

Igbo For Specific Purpose Dictionary: The Need for Further Development

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Abstract

Language for Specific Purpose (LSP) dictionaries are reference works that define a language variety used by experts and professionals in a particular subject field. They are designed for specific purpose, to satisfy the needs of a defined group of users. They enhance language development through terminology development and advancement in Education. This paper is targeted at creating awareness and sensitization on the need for more Igbo LSP dictionaries. It is focused on identifying the features of LSP dictionaries and using the identified features to evaluate eleven (11) print dictionaries of the Igbo language. The theoretical framework adopted for this study is the Substance over Form approach proposed in Nielsen (2011). It focuses on types of data that exist in different sections of a dictionary, and how they support the dictionary function. Data for the study was collected from eleven print dictionaries of the Igbo language. From the analysis of the target users, and the dictionary structures; especially the macrostructure which reveals the order and arrangement of the lemmata; and the microstructure that showcases the definition style adopted at the entries; it could be confirmed that most of the dictionaries have not been developed with a view to serving as LSP dictionaries. The only dictionary among the eleven (11) analyzed in this study that can be described as LSP is 'Igbò-Àdị' Igbo-English, English-Igbo Dictionary of Linguistic and Literary Terms by Mbah et al. (2013). Having observed the importance of LSP dictionaries for the Igbo language, this paper advocates for the development of more Igbo LSP dictionaries for experts in the various subject fields, as well as for secondary school subjects.

1. Introduction

Language for specific purpose dictionaries (henceforth to be referred to as LSP dictionaries in this work) are reference works that define or describe a language variety used by experts and professionals in a particular subject

field. They are designed for the specific purpose of satisfying the needs of a defined group of users. These dictionaries may be monolingual, bilingual or multilingual. Some authors refer to the LSP dictionaries as restricted dictionary type. The general-purpose dictionary (hence forth to be referred to as GPD in this paper) deals with the general vocabulary of a language, while the LSP dictionary is concerned with specific and precise vocabulary of the language. Singh (1982) observes that GPDs contain those words of the language which are in general use, representing various spheres of life, and presenting a complete picture of the language; while LSP dictionaries either cover a specific part of the vocabulary or are prepared for some definite purpose.

This paper is centered on LSP dictionaries. Its target is to create awareness and sensitization on the need for more Igbo LSP dictionaries. It identifies the features of LSP dictionaries; identifies LSP dictionaries in the Igbo language, analyses them with the identified features of LSP dictionaries, and draws conclusion from the findings. It is divided into four sections. Section one is the introduction; while section two is on literature review and theoretical framework. Section three is the data presentation and analysis, and section four summarizes and concludes the paper.

2. Literature Review

This section reviews related literature on the subject matter, and is divided into the following subsections: clarification of related concepts, classification of LSP dictionaries, structure of LSP dictionaries, definitions in LSP dictionaries, LSP dictionaries in African Lexicography, the theoretical framework and summary of literature review.

2.1 Clarification of Related Concepts

This subsection clarifies such related lexicographic concepts like wordlist, glossary, thesaurus, and encyclopedia, some of which can easily be confused with the LSP dictionary. A closer look at such works reveals their differences from the dictionary, hence the separate names they bear. The differences between them are found more in the type and level of

information they contain, their structures as reference works, the information categories they contain, and the manner of presentation.

Word-list - This refers to a written collection of all words derived from a particular source, or the list of words that exist in a language. Within the African context, its origin can be traced back to the collection of wordlists of the ‘new and strange languages’ within the colonial period culminating later in the Swadesh Wordlist or the later 550-wordlist of Greenberg, all of which have been not only identified but also taken into consideration in the later development of the comparative dictionary of the Western Oti/Volta languages (Naden 1993). In spite of the projected/envisioned product being called a ‘comparative dictionary’, the author still notes how the work need not be confused with a dictionary, because it is “merely a superior version of the wordlist-comparisons like those of Swadesh *et al* (1966)” (Naden 1993:174).

Such a development from a smaller to a larger and more comparative wordlist of the Igbo language has also been noted by Uchekukwu (2006), who traced the ‘tradition’ of Igbo wordlist compilation through Koelle’s *Polyglota Africana* that was imitated in Armstrong’s (1967) comparative wordlist of five Igbo dialects:

<u>English</u>	<u>Awo Idemiri</u> (Olu)	<u>Owerri</u> (ae,o)	<u>Ogini</u>	<u>Umuoji</u> (Onitsha)	<u>UkwaaIi</u>
Above	(414)	n'eIū eelū elū	n'elu	neenū	enut

Figure1. Igbo Dialects (Armstrong, 1967: 11)

Later grammar and anthropological works of the colonial linguists within the Igbo speaking region followed the same wordlist compilation method, sometimes with or without the indication of the part of speech. It is in the light of this that Ogbalu’s (1962) “dictionary” can be seen as belonging to the category of “bigger wordlist” of the Igbo language.

Generally, the tradition of wordlist compilation has witnessed gradual increase in the number of words, but without detailed enunciation

of the senses of the words compiled; at the most, a one-to-one equivalent is provided in English. Hence, all such reference works, whether a simple one page list, or the bigger list of 1000 or more words, are all referred to as wordlists. This is the main, historical sense of the term *wordlist*, which is different from the other sense that refers to the basic order in which entries in dictionaries and other reference works are sequenced. A further development from the first sense of wordlist gave rise to the glossary, which is *also* referred to as wordlist in some works.

