IMPROVING LEARNER'S DICTIONARIES: A DISCUSSION BASED ON AN INTERDISCIPLINARY APPROACH

Laura Campos de Borba

Universidade Federal do Rio Grande do Sul

ABSTRACT: Learner's Lexicography has reached a high standard of quality in language description. However, it is still necessary to face an old and, at the same time, always new challenge: increasing the user-friendliness of learner's dictionaries. This work deals with how to improve learner's dictionaries, focusing on the user profile and the user's needs. To achieve this aim, notions from Psycholinguistics, Contrastive Linguistic, Applied Linguistics, Lexicology and Cognitive Psychology were central for this research. This study covered the delimitation of the user profile and the relevance of their mother tongue and the user's learning needs in relation to their proficiency level in the foreign language. At last, I carry out a brief analysis of entries in learner's dictionaries to discuss how straightforward and user-friendly the information provided is. This work allows the conclusion that an interdisciplinary approach can improve the user-friendliness of learner's dictionaries, particularly EFL and SFL dictionaries.

KEYWORDS: Lexicography. Learner's dictionaries. Teaching and learning foreign languages.

RESUMO: Os dicionários de aprendizes alcançaram um alto padrão de qualidade no que se refere à descrição da língua. Contudo, ainda é necessário enfrentar um antigo e, ao mesmo tempo, novo desafio: aumentar a facilidade de consulta [user-friendliness] de tais obras. Este trabalho trata de como aprimorar os dicionários de aprendizes, com especial atenção ao perfil de usuário e às suas

* PhD student, Department of Linguistics and Literature (UFRGS). PhD grant n. 001 CAPES / Brazil. E-mail: lauracborba@hotmail.com. To the memory of my beloved grandfather Dirceu Campos († 13/08/2019), a good, fair man who stoically faced his disease. Thank you for all your love and for showing me what perseverance is.
necessidades. Para alcançar este objetivo, são empregados subsídios da Psicolinguística, da Linguística Contrastiva, da Linguística Aplicada, da Lexicologia e da Psicologia Cognitiva. Este estudo abarca os seguintes âmbitos: a delimitação do perfil de usuário e a relevância de sua língua materna e as suas necessidades de aprendizagem em relação ao seu nível de proficiência na língua estrangeira. Por fim, realiza-se uma breve análise de verbetes de dicionários de aprendizes para discutir quão simples e didáticas [user-friendly] são as informações fornecidas. Conclui-se que uma abordagem interdisciplinar pode melhorar a facilidade de consulta dos dicionários de aprendizes, especialmente aqueles para aprendizes de inglês e espanhol como língua estrangeira.


RESUMEN: Los diccionarios de aprendices han alcanzado un alto nivel de calidad en lo que se refiere a la descripción de la lengua. No obstante ello, aún es necesario enfrentar un antiguo y al mismo tiempo nuevo desafío: incrementar la facilidad de consulta [user-friendliness] de dichas obras. El presente trabajo trata de cómo mejorar estos diccionarios, concentrándose en el perfil de usuario y en sus necesidades. Para alcanzar tal objetivo se emplean subsidios de la Psicolingüística, la Lingüística Contrastiva, la Lingüística Aplicada, la Lexicología y la Psicología Cognitiva. El ámbito de este estudio abarca la delimitación del usuario y el papel que juega la lengua materna, así como las necesidades de aprendizaje de éste en relación a su grado de competencia en la lengua extranjera; del mismo modo, se realiza también un breve análisis de artículos de diccionarios de aprendices para discutir que tan simples y didácticas [user-friendly] son las informaciones que proporcionan. El trabajo lleva a la conclusión de que un abordaje interdisciplinar puede mejorar la facilidad de consulta de los dicionarios de aprendices, particularmente aquellos para aprendices de inglés y español como lengua extranjera.


1 INTRODUCTION

Today, there is no doubt that Learner’s Lexicography has reached a high level of quality. In the specific case of learner’s dictionaries of the English language, this kind of reference work1 has been paying special attention to the description of the English language in use. However, describing the language in use corresponds to one side of the coin; the other side is the user and their needs. Curiously, learner’s dictionaries are not as user-friendly as they could be. There are at least three aspects that need more investigation in Metalexicography to improve the quality of learner’s dictionaries: (1) how to delimit the user profile (and what does it mean in terms of dictionary design and dictionary-making); (2) how learner’s dictionaries could get closer to the learning context; and (3) how to provide information about the language in use in a straightforward, user-friendly way.

About the first aspect, until now learner’s dictionaries are addressed to any person that is learning a particular foreign language (FL). That is the problem of the ‘one-size-fits-all’ practice mentioned by Rundell (2010) apud CHI, 2015, p. 170). As reported by Nesi (2013a, p. 2), monolingual dictionaries for native speakers show ‘little indication of the type of user’ because of market reasons. The same lack of specification about the user profile is noted in learner’s dictionaries, maybe for the same reason.

