support easy readability? | Yes |

Table 6: Evaluation criteria and assessment

## 6. Conclusion

The journey of Yoruba standardised dictionaries began in 1843 and has seen various attempts at compilation. Fakinlede's comprehensive dictionary stands out for its inclusion of science and mathematics data, addressing a significant gap in previous dictionaries. Through an evaluative and descriptive approach together with evaluation criteria, this review has identified the dictionary's potential benefits for its intended users, as well as several shortcomings. However, there is still much room for improvement and adaptation to the demands of the digital age, considering the evolving language, culture, and society. The Yoruba lexicography field, both in practical and academic dictionaries, has a long way to go. Looking ahead, it is hoped that online Yoruba dictionaries will strive to undertake similar comprehensive projects, leveraging their advanced resources compared to when the YMPD was conceived.

Two significant challenges were faced in the course of this review. The methodology and underlying theories employed by the author remain inaccessible, posing a challenge for further research. Obtaining additional early Yoruba dictionaries, such as *A Vocabulary of the Yoruba Language* and *A Dictionary of the Yoruba Language*, for the purpose of comparison with the YMPD posed a challenge. These dictionaries are currently out of print and unavailable in nearby libraries, making it difficult to acquire them for the evaluation process.

Future research endeavours should focus on several areas. Regarding semantics, the review highlights the inclusion of examples in the dictionary, but their effectiveness has not been assessed. Conducting user studies would provide valuable insights into the dictionary's efficacy in assisting users and guiding further improvements

In conclusion, the Yoruba lexicographic landscape holds great potential for growth and development. The YMPD, along with the insights from this review, can serve as inspirations for future advancements in Yoruba lexicography. By addressing the challenges, incorporating user feedback, and conducting research in areas not explored in this review, such as evaluating the quality and effectiveness of examples and collocations in the YMPD, Yoruba dictionaries can evolve to better meet the needs of their users in the years to come.

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