Glossary – This is bigger than a wordlist; it is a list of terms from a particular domain of knowledge with their definitions. It can also mean the words on a diagram or map that explains the symbols used. So, glossary is not only a list of words but also symbols. Hartmann and James (2002: 63) define it as a type of reference work which lists a selection of words or phrases, or the terms in a specialized field, usually in alphabetical order, together with minimal definitions or translation equivalents. A good example of this for the Igbo language is Igboanusi and Mbah's (2017) *English-Igbo Glossary of HIV, AIDS and Ebola-Related Terms*, which is also correctly named a *glossary*. The dictionary has more content than the glossary.

Dictionary – Is a reference book that gives a list of the words of a language in alphabetical order and shows their definitions, pronunciations, parts of speech, and uses, through examples and sometimes etymologies. The dictionary provides more information on the headword, hence the availability of more information at the dictionary entries. Hartman and James (2002:41) refer to it as the most common reference work.

Thesaurus – This is a reference work that lists words in groups of synonyms and related concepts. It is also referred to as a book of words and their synonyms. The words are usually arranged in alphabetical order. Hartmann and James (2002:147) see it as a type of reference work which presents the vocabulary of a language, language variety or subject discipline by systematically tracing synonym networks between words within semantic domains.

Encyclopedia – Is a book or set of books giving information on many subjects or many aspects of one subject and typically arranged

alphabetically. It focuses on providing knowledge and information to the user; it is described as an information bank. Hartmann and James (2002: 48) define it as a type of reference work which presents factual information in a wide range of subject disciplines. This information is collected from expert consultants and arranged in a combination of systematic and alphabetical order for the benefit of the general educated reader.

The basic similarity between the dictionary and these other reference books is that their contents are arranged in alphabetical order. The glossary and wordlist show list of words and their meaning. However, while the wordlist addresses the words in a language, the glossary addresses technical jargons of a particular domain, profession or subject field. The Thesaurus provides list of words and their systematic relationships with other words, like synonyms and antonyms, while the encyclopedia is concerned with providing detailed information on different subjects.

Some of these reference books like the wordlist, glossary and thesaurus exist in the Igbo language, examples of which are: Armstrong (1967) *A comparative Wordlist of Five Igbo Dialects*; Akponye (2011) *Bilingual Dictionary of the Igbo and English Languages with Thesauruses* (it has some features of dictionary and thesaurus combined); Igboanusi and Mbah (2017) *English-Igbo Glossary of HIV, AIDS and Ebola-Related Terms*. However, this paper is concerned with LSP dictionaries. These differences are further displayed by the entry style in these reference works in figures 2, 3, and 4 with the headword ‘Doctor/Dibia’.

			ebùbere			
Do	(130)	imē	imē	mbe (imē)	imē	meme
Doctor	(125)	nwadibyè	dibyà	dibyà	+ dibyà	dibìyè
Dog	(256)	nkità	nkìtā (nkìtā)	nkìtā	nkìtā	àwa

Figure 2: Entry on Doctor in Armstrong (1967:31) – A wordlist

<p>Doctor</p>	<p>A physician or doctor is a professional who practises medicine, which is concerned with promoting, maintaining, or restoring human health through the study, diagnosis, and treatment of disease, injury, and other physical and mental impairments.</p>	<p>Dibja</p>	<p>Dibja Bèkee ma ọ bụ nke ịgbo ọka mmụta a zuru n'ogwu nke ọrụ ya gbasara nkwalite nchekwa, na ogwugwo onye ọrja site na nlele, mmata na inye ya ọgwụ ọrja, mmerụ ahụ na nkwarụ ahụ na echiche.</p>
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Figure3: Entry on Doctor/Dibià in Mbah And Igboausi (2017:88) – A glossary

Dibja afà n A diviner, mystic, psychic, telepathist
Dibja àjà n A spiritualist
Dibja anya n An optician, oculist, ophthalmologist
Dibja mgborogwu n A herbalist
Dibja n A medical doctor, physician
Dibja Odịnààlà n A native doctor
Dibja Ọgwu n A medical doctor
Dibja Qwaahụ n A surgeon

Doctor (native) Dibja Odịnààlà
Doctor (Dr.) Dọkintà (Dkt.)
Doctor (medical) Dibià Bekee

Figure 4: Entry on Dibià/Doctor in Akponye (2011:36, 343) – A Theausarus

dibià Igbo-E

dibià n [HLL] ¹doctor or medicine-man; one who prepares curative (or poisonous) medicines; ²diviner or spiritualist; one who can intercede (through divination or sacrifices) with the spirit world on behalf of clients; fortune-teller.

doctor n dibia [HLL].

Figure5: Entry on Dibià/Doctor in Echeruo (2001: 39, 203) – A GPD

2.2 Classification of LSP Dictionaries

Several authors have made different classifications of LSP dictionaries. Nielsen (1994:2-5) classifies them based on the subject fields they cover, as: multi-field LSP dictionary, single-field LSP dictionary and sub-field LSP dictionary.