Regarding the second aspect, it can be noted that learner’s dictionaries are not close enough to the learning needs, that is, the documents that help to make syllabuses2 of FL’s teaching and learning.

Finally, despite the fact the language described is indeed the language in use (at least in the case of the English language), it is still necessary to find other ways to keep helping the user to find and interpret the information provided. As Bogaards (2003, p. 33) points out, ‘[…] it seems that many learners are reluctant to use the dictionary and that, when they open it, they do not know how to use it’. As Ranalli and Nurmukhamedov (2013, p. 4) warn, it seems to be that the way learner’s dictionaries present language description needs to be more user-friendly. Nesi (2013b, p. 69), in turn, observes that the task to look up something in the dictionary

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1 In Lexicography, a reference work is ‘Any product, such as a published book or a computer software, that allows human to store and retrieve INFORMATION relatively easily and rapidly. The DICTIONARY is the prototypical reference work, as is provides structural linguistic and/or encyclopedic information by means of a generally known access system (such as an ALPHABET)’ (HARTMANN; JAMES, 2001, s.v. reference work).

2 By syllabus I refer to ‘a description of the contents of a course of instruction and the order in which they are to be taught’ (RICHARDS; SCHMIDT, 2010, s.v. syllabus).
takes place when the users are already solving another "major" task (such as reading or writing), so they "want to find information quickly, with as little disruption as possible". These are strong arguments to investigate how to improve user-friendliness in learner's dictionaries.

This work deals with how to improve learner's dictionary design with particular attention to the user profile. It is clear to us that Metalexicography alone cannot handle this problem and needs some kind of support. Hence, the hypothesis I put forward here is that it is imperative to implement an interdisciplinary approach, that is, to explore contributions from other areas to convert their theoretical knowledge into general principles and methodological procedures. Naturally, Corpus Linguistics already is a fundamental area to dictionary-making as it investigates the language in use. In addition to Corpus Linguistics, I claim that Psycholinguistics, Contrastive Linguistics, Applied Linguistics, Lexicology, and Cognitive Psychology can contribute to the user-friendliness of a learner's dictionary.

First, Psycholinguistics and Contrastive Linguistics shed light on how different languages interact with each other and highlight the importance to consider the learner's mother tongue when determining the user profile of learner's dictionaries. In this work, the user's mother tongue is among the factors that determine the dictionary user profile.

Second, Applied Linguistics allows us to come near to the learning needs of the intended user, which is another relevant factor to defining the user profile. The starting point is the Common European Framework of Reference (CEFR, 2001), its reference levels, and other documents based on these levels. On the one hand, CEFR (2001) reference levels can be used to establish a proficiency basis the lexicographer could expect from the user. On the other hand, from the perspective of the learning process, the next CEFR (2001) reference level corresponds to the user's needs.

Third, it is common to find multiword expressions and illustrations in learner's dictionaries (at least in the English language lexicographic tradition). However, many times those expressions are not easily identifiable as frequent word combinations in learner's dictionaries. Also, there are no clear criteria to their inclusion, that is, why to include them and where. On the one hand, theories about word combinations in the field of Lexicology can be adapted to describe multiword expressions in a user-friendly way, helping the dictionary user in finding and identifying them more quickly. On the other hand, Cognitive Psychology can provide guidelines to establish a set of criteria about the function of illustrations in learner's dictionaries.

Lastly, the discussion in this work is part of my PhD thesis, in which I propose an enhancement of existing EFL and SFL dictionaries to satisfy Brazilian user's needs, who speak Brazilian Portuguese as their mother tongue and learn these foreign languages in their home country in adulthood. Both languages are essential for Brazil's development and will be taken into account throughout this work.

This work is organized as follows: section 2 comments on the relevance of learner's dictionaries to Brazilian learners; section 3 summarises some of the many advances of Learner's Lexicography and signalise some current problems Metalexicography has to deal with today; section 4 remarks on the contributions from the areas cited above to improve learner's dictionaries; finally, section 5 analyses the description of multiword expressions in learner's dictionaries with focus on the role of the user's mother tongue and learning needs.