The multi-field are those that cover more than one subject field, the single-field are those that cover one subject field (e.g. a dictionary of law), and the sub-field are those LSP dictionaries that cover only a part of a subject field (e.g. a dictionary of contract law). Mihindou (2004:119) views the LSP dictionaries as technical dictionaries which he further classifies into: technical and semi-technical. It is technical when it is designed with technical vocabulary of a specialized subject discipline. One of the objectives of an LSP dictionary is to satisfy and inform the experts, professionals in several specialized fields like medicine, law, banking and finance, natural science, etc, who make use of their technical and complex language and unique jargons as the most precise means of expressing ideas and communicating within their field. Again, the LSP dictionary can also be designed for semi-experts and/or the laypersons in that field in which case the vocabulary will be semi-technical. Mihindou (2004) believes that LSP dictionaries as technical dictionaries are governed by one common principle, which is to be non-ambiguous. It is important to keep in mind that a technical term should have only one logical and unambiguous meaning. This can be considered as the most precise aspect in the treatment of lexical items in LSP dictionaries (Van Schalkwyk 1987 as cited in Mihindou 2004:121).

In the proposition of Singh (1982) there are two types of LSP dictionaries, namely: dictionaries of technical terms and dictionaries of special professions. The Dictionaries of Technical Terms deal with technical terms in a language, and terminology plays the most dominant and vital role in this type of dictionaries. They are focused on special fields in life, and are often presented by special bodies and commissions formed especially for that purpose. They contain either terms peculiar to a particular subject field or general words with special meanings for special

fields. Dictionaries for Special Professions present lexical items in a particular way according to the professional jargon. A dictionary of antiques and decorative arts, a reference book for glass collectibles, a dictionary of technical terms containing definitions of commonly used expressions in aeronautics, etc can all be considered as examples of such a type of dictionary. This type of dictionary depends totally on the aspects of the language covered.

2.3 Structure of the LSP Dictionaries

The structure of the LSP dictionary is basically the same as other GPDs which include the three major structures, namely: megastructure, macrostructure and microstructure.

At the megastructure we take a brief look at the outside matter: LSP dictionaries also display frame structure just like other types of dictionaries. However, more importance is attached to certain types of information or subtexts as part of their outside matter. These include the list of subject field experts, bibliography, and illustrations. This is because, the production of LSP dictionaries require the input of subject field experts (Okeke 2020:16). The motivations behind listing subject field specialists in the front matter of an LSP dictionary and adding a list of translators for bilingual LSP dictionaries is to authenticate the dictionaries whose conceptual quality may be questioned if lexicographers do the work alone (Chabata and Nkomo 2010). The importance of bibliography is that it may provide the user of the LSP dictionary with other possible references for further consultations on specific topics. Again, the back matter of LSP dictionary, just like that of other GPDs, may include texts that provide cultural or specialized information such as tables of weights and measures, it is also specific, and depending on what area the dictionary is designed. Most back matter texts in LSP dictionaries are integrated function adhering (Gouws 2007), that is, explicitly connected with the function of the dictionary, because they advance the functions of the main text (Chabata and Nkomo 2010).

In the macrostructure, the LSP dictionaries often present their lemmata in alphabetical order like the GPDs. In GPDs the central list is

established in alphabetical order, which implies that the lemmata, sublemmata, and even article stretches are arranged from A to Z. But LSP dictionaries can present their lemmata using a different arrangement according to the purposes decided on in the data distribution programme. It can be an alphabetic, thematic, or semantic ordering. In a thematic ordering, lexical items are grouped in families. Items such as beauty, elegance and peace can be grouped in a category human being, while words such as cholera, AIDS, and malaria can be incorporated in a disease category. The semantic ordering is more often used in a synonym dictionary (Mihindou 2004:129)

Looking at the microstructure, there are two major components in any dictionary article, which are: comment on form and comment on semantics. The LSP dictionaries present less information in the entries than GPDs. This can be seen from the following example taken from *Stedman's Medical Dictionary* as cited in (Mihindou 2004:130)

- 1) **hermetic** (her-met'ik). Airtight; denoting a vessel closed or sealed in such a way that air can neither enter it nor issue from it.

In a normal GPD, this lexical item is treated differently. Apart from the phonetic markings, morphological features are included as well as grammatical information such as the part of speech as can be seen in the following definitions from *Chambers 21st Century Dictionary* in example 2.

- 2) **hermetic** /h3:'metIk/ and hermetical ▷ adj. 1 perfectly closed or sealed so as to be airtight. 2 belonging or relating to magic or alchemy. 3 obscure or abstruse.
• hermetically adverb. • hermeticity |h3:'mə'tIsItI| noun. ; 17c: named after Hermes Trismegistos, supposedly the Greek author of texts on magic and alchemy, and also the inventor of a magic seal.
Allen *et al* (1999:630)

In the *Chambers 21st Century Dictionary* (which is a GPD), the lemma *hermetic* is followed by a phonetic transcription, /hɜ:'mɛtlk/, an additional headword *hermetical* as morphological variation, indicating an optional choice offered to the user, then the symbol ▷ used to mark the principal part of speech, in this case *adj.* written in italics; it provides three senses of the word. There is also etymological information on the headword (named after Trismegistos, supposedly the Greek author of texts on magic and alchemy, and also the inventor of a magic seal). *The Stedman's Medical Dictionary* (an LSP dictionary) has no provisions for all these details.

This can also be seen in the lexical item 'occupant' as an article in *Oxford Advanced Learner's Dictionary* (a GPD) and *Black's Law Dictionary* (an LSP dictionary):

3) *Black's Law Dictionary*

Occupant (16c) 1. One who has possessory right in, or control over, certain property or premises. 2. One who acquire title by occupancy
Garner *et al* (2009:1184)

4) *Oxford Advanced Learner's Dictionary*

Occupant /'ɒ kjəpənt: *AmE*'ak-/noun (especially written) 1. a person who lives or works in a particular house, room, building, etc: *all outstanding bills will be paid by the previous occupants.* 2. a person who is in a vehicle seat, etc at a particular time: *The car was badly damaged but the occupants were unhurt.* Hornby (2000:806)

From examples 3 and 4 above *Oxford Advanced Learner's Dictionary* (a GPD) provides the phonological transcription of the headword (/ 'ɒ kjəpənt/), its part of speech (*noun*), an indication that it is written in American English (*AmE*), and gave it two senses with accompanying examples. The LSP dictionary, *Black's Law Dictionary* does not have all

those details. It only gives two professional definitions of the headword as it applies to the legal profession.

2.3 Definitions in LSP Dictionaries

Kwary (2011:64) asserts that LSP dictionary users have different competences, and these may influence the way definitions are written in LSP dictionaries. Bergenholtz and Tarp (1995:20-23) distinguish between different groups of LSP dictionary users based on two types of competences, namely: encyclopaedic (subject-field) competence and foreign language competence (for bilingual LSP dictionaries).

Under the encyclopaedic or subject-field competence, the LSP dictionary users can further be classified into experts, semi-experts and laypeople. Kwary (2011) believes that difference in the definition in various LSP dictionaries is dependent on these different classes of user groups. Bergenholtz and Nielsen (2006:300) give the following examples for the definition of the term 'gene' for two classes of users of LSP dictionaries: Layman and semi-expert. If the user is a Layman, they propose that the definition should be reflected as:

5) gene

the basic unit of inheritance which is transmitted from parents to offspring

If the user is a semi expert the definition should be presented as follows:

6) gene

a gene is a DNA sequence ending a mRNA (protein), tRNA or rRNA

Kwary (2011) who supports the same view proposes the following as definitions for the term 'common stock' in a Financial LSP dictionary for the three different classes of users:

If the user is a Layman it should read

7) common stock

A type of share in a company that gives the owner the right to receive an amount of money from the company, and the right to vote at meetings.

If the user is a semi-expert, a more expert definition may be presented as follows:

8) common stock

a type of share that gives the owner the right to receive an amount of money according to how much profit the company has made, and the right to vote at stockholders meeting.

If the user is an expert the dictionary should provide a more expert definition using technical vocabulary which is understandable by an expert as follows:

9) common stock

a type of share that gives the owner the right to a dividend and a right to vote at stockholders meeting.

Other types of definition which is based on the function of the LSP dictionary as discussed by Kwary (2011:61) are the substitutable definition and full sentence definition. Substitutable are short definitions that focus on the meaning of the word. They are suitable for text reception LSP dictionaries, while the full sentence definition is good for text production LSP dictionaries. One of the advantages of full sentence definition is the implicit ability to tell users about the structure of the word.

Mihindou (2004:124) opines that meaning and word are intimately linked but not necessarily fused. The word the lexicographer includes as lexical item in a dictionary, for instance, a dictionary of econometrics, is a sum of symbols linked together in a way to be

pronounced as one unit and interpreted in a certain way. This interpretation brings out the meaning. The process of this operation implies certain mechanisms in the mind of the user and the compiler. As a result, one word can have one, or more than one, meaning. Therefore, the lexicographer will be able to treat the lemma in an appropriate way according to the context or the co-text. He can, for instance, treat a lemma in such a way that the differentiations between denotation and connotation will be clear to the user and will indicate at the same time relations of meaning such as synonymy, antonym, hyponymy, etc.

Gouws (2000:11:87-88) asserts that not all lemmata can be defined in the same way and lexicographers rely on different types of definitions in the process of presenting comments on meaning of words. He proposes four different types of definitions that can be used in LSP dictionaries:

- a. The generally descriptive definition in which the meaning of the definiendum (the lemma) is explained by the definiens (the explanation) without any reference to the semantic relationship between the definiendum and other lexical items. Monolingual LSP dictionaries often use this category of the explanation of meaning.
- b. The genus–differentia definition which does not only provide explanations of the lemma, but also places the lemma in a class (genus) and operates by distinguishing through opposition between the lemma and other members of the class. In the context of explanations of meaning, this category is also, mostly used in monolingual LSP dictionaries.
- c. The synonym definition which gives a synonym for the lemma. This category is used in LSP dictionaries, especially in the context of translation equivalents in the target language.
- d. The circular definition which implies a very strong resemblance between the definiendum and definiens.

The use of any of the definition styles is dependent on the choice of the author (s) or initiators of the dictionary project, being guided by the intended users for whom the LSP dictionary is designed. Any of the definition style adopted would be stated in the style guide in order to achieve consistency (Atkins and Rundel 2008:118).