2 WHY RESEARCH LEARNER'S DICTIONARIES

The fact that the English language is indeed a "global language" (CRYSTAL, 2003; NUNAN, 2003) has partially become a universal truth. This "globalization" of the English language is a highly relevant phenomenon because English is considered internationally the most accepted vehicle to disseminate scientific knowledge, to discuss the economic activity and, last but not least, to give wide access to information. Besides, it cannot be ignored that, after English, Spanish figures as the second language of international communication (INSTITUTO CERVANTES, 2018, p. 6).
In the 19th century, English Language Teaching (ELT) began to be encouraged in Brazil due to the demand for proficiency in that language in the labour market of that time, caused by commercial relations with England (NOGUEIRA, 2007). Over time, the reasons for learning English in Brazil have undergone few modifications. Nowadays, the ability to speak English is considered the main factor to guarantee the relationship of Brazilian companies with the global market; also, for Brazilian workers, proficiency in the English language assures them a social rise through the wage increase (BRITISH COUNCIL, 2014, p. 14-20). Nevertheless, data from the British Council (2014, p. 8) reveal that only 3.4% of the Brazilian middle-class population speaks English effectively; regarding the high class, English speakers accounted for only 9.9%. A huge part of the Brazilian population (47%) states that they have only a basic level of English proficiency (BRITISH COUNCIL, 2014, p. 8). In fact, data released by the British Council (2014) reveal the deficiency of ELT in Brazilian Primary and Secondary Education (both public and private). In the public school system, for example, lack of access to adequate learning materials (among them, dictionaries) is the main problem identified by English language teachers (BRITISH COUNCIL, 2015, p. 15).

In relation to the Spanish language, the economic factor also plays an important role in its relevance to Brazil. Data from Instituto Cervantes (2018, p. 28) show that 6.9% of global GDP (Gross Domestic Product) is generated by Hispanic countries. This data, added to the geographical borders of Brazil with seven countries where Spanish is the official language, explains the significant interest for Spanish language learning in the country. Also according to Instituto Cervantes (2018, p. 11), in Brazil, there are just over six million learners of Spanish as a foreign language (SFL); it is the second country with the largest number of SFL learners in the world.

In order to improve the low rates mentioned above, along the last ten years, Brazil had invested in the massification of foreign language teaching (FLT) at the university level so that Brazilian students could apply for international academic mobility through initiatives such as the Science without Borders Program. Recently, this governmental programme was interrupted for economic reasons. However, for the academic community, it is clear that proficiency in foreign languages (FLs), such as English and Spanish, is an ‘intellectual investment’ that will offer better job opportunities to young academics and future Brazilian professionals.

Given the relevance of the English and Spanish languages to Brazil, any initiative in favour of the design of learning materials that allow continuous development of language proficiency and, at the same time, propitiates autonomy in FL learning, represents a strategic action for the expansion of FLs proficiency in the country. In this context, learner’s dictionaries are powerful tools that could contribute to develop autonomy in language learning in Brazil. In the specific case of ELT, the lexicographic tradition of the English language is remarkable not only for their quality but also for the variety of learner’s dictionaries. In English-speaking countries, especially the United Kingdom, dictionary-making is an academic activity firmly established and of excellent quality. The economic constraints and the challenges and projections of ELT in Brazil described in the previous paragraphs are strong reasons to pay attention to this kind of reference work, particularly those compiled to users that need to move on from basic proficiency levels (such as A1 and A2) to pre-intermediate ones (A2 and B1).

As stated by Bugueño Miranda (2019a, p. 9), every dictionary is a heuristic tool because it helps someone in solving a task (from syllables division to word choice when solving crosswords). This means that it is necessary to compile a dictionary for specific users and specific tasks. For this reason, Rundell (2010 apud CHI, 2015, p. 170) argues that the future of Pedagogical Lexicography is centred on the concepts of customization and personalization. Part of this future already happens, thanks to the advances in Corpus Linguistics. There is no doubt that Lexicography has benefited and still benefits from this area; however, Rundell (2008, p. 229) already emphasised that a good corpus does not automatically guarantee that a dictionary will reach a high-quality standard.

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1 As stated in British Council (2014, p. 14-20), 91% of Brazilian executives consider that English is the most important language in the business world. Among Brazilian workers, 96.5% consider that proficiency in the English language gives them a salary increase of 40%.

2 For 81% of English teachers interviewed, lack of access to adequate learning materials is a routine problem. There is no accurate data on the situation in the private primary school system, but the low number of English speakers in the middle and high classes allows us to assume that the financial factor is not the only variable related to those low indexes.

3 In total, there are 21 million learners of SFL in the world (INSTITUTO CERVANTES, 2018, p. 5).

4 The Science without Borders Program was restricted to graduate students and the number of scholarships was reduced to 5% (MEC, 2017).
Rundell's points of view lead us to believe that, as Chi (2015, p. 181) and Andersen and Nielsen (2009, p. 356) argue, the compilation of a learner's dictionary is necessarily interdisciplinary.

In the next section, there is a brief comment on the advances in Learner's Lexicography and their connection with the current challenges summarised in section 1.

3 LEARNER’S DICTIONARIES: THEN AND NOW

English as a foreign language dictionaries (EFL dictionaries) are pioneer in a series of advances in Learner’s Lexicography. Although nowadays there are learner's dictionaries produced by other lexicographic traditions, such as Spanish-language (BORBA, 2019) and German-language (BUGUENO MIRANDA, 2019b), the English-language tradition predominates as the most advanced one, as related by Borba and Bugueño Miranda (2018, 2019a), for example.

Jackson (2002) and Heuberger (2016) made a historical synthesis of the emergence and evolution of EFL dictionaries, beginning with the publication of the first edition of the dictionary that is known nowadays as *Oxford Advanced Learner’s Dictionary* (OALD) in the late 1940s. According to the authors, OALD represents a milestone in the history of Learner’s Lexicography because it paid special attention to the way words combine to each other in English (JACKSON, 2002, p. 130; HEUBERGER, 2016, p. 27). As a result of this characteristic, an innovative fact for the time, Heuberger (2016, p. 27) points out that OALD aimed to provide assistance mainly in encoding tasks (writing and speaking).

For about 30 years, OALD has prevailed as the only English learner’s dictionary. During this period, two new editions were published with two important modifications: the profuse supply of examples in the second edition, and the detailed description of syntactic patterns focusing on verb complementation (KLOTZ; HERBST, 2016, p. 105-108).

In the late 1970s, a second dictionary for EFL learners was launched, known nowadays as *Longman Dictionary of Contemporary English* (LDOCE). Like OALD, LDOCE also provided a detailed description of syntactic patterns. Its main feature consisted of the use of a defining vocabulary to write definitions. As Rundell (2008, p. 224-225) comments on, the purpose of using a defining vocabulary was to generate definitions that were easier to understand and to further differentiate learner’s dictionaries from dictionaries for native speakers.

In the late 1980s, a third English learner’s dictionary emerged, known nowadays as *Collins Cobuild Advanced Learner’s Dictionary* (CCAD). CCAD’s first edition was pioneer in using a corpus as the basis for language description in a learner’s dictionary (cf. CHI, 2015, p. 166). The senses of polysemic entries were ordered by frequency; besides, the examples provided for each sense were extracted from the corpus with minimal changes (HEUBERGER, 2016, p. 28). CCAD also introduced a new technique to write definitions: the whole-sentence definition. Definitions based on this technique present two sentences, one to introduce the headword in a specific context and other to provide the definition itself (FARIAS, 2009, p. 76).

In the mid-1990s, the fourth generation of English dictionaries emerged, carried out by the current *Cambridge Advanced Learner’s Dictionary* (CALD), which emphasised the coverage of more varieties of the English language. In that same decade, other EFL dictionaries launched new editions with substantial improvements, including information such as word frequency for the most used words and signposts in polysemic entries; syntactic codes (used by OALD and LDOCE) were left behind; and a simplified description of syntactic patterns was adopted (RUNDELL, 2008, p. 232-239; HEUBERGER, 2016, p. 28-29).

In the 2000s, two other EFL dictionaries emerged: *Macmillan English Dictionary for Advanced Learners* (MEDAL) and *Merriam-Webster’s Advanced Learner’s English Dictionary* (MWALE). MEDAL followed a great part of the successful proposals of the other EFL dictionaries (such as using a defining vocabulary and indicating word frequency). This dictionary also provides more detailed information on collocational patterns, common errors made by learners, etc. (FONTENELLE, 2011, p. 53). MWALE, the first EFL dictionary to emerge on American territory, stands out for the massive presence of examples in their entries.
A great part of innovation proposed by each publisher of EFL dictionaries has been maintained throughout various editions and embraced by the other publishers over time. It means that all publishers have implemented the use of corpus in the dictionary-making process; emphasised multiword expressions; provided examples; used a defining vocabulary; used signposts; indicated word frequency; preferred simplified systems to show syntactic patterns, and included illustrations. All these modifications helped to provide information about the language in use and are an effort to present the information in an understandable, user-friendly way. Now, the next challenges are related to other aspects of user-friendliness, as it was commented in section 1: (1) how to delimit the user profile (and what does it mean in terms of dictionary design and dictionary-making); (2) how learner’s dictionaries could get closer to the learning context; and (3) how to provide information about the language in use in a straightforward, user-friendly way. These topics are discussed in the next section.

A crucial final remark is that advances in Learner’s Lexicography of the English language are not obvious. If we consider other lexicographic traditions that also publish learner’s dictionaries, like the Spanish-language one, it is easily noted that SFL dictionaries still do not follow the advances that have been made by the Anglo-Saxon tradition. In Learner’s Lexicography of the English language, in addition to the use of corpus, there is a wide variety of publishers in charge (Oxford, Macmillan, Collins, Longman / Pearson, Cambridge) and a wide variety of learner’s dictionaries for many proficiency levels. SFL dictionaries, in turn, are not only fewer, but also do not follow the advances in Corpus Linguistics (BORBA, 2019). Besides, SFL learners are at a great disadvantage compared to EFL learners because apparently there are only learner’s dictionaries for advanced proficiency levels (the existing SFL dictionaries do not use any scale to indicate the proficiency level required to consult them).