2.4 LSP Dictionaries in African Lexicography

Chabata and Nkomo (2010:87-88) are of the view that LSP dictionaries are the most recent types of specialized dictionaries that have emerged in African lexicography. They believe that the main motive for the production of LSP dictionaries in African Languages is terminology development. This will contribute to the promotion of these languages so that they can play more advanced roles in education and other specialized domain. However, as more lexicographic works have been done on the languages of South Africa, the works on LSP dictionaries in South Africa shall form the basis for the discussion of LSP dictionaries in Africa and a comparison with Igbo LSP dictionaries.

Some of the LSP dictionaries in South African languages have been used to address the issue of subject learning in their secondary schools. These include the *Multilingual Explanatory Science Dictionary* (MESD) and the *Multilingual Explanatory Mathematics Dictionary* (MEMD) which were developed in an attempt to address the underperformance in mathematics and science of learners in township schools for the grade 8 to 12 schools curriculums to help the students and their teachers better understand the English text in their mathematics and science curricular material. In these dictionaries the lemmas are given in English while the definition of each lemma is given in English and translated into the learners' native languages, viz. Northern Sotho (Sepedi), Tswana, Venda and Zulu. No translation equivalents are provided for the lemmas themselves with the exception of the Zulu section where some translation equivalents are indeed provided (Taljard, Prinsloo, and Fricke 2011). Other LSP dictionaries that have been compiled in the South African lexicography include: *Ndebele Dictionary of Music Terms*;

Shona Dictionary of Linguistics and Literary Terms; Xhosa Mathematics Dictionary for Schools, among others.

With regard to the Igbo language, the focus over the years has been on the development of terms in various domains, and the production of wordlists of the developed terms with their English equivalents (Ahiazuwa 2015). In the course of this development, the word “dictionary” is rarely used to describe the products of such endeavours. Some examples for the Igbo language include the *Okaasusu Igbo – Igbo Metalanguage* (Ogbalu 1985) and the later *Okaasusu Igbo – Igbo Metalanguage* Volumes one and two, edited by Emenanjo, Umeh and Ugoji (1990) but sub-titled “A Glossary of English-Igbo Technical Terms in Language, Literature and Methodology”. Also a recent work within this domain is titled *English-Igbo Glossary of HIV, AIDS and Ebola-Related Terms* (Igboanusi & Mbah 2017), which still points to the wordlist/glossary compilation stage. However, a major shift in this area is Mbah *et al*'s (2013) work titled *Igbo Adi Igbo-English, English-Igbo Dictionary of Linguistics and Literary Terms*, which boldly bears the designation “dictionary”, and not a “glossary”. This is in contrast to the earlier mentioned *English-Igbo Glossary of HIV, AIDS and Ebola-Related Terms*, which is also correctly named a *glossary* (Igboanusi and Mbah 2017), and which belongs to the category “glossary”. One can therefore safely argue that with Mbah *et al* (2013), the Igbo language has commenced the movement along the path of LSP dictionaries.

2.5 Theoretical Framework

The theoretical frameworks adopted for this study is the Substance over Form approach (henceforth to be referred to as SOF) proposed in Nielsen (2011). It focuses on identifying the type of data that actually exist in a given section of a dictionary, and provides principles for critical analysis of different sections of the dictionary. The procedures adopted within the framework include:

- A faithful presentation of the lexicographic elements of the surface features, their organization and presentation, as well as the

underlying features which include the data types and the structure presented in the dictionary.

- A focus on the type of data that actually exist in different sections of the dictionary, their access structure and presentation, and how they support the function of the dictionary.
- Analysis of the different components of the dictionary and comparison of their contents with the identified features of LSP dictionaries. The components analyzed include the megastructure, the macrostructure, and the microstructure, all of which should reveal the relation of the dictionary structure and content to the function of the dictionary.

This approach shall be adopted for the analysis of the identified features of LSP dictionaries. Data collected from the dictionaries shall be presented as they are from source without modifications.

2.6 **Summary of Literature Review**

This section first reviewed some concepts that could be confused with LSP dictionaries, followed by the classification of LSP dictionaries, and the explanation of the structure of LSP dictionaries, including the outside matter. Next was the macrostructure of LSP dictionaries and their arrangement, which may be thematic or semantic order, depending on the purposes and data distribution programme of the dictionary. At the level of the microstructure, LSP dictionaries present less information than GPDs, because information on phonetic markings, morphological features, etymology, part of speech, etc that are found in the entries of GPDs are not available in LSP dictionaries. Instead, the LSP dictionaries only provide straight forward definitions of the lemma depending on the class of the LSP dictionary. Definitions in LSP dictionaries are logical and unambiguous. They may be substitutable or full sentence definitions.

Finally, the main motive for the production of LSP dictionaries in African languages revolves around terminology development and promoting the languages so that they can play more advanced roles in education and other specialized domains.

3. Data Presentation and Analysis

The data for this study was collected from eleven (11) print dictionaries of the Igbo language. The presentation and analysis of data in this section is organized in three subsections using the SOF approach. Subsection 3.1 is focused on identifying the target users and typology of the dictionaries; this is because the target users for whom a dictionary is designed is a number one pointer to its typology. Thereafter shall follow subsection 3.2 in which the contents of the structures of the dictionaries are examined. This shall be done under the megastructure, macrostructure, and microstructure. Finally, subsection 3.3 uses the points arising from 3.1 and 3.2 to examine the dictionaries to see the extent to which they have other features of LSP dictionaries which include, list of subject field experts and technical vocabulary.