4 LEARNER’S DICTIONARIES: NOW AND THEN

As mentioned in section 1, at least two variables were used to identify the user profile of a learner’s dictionary: their mother tongue and their learning needs.

In learner’s dictionaries, the intended user profile is still generic (‘EFL learner’ or ‘SFL learner’), as we see on Cobuild Essential English Dictionary (CoED2, 2014), on Cambridge Advanced Learner’s Dictionary (CALD4, 2013), and on many others. Nonetheless, many lexicographers and metalexicographers, such as Leech and Nesi (1999), Tarp (2008), Nesi (2013b), and Borba and Bugueño Miranda (2019a, 2019b) include the user’s mother tongue as a feature that should be taken into account when compiling a learner’s dictionary. This topic will be discussed later in this section.

Narrowing down to EFL Brazilian adult learners, their learning process occurs in a country where English is not an official nor a second language. In other words, they have low opportunities to interact in English. In spite of the huge access to English-language content that the internet brings, the main activities of daily life are performed in Brazilian Portuguese.

The second variable that determines the user profile of learner’s dictionaries is related to the learning needs from the FL learning context. Little is known about how to link learner’s dictionaries to language teaching methods in vogue (what means to say the communicative approach). In the case of EFL dictionaries, it could be stated that almost all of them flag up a proficiency level on the CEFR (2001) scale, that is an exponent of the communicative approach. However, two points remain unclear. First, EFL dictionaries combine two systems to indicate those levels. One of them uses more generic words (like elementary, pre-intermediate, intermediate, upper-intermediate, and advanced) to refer to proficiency levels. This information can be easily found in the cover of EFL dictionaries. The other system is the CEFR (2001), that established six proficiency levels (A1, A2, B1, B2, C1, and C2). The CEFR (2001) scale is undoubtedly the most used worldwide, but, curiously, learner’s dictionaries usually show them only in the back cover and in small letters.

3See Borba and Bugueño Miranda (2018) for the lack of correlation between the ELT document English Profile (UCLES, 2011) and the Cambridge Advanced Learner’s Dictionary (CALD4, 2013), and between the German language teaching document Profile deutsch (GLABONIAT ET AL., 2005) and the Langenscheidt Großwörterbuch Deutsch (LgwboDaF, 2015).
The second point that remains unclear is the lack of clarity about what the proficiency level means in terms of language learning. It is not possible to know if the level (either a generic one or a CEFR (2001) one) refers to a minimum basis that the dictionary expects the learner would have already reached or if this level corresponds to the one(s) learners aim to reach with the dictionary’s help. This question is very important to identify users’ needs and to bring the learner’s dictionary closer to FL learning.

The third topic I have summarised in section 1 is user-friendliness in learner’s dictionaries. The way information is showed in the entry is just as important as a faithful description of the language in use. Although there are methods to make language description more user-friendly, such as using whole-sentence definitions and signposts, it is necessary to investigate what other mechanisms could be used to increase the power of elucidation in learner’s dictionaries (BORBA; BUGUENO MIRANDA, 2019a).

Such demand is not new, as it has already been commented. In the past, criticisms over the use of codes to indicate syntactic patterns in the Oxford Advanced Learner’s Dictionary of Current English (OALD3, 1974), for example, gave rise to a succession of modifications in the way this information was presented, in order to make it more clear (KLOTZ; HERBST, 2016, p. 105-108). However, it is still necessary to continue reviewing the way the English language is described and presented in learner’s dictionaries. See the entry fold in CALD4 (2013), for example:

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fold /fʊld/  
verb BEND > 1 US [I or T] to bend something, especially paper or cloth, so that one part of it lies on the other part, or to be able to be bent in this way: I folded the letter (in half) and put it in an envelope.  
  a He had a neatly folded handkerchief in his jacket pocket.  
  b Will you help me to fold (up) the sheets?  
  c The table folds up when not in use. 2 [T] to wrap: She folded her baby in a blanket.  
  d He folded his arms around her.  
fold your arms to bring your arms close to your chest and hold them together 4 [T] to move a part of your body into a position where it is close to your body: She sat with her legs folded under her. FAIL > 5 [I] (of a business) to close because of failure: Many small businesses fold within the first year. […]
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Figure 1: Partial transcription of the entry fold (CALD4)

Source: CALD4 (2013, s.v. fold)

The four senses under the signpost bend refer to four kinds of complements: paper, fabric, body parts and furniture. However, CALD4 (2013) does not present this piece of information in a clear way that enables a Brazilian Portuguese learner to understand it straightforwardly. In the first sense, the specification ‘especially paper or cloth’ does not make it clear as to what else, besides paper and cloth objects, can be ‘folded’. This lack of clarity is more evident in the last example of sense 1, which is about folding a table. The second sense does not seem to be related to the signpost bend and with senses 1, 3 and 4. Regarding the third and fourth senses, it is not possible to understand why they are separate since both contain the same meaning. On the one hand, not only arms can be folded, but legs as well (see example in sense 4). This raises doubts about the status of fixed expression that CALD4 apparently attributes to fold your arms by highlighting this expression in bold. On the other hand, a query to WordBanks (WB, 2015) revealed that not all body parts appear with the verb to fold, but only arms, hands and legs. In summary, CALD4 (2013) presents the complements of the verb to fold in a way that does not offer learners quick access to them. This makes the search for information more time-consuming.