3.1 Dictionary Typology, Dictionary Function, and Target Users

The first stage of the analysis is focused on identifying the typology of each of the dictionaries, their functions, and their target users as indicated in their titles and front matter.

From the data collected from the eleven (11) print dictionaries of the Igbo language in this study, eight (8), namely: Welmers and Welmers (1968), Nnaji (1995), Igwe (1999), Eke (2001), Echeruo (2001), Akponye (2011), Williamson (2013), and Mbah (2021), are GPDs: six (6) bilingual, one (1) monolingual, and one (1) bilingual with thesaurus. Another two (2) are bilingual pedagogical dictionaries, namely: *Ọkọwaokwu Igbo Ụmụaka* by Mbanefo (2014) and *Mgbemena, et al. (2017)* sponsored by The Nigerian Educational Research and Development Council; both are designed for children and pupils at Basic Education level. There is only one (1) dictionary whose title and target users indicate that it has been designed as an LSP dictionary, the '*Ìgbò Àdị*' Igbo-English, English-Igbo Dictionary of Linguistics and Literary Terms by Mbah, et al. (2013).

Table 1 below, which is a summary of the analysis, is divided into four columns: the serial number; the dictionaries, the target users, and the typology/function. The last column, which is the classification of the dictionaries on the basis of their typology and lexicographic function, involves the consideration of the title, target users, and function as explained in the words of the dictionaries.

Table 1: Summary of the Target Users and Typology/Function of the Dictionaries

S/ N	DICTIONARY	TARGET USERS	TPOLOGY/FUNC TION
1.	Welmers/Welmers (1968):	Speakers of English who have acquired at least a minimum competence in Igbo, and who are aware of the major structural patterns of Igbo (information under purpose on page I of the dictionary).	Bilingual/GPD/Learner's Dictionary
2.	H.I. Nnaji (1995):	Candidates sitting for Igbo Language in SC/GCE Examinations and learners of Igbo language (information under preface on page iv of the dictionary).	Bilingual/GPD
3.	G.E. Igwe (1999):	Serious minded students of Igbo as well as teachers	Bilingual/GPD

		(information on page LVII of the front matter).	
4.	M.J.C. Echeruo (2001):	Learners of Igbo Language (inferred from its title and typology as a bilingual dictionary).	Bilingual/GPD
5.	J. G. Eke (2001):	Secondary and Commercial Schools, Colleges of Education, Universities and Candidates for SSCE/GCE, Masters Degree and others (information on page vi of the dictionary).	Bilingual/GPD
6.	O. Akponye (2011):	Pupils, Students, Teachers both in the high and low cadres of Education (information reflected under the preface on page iv of the dictionary).	Bilingual/GPD with Thesauruses
7.	K. Williamson (2013):	Learners of the Igbo Language - Oñnichà Igbo in particular (information under introduction on page iv, and from the title of the dictionary).	Bilingual/GPD

8.	B.M. Mbah <i>et al</i> (2013):	Teachers, students, linguistic and literary scholars (information reflected under the preface on page vi of the dictionary).	Bilingual/LSP
9	Y.C. Mbanefo (2014):	Children (and maybe adult) – (information under preface on page 6 of the dictionary).	Bilingual/ Pedagogical
10.	A.U. Mgbemena <i>et al</i> (2017):	Pupils at the Basic level of education (information under purpose of the dictionary on page iv).	Bilingual/Pedagogical
11.	B.M.O. Mbah (2021):	Native speakers of the Igbo language (inferred from the title and the typology of the dictionary).	Monolingual/GPD

3.2 The Dictionaries, Their Structures and Definition Styles

This subsection presents the contents of the different components of the dictionaries. These include their megastructure, macrostructure, microstructure, presentation style, and the definition style in their microstructure.

The Megastructure: The analysis of the megastructure, with particular reference to the outside matter, reveals that all the dictionaries have front matter. Only two, out of the eleven (11) dictionaries have well pronounced

middle matter, namely, Nnaji (1995) and Eke (2001); Williamson (2013) has a scanty middle matter. Mbanefo (2016) and Mgbemena *et al* (2017) are specially designed for children, therefore are decorated with middle matter contents in all the pages. The other five (5) dictionaries have no middle matter. Three (3), out of the eleven (11) dictionaries have back matter, namely, Echeruo (2001) has a back matter designed for a GPD, Mbah *et al* (2013) has a back matter designed for LSP dictionary, Mbanefo (2016) has a back matter which content is an advertisement for online children's material, and the other eight (8) dictionaries have no back matter information.

The Macrostructure: Analysis of the macrostructure of the dictionaries shows that nine (9) out of the eleven (11) dictionaries adopt the alphabetical order for their lemmata, one (1) which is Igbo: A Learner's Dictionary by Welmers and Welmers (1968) uses the Morphosematic order, while Igbo Ìdị Igbo-English, English-Igbo Dictionary of Linguistic and Literary Terms by Mbah *et al* (2013) uses the thematic ordering which is a style for LSP dictionaries.

The Microstructure: Analysis of the microstructure of the dictionaries, and the definition style adopted by the author(s) reveals that four (5) of the bilingual GPDs, namely Nnaji (1995), Igwe (1999), Echeruo (2001), Eke (2001), and Akponye (2011) indicate the word class of the lemmata following after headword in their entries. As bilingual dictionaries, they provide equivalent of the lemma in English at the Igbo section, and the Igbo equivalent at the English sections, or explanation of the lemma where no direct or single word equivalent is found; though there is a level of inconsistency in some of the entries.

However, Akponye (2011) has a unique entry style; it provides only word equivalents as synonyms in each entry. Echeruo also has some remarkable uniqueness, its presentation of tone mark with letters of the alphabet in an enclosed square bracket e.g [LLL) is peculiar to it alone. Igwe (1999) has its entries listed alphabetically; the base forms of a verb

are listed and with it are given its simple and gerundial infinitives. Welmers and Welmers (1968) begin its entries with root word, followed by the headword in English and Igbo and explanations on the word usage, while Williamson (2013) entries are majorly on verbs and verbal derivations in Onitsha dialect. Mbah *et al* (2013) has the lemma followed by headword equivalent and a concise explanation of the headword in English in the Igbo section and in Igbo at the English section.

Mbanefo (2013) and Mgbemena *et al* (2017) which are children's dictionaries have sentences exemplifying the use of each headword following after it, and an illustration picture for every entry in Mbanefo (2013) in particular. Mbah (2021) which is the only monolingual GPD is showing an explicit entry content for its dictionary type. The lemma is tone marked, followed by the word class of the lemma, then a transcription of the lemma, followed by an explanation or definition of the lemma, and finally an example(s) on usage of the lemma. Mbah (2021) provides a good example of Igbo GPD entries, while Mbah *et al* (2013) provides a good example of Igbo LSP dictionary entries. Examples of entries in the two dictionaries are shown in figures 6 and 7 below.

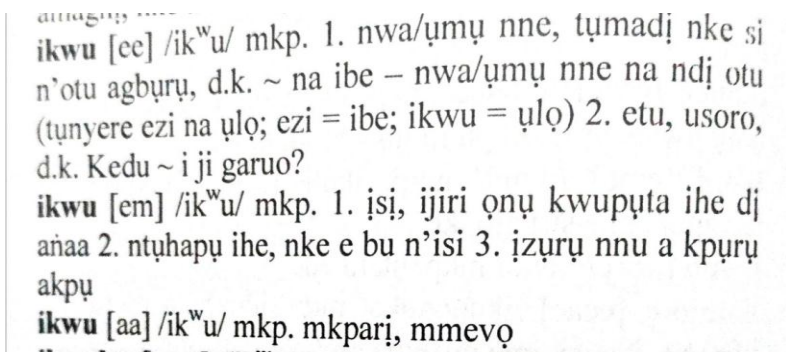


Figure 6: Entry on the Lemma 'ikwu' in Mbah (2021: 281) – A GPD

ikwu - onye ya na mmadu sitere
n'otu agburu - kin
ikwu otu oke - nwa nwa nne nne
ma o bu nwa nne nna sitere n' otu
oke - parallel cousin

Figure 7: Entry on the Lemma ‘ikwu’ in Mbah *et al* (2013:110) – An LSP dictionary

Table II: Summary of the Dictionaries, their Structures and Definition Style

S/ N	Dictiona ry	Megastructure	Macrostr ucture	Microstructure	DEFINITI ON STYLE
1.	Welmer s and Welmer s (1968)	Available front matter, no middle matter, no back matter	Morphos emantic order	Headword, English/ Igbo equivalent, example of usage in both languages.	Explanator y sentences with some examples.
2.	H.I. Nnaji (1995)	Available front matter and middle matter, no back matter	Alphabet ical order; ideal for a GPD	Headword, indication of word class followed, English/Igbo equivalent or explanation.	Explanator y sentences
3.	G.E. Igwe (1999)	Available front matter, no middle matter, no back matter.	Alphabet ical order; ideal for GPD	The base forms of a verb are listed, and with it are given its simple and gerundial infinitives. Headword and word class indicated.	Headword equivalent with explanatory sentences.

4.	M.J.C. Echeruo (2001)	Available front matter, no middle matter, and available back matter ideal for a GPD.	Alphabetical order; ideal for a GPD	Headword, word class, tone mark, English/Igbo equivalent or explanation.	Explanatory sentences with examples in some instances
5.	J. G. Eke (2001)	Available front matter, middle matter, but no back matter.	Alphabetical order: ideal for a GPD	Headword, word class, Igbo equivalent or explanation	Explanatory sentences
6.	O.Akponye (2011)	Available front matter, no middle matter, no back matter.	Alphabetical order; ideal for a GPD	Headword, word class in the Igbo-English section, English/Igbo equivalent as synonyms.	Headword equivalents as synonyms
7.	Williamson (2013)	Available front matter, scanty middle matter, no back matter	Alphabetical order; ideal for a GPD	Mostly Igbo verb roots and verbal derivations (in Onitsha dialect), followed by their equivalent or explanations in English.	Headword equivalents and some explanatory sentences in some instances
8.	B.M. Mbah <i>et al</i> (2013)	Available front matter, no middle matter, and available back matter ideal for an LSP dictionary	Thematic structure with the lemmata arranged in	Headword, English/Igbo explanation on the word, headword equivalent in	Headword, concise explanation of it, headword equivalent in the target