Another example that illustrates the need to present the language in use in a more user-friendly way is the entry fold in the Longman Wordwise Dictionary (LWord2, 2008), a dictionary for ‘pre-intermediate and intermediate learners’ (LWord2, 2008, cover).
In sense 1, it would be interesting to specify what kinds of complements may follow the verb. In sense 2, the highlighted words fold your arms lead the user to believe that it is a fixed expression when, in fact, it is not, because it admits other complements. The definition, in turn, may be difficult for a pre-intermediate user because of polysemic words such as bend and rest. In this sense, the picture of a man with folded arms helps the Brazilian learner to understand the meaning, mainly because in Brazilian Portuguese the arms are crossed [cruzados], not folded [dobrados].

At this point of the discussion, it is relevant to comment on the role of illustrations (pictures) on EFL dictionaries. They are usually put next to some entries and in the middle matter\(^8\) or back matter\(^9\). On the one hand, one does not ignore the fact that illustrations play an important role in drawing consumer's attention and increasing sales (KLOTZ; HERBST, 2016, p. 66). On the other hand, interest in illustrations is a sign that, for the lexicographers in charge of learner's dictionaries, this element has an important role in elucidating senses for which a definition alone cannot give a satisfactory answer (FARIAS, 2013, p. 300). In some cases, as on LWord2 (2008, s.v. fold), pictures are a helpful resource; in other cases, they seem to be useless to a Brazilian EFL learner due to the similarity between spelling and meaning of some words in English and Portuguese. It is the case of piano, which is followed by a picture in LWord2 (2008, s.v. piano). It happens not only because the dictionary user is generic, but also because in Metalexicography little is known about the function of illustrations and under what criteria they should be included, as Borba (2018a), Farias (2013), and Klotz and Herbst (2016, p. 66) point out.

In short, learner's dictionaries have to maintain the use of Corpus Linguistics for the lexicographic description, especially of multword expressions. In the current state of metalexicographic research, it is impossible to separate Corpus Linguistics from Learner's Lexicography. As a consequence, there is no denying that, broadly speaking, EFL dictionaries actually reflect the language in use. As remarked previously, corpus-based dictionary-making is not an obvious method in the case of learner’s dictionaries from other lexicographic traditions, such as the Spanish-language one\(^10\).

At the same time, it is necessary to associate the language description in learner’s dictionaries with theories that help to make the description itself more user-friendly, especially concerning multword expressions and illustrations. In order to achieve this objective, the possibilities of correlation between Lexicography and other areas of knowledge must be investigated. As reported in section 1, this work assumes the design of a learner’s dictionary will benefit not only from Corpus Linguistics, but also from Applied Linguistics, Psycholinguistics, Contrastive Linguistics, Lexicology, and Cognitive Psychology. This interdisciplinary proposal is

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\(^8\) Hartmann and James (2001, s.v. middle matter) define middle matter as "Those components of a dictionary which may be inserted into the central WORD-LIST section without forming a constituent part of it. [...]"

\(^9\) Hartmann and James (2001, s.v. back matter) define back matter as "Those component parts of a dictionary which are located between the central WORD-LIST section and the end of the work. [...]"

\(^10\) The empirical data provided by corpus-driven and corpus-based approaches always reveals new features of a natural language. Bugueño Miranda and Borba (2019), for example, present a series of collocational and colligational patterns of Spanish language for which, until now, literature had offered no description at all. Two examples of collocations analysed by the authors are licencia de conducir and cédula de identidad; two examples of colligations are demasiado tarde and jugar + [preposition] (this last one varies in line with the kind of complement).
based on FL Didactics/Pedagogy\textsuperscript{11}, that encourages an interdisciplinary approach to foreign language teaching. Applied to Metalexicography and, strictly, to the design of a learner’s dictionary, an interdisciplinary approach allows lexicographers to analyse a problem (in this case, user-friendliness) from other perspectives and stimulates them to convert theoretical knowledge from other areas into general metalexicographic principles and methodological procedures.

Currently, Applied Linguistics counts on many documents about FLT that are based on CEFR (2001) proficiency levels. These documents may serve as a reference to compile learner’s dictionaries and, consequently, can bring them closer to the FL learning context (second aspect mentioned in section 2). For ELT, there are many sources available, such as the English Profile (UCLES, 2011) and the vocabulary lists from Cambridge Assessment, such as Cambridge Assessment (2012) list for proficiency level B1. For Spanish Language Teaching, there is the Plan Curricular del Instituto Cervantes (PCIC, 2006).

Psycholinguistics, in turn, clarifies why the user’s mother tongue (MT) is important to establish the user profile of a learner’s dictionary, as it was mentioned before. Considering that adult learners from low proficiency levels in English and Spanish constitute the user profile that this work concerns, the following paragraphs comment on the role MT plays in learning an FL and why MT should be taken into account in terms of dictionary-making.

First, Dörnyei (2009, p. 22-23) observes that adults have already acquired individual, social and cognitive abilities through their MT’s mediation. It means that adults have to learn how to perform in the FL the main communicative functions they already perform in their MT, that is, expressing personal attitudes, socialising, and imparting and seeking factual information (CEFR, 2001, p. 125). In the case of Brazilian learners, these communicative functions are intrinsically associated\textsuperscript{12} with Brazilian Portuguese's forms and meanings, that is, their MT.

Second, in order to learn an FL to perform communicative functions in that language, the FL learner has to add new forms and expand their existing conceptual system. As stated by Dörnyei (2009, p. 22-23), in adulthood, the FL learning process is based on the learners’ already known language(s)\textsuperscript{13}. In the case of Brazilian FL learners, it refers to Brazilian Portuguese.

Third, learning an FL in adulthood naturally involves interaction between elements from MT and FL, which causes influences from one language into the other, as stated by psycholinguists like Li (2013). These influences are attested in learner corpora, for example (see below). Because of these influences, the needs of an adult Brazilian EFL/SFL learner will not be the same as those of a German EFL/SFL learner. This is why the one-size-fits-all solution to establish the user profile of learner’s dictionaries does not completely fit learners from any MT. It seems clear that, at least in the case of Brazilian FL learners, the user’s MT is an important aspect that needs more attention. Last but not least, it must be also considered that influences of the MT on FL learning takes place specially (but not only) at initial learning levels, as stated by Kroll and Bialystok (2013, p. 505).

The role of MT in FL learning is not an exclusive concern of Psycholinguistics. Contrastive Linguistics\textsuperscript{14} also paid attention to the way MT influenced FL learning. Contrastive Linguistics has been associated with Corpus Linguistics to generate learner corpora, that is, databases with texts produced by FL learners. Usually, it is possible to do an advanced search selecting texts produced by learners that speak the same MT. This procedure allows the lexicographer to identify which aspects of a certain FL need more attention by learners that speak a particular MT (BEGUÉÑO MIRANDA; BORBA (2019); BORBA; BEGUÉÑO MIRANDA (2019a, b); NICHOLLS (2003)). For example, the verb \textit{ir} [to go] is one of the words included in PCIC (2006, p. 318) to indicate movement in Spanish. While consulting CAES (2014), a learner’s corpus of Spanish language, I realised that Brazilian SFL learners

\textsuperscript{11} In Romance languages, the term \textit{didactics} is not commonly used with its negative connotation.

\textsuperscript{12} It may be considered that the only language required for the majority of daily communicative situations in the country is Brazilian Portuguese.

\textsuperscript{13} This also sheds light on why learners prefer bilingual dictionaries at least at beginning learning levels, as pointed out by Nesi (2015, p. 2).

\textsuperscript{14} Although studies of Contrastive Linguistics are not many among the Portuguese-Spanish language pair (e.g. DURÃO, 2004) and the Portuguese-English language pair (e.g. O’DONNELL CHRISTOFFERSEN, 2016), one cannot deny the value that Contrastive Linguistics can have on improving the information to be inserted into a learner’s dictionary.
of A1, A2, and B1 proficiency levels use the pattern ‘ir para’ as it is used in Portuguese. However, according to Corpes (2018), a corpus of the Spanish language, the pattern used in Spanish is ‘ir a’.15 Because of this discrepancy, this syntactic pattern would need to be not only described but also highlighted in SFL dictionaries for Brazilian learners.

As the abovementioned example shows, there are word combinations that share a common equivalent element among two languages (in this case, the verb ‘ir’), but sometimes this element selects different (i.e. not equivalent) partners in each language to express the same meaning. With this example, I wanted to highlight a broad idiomatic phenomenon that is of special interest to this work: multiword expressions (MWE). There are many kinds of MWE. When comments on some of them (see below), Borba (2017, p. 35) makes two remarks. First, there are different degrees of fixedness between each type of MWE. In the picture below adapted from Borba (2017, p. 35), the colour fading effect represents the various degrees of fixedness (from the most rigid, on the left side, to the least rigid, on the right side). Second, the boundaries between each phenomenon are fluid, as the absence of divisions in Figure 4 intends to represent:

Among this set of phenomena, two of them interest us in this work: collocations and collocations. Colligations are ‘grammatical patterns required by certain words or types of words’ (DUAN; QIN, 2012, p. 1890)16. The word combination cited above from the Spanish language (‘ir a’) is an example of colligation, that is, a word (the verb ‘ir’) that requires the preposition ‘a’ to mean movement (see more details and examples in section 5).