			groups; ideal for an LSP dictionar y	English and Igbo	language (designed for LSP dictionary)
9	Mbanef o (2014)	Available front matter, middle matter, and back matter ideal for a children's dictionary.	Alphabet ical order, ideal for children' s dictionar y	Headword, a sentence to illustrate the use of the headword in English and Igbo, and a picture illustrating the headword.	Illustrative examples and pictures
10.	Mgbem ena et al (2017):	Available front matter, middle matter, no back matter.	Alphabet ical order; ideal for children' s dictionar y.	Headword, headword equivalent, with some having pictures to illustrate the headword.	Headword equivalents , illustrative sentences and some pictures in some instances.
11.	Mbah (2021)	Available front matter, no middle matter, no back matter.	Alphabet ical order; ideal for a GPD	Headword, tone mark, transcription, definition/ explanation of the headword. All in Igbo language.	Explanator y sentences.

Subject Field Experts and LSP Technical Vocabulary

This subsection summarizes the analysis of the dictionaries based on the features identified in sections 3.1 and 3.2. It also examines to what extent other identified features of LSP dictionaries that include list of subject

field experts and LSP technical vocabulary are available in the dictionaries.

Subject Field Experts: Analysis on the availability of list of subject field experts in the dictionaries front matter reveal that seven (7) out of the eleven dictionaries a single authored, namely: Nnaji (195), Igwe (1999), Eke (2001), Echeruo (2001), Akpone (2011), Mbanefo (2016), and Mbah (2021), therefore they do not have any list of contributors or subject field experts. Wlemers and Welmers (1968) has two authors and a list of local speakers of Igbo language who aided the data collection process. Williamson (2013) has editors and writers who contributed to the work, but are not listed. Mgbemena *et al* (2017) as a pedagogical dictionary has a list of writers, editorial team, and project management team. Mbah *et al* (2013) has a list of subject experts who are lectures in different subject areas in the department of Linguistics and Literary studies.

Technical Vocabulary: Eight (8) of the dictionaries analyzed in this study are GPDs as identified in subsection 3.1; therefore they are concerned with the general vocabulary of the Igbo language. The seven (7) bilinguals relate vocabulary of the Igbo language with that of the English language; while the one (1) monolingual deals with only the Igbo language. The two Pedagogical/GPDs employ the use of vocabulary that is relevant to the level of the target users (children). Technical vocabulary for Linguistic and Literary Terms are identified in Mbah *et al* (2013) being the only identified Igbo LSP dictionary.

Table III: Summary of Analysis based on Identified Features of LSP Dictionaries (the sign x indicates not available in the dictionary, while v indicates available)

S/N	DICTIONARY	Subject Field Experts	LSP Related Back Matter	LSP Technical Vocabulary	Thematic Presentation of Lemmata
1.	Welmers and Welmers (1968): <i>Igbo: A</i>	×	×	×	×

	<i>Learner's Dictionary</i>				
2.	H.I. Nnaji (1995): <i>Modern English Igbo Dictionary</i>	×	×	×	×
3.	G.E. Igwe (1999): <i>Igbo-English Dictionary</i>	×	×	×	×
4.	M.J.C. Echeruo (2001): <i>Igbo-English Dictionary: A Comprehensive Dictionary of the Igbo Language with an English-Igbo Index</i>	×	×	×	×
5.	J. G. Eke (2001): <i>Igbo-English Dictionary</i> (Okwua Okwu)	×	×	×	×
6.	O.Akponye (2011): <i>Bilingual Dictionary of the Igbo and English Languages with Thesauruses</i>	×	×	×	×
7.	K. Williamson (2013): <i>Igbo-English Dictionary</i> (2 nd Edition)	×	×	×	×

8.	B.M. Mbah et al (2013): Ìgbò Àdì <i>Igbo-English English-Igbo Dictionary of Linguistic and Literary Terms</i>	✓	✓	✓	✓
9	Y.C. Mbanefo (2014): <i>Ọkọwaokwu Igbo Ụmụaka. Igbo Dictionary for Children</i>	✗	✓	✗	✗
10.	Mgbemena et al (2017): <i>Igbo-English Bilingual Dictionary for Basic Education. Nkọwaokwu N'asusu Abuo Igbo-Bekee Maka Omumu ihe Ntoala</i>	✓	✗	✗	✗
11.	B.M.O. Mbah (2021): <i>Igbo: Ọsanye Okwu Igbo na Nkọwa ya</i>	✗	✗	✗	✗

4. Summary and Conclusion

From the reviewed literature on features of LSP dictionaries and data collected from eleven (11) print dictionaries of the Igbo language, it is certain that Igbo LSP dictionaries are still scarce. The features of LSP dictionaries identified in this study as proposed by authors like Singh

(1982), Nielsen (1994) Bergenholtz and Tarp (1995), Chabata and Nkomo (2010), Kway (2011), and Mihindou (2004) include:

- i. List of subject field experts in the front matter
- ii. Back matter information that is relevant to the dictionary function/type
- iii. Less information in the dictionary entries
- iv. Thematic presentation style of the lemmata

Considering the importance of LSP dictionaries for language development as asserted by Chabata and Nkomo (2010) cited earlier, this paper proposes that more Igbo LSP dictionaries should be developed for various subject fields and professions as well as for the secondary schools, as monolingual, bilingual or multilingual.

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