The other kind of MWE that this work focuses on is collocations, that is, words that co-occur very closely together because of a strong mutual attraction, as claimed by Sinclair (1991, p. 112; 170). Atkins and Rundell (2008, p. 302) also define collocation as ‘a recurrent combination of words, where one specific lexical item (the ‘node’) has an observable tendency to occur with another (the ‘collocate’), with a frequency far greater than chance’. For example: in Portuguese, the MWE ‘cruzar os braços’ [to cross the arms] has the equivalent in English ‘to fold [my/your/her/his] arms. As the basis of the collocation in each language (‘braços’ / ‘arms’) selects a different collocate (‘cruzar’ / ‘to fold’), it is plausible to expect the Brazilian learner to translate each element of that collocation into

15 It is curious that the PCIC (2006, p. 318) includes only the verb ‘ir’, but does not mention any colligational pattern.

16 Bell (2013), Legallois (2012), Stubbs (2004), and other authors consider collocations as one more manifestation of collocations. Therefore, the term ‘grammatical collocation’ is also used to designate a coligation. I prefer to separate lexical combinations (collocations) from grammatical combinations (colligations) to facilitate the argumentation and the proposal of a lexicographical treatment for each kind of phenomenon.
English and produce *to cross the arms. Unfortunately, I cannot have access to learner corpora of the English language, but the lexicological analysis is still valid to illustrate the intricate relationship among MT, FL, and MWE.

Colligations and collocations are generally difficult for FL learners because they are no predictable, aleatory word combinations, features that characterise them as idiomatic phenomena (as well as any MWE). Divergent patterns of word combinations in different languages are a clear manifestation of idiomaticity.

Idiomatic phenomena such as MWE are studied not only by Corpus Linguistics, but also by Lexicology. Actually, Lexicology is another area that benefits from data generated by Corpus Linguistics to study lexical phenomena such as word combinations. It is possible to take advantage of the wide-ranging discussion about MWE in Lexicology, such as Booij (2003), Riemer (2010), Geeraerts (2010), and Mel’čuk (2015), to elucidate how these word combinations (especially collocations and colligations) could be disposed in learner’s dictionaries in a user-friendly way. Nowadays, despite the fact that MWE are easily found in EFL dictionaries, for example, sometimes they are not emphasised in the dictionary entry, as it was illustrated on Figures 1 and 2. Concerning collocations, Mel’čuk’s Meaning-Text Theory (2015), for example, can be adapted to describe them in a more user-friendly way, as proved by Borba (2018b).

Finally, Cognitive Psychology is another area that offers the possibility of research on improving the user-friendliness of learner’s dictionaries. The area gives support for a relatively common complementary resource in learner’s dictionaries: illustrations. Illustrations are useful for the treatment of words that are difficult to define (such as culture specific words, also known as realia17) and for assistance in decoding and encoding tasks. Theories about visual perception (bottom-up and top-down) and object perception (holistic and part-based), summarised on Sternberg and Sternberg (2012), are, in this sense, very promising. Also, Cognitive Psychology addresses how to use salience effects, so the user can quickly understand the information provided in entries of learner’s dictionaries. The salience effects fit into theories on visual perception, such as Gestalt Theory (STERNBERG; STERNBERG, 2012). Even though this work is not aimed at further analysing illustrations and salience effects in learner’s dictionaries, I wanted to draw attention to other possibilities to investigate their role in this kind of reference work.

As it was stated in section 1, this work aims mainly to propose an interdisciplinary approach to take charge of the user profile and user-friendliness in learner’s dictionaries. There is not enough space to demonstrate more clearly how each abovementioned area could contribute to improve the design of learner’s dictionaries. Thus, the next section relies on contributions from Psycholinguistics, Contrastive Linguistics, and Applied Linguistics to analyse collocations and colligations in learner’s dictionaries. The goal is to illustrate the importance of specifying the user profile of learner’s dictionaries taking into account their MT (Brazilian Portuguese) and their learning needs (that is, reaching A2 and B1 proficiency levels).

5 TOPICS OF SPECIFIC INTEREST: COLLOCATIONS, COLLIGATIONS, AND THE USER PROFILE

Researchers such as Sinclair (1991) and Coseriu (2007) agree that one of the features that characterise a natural language is the fact that, at the same time that there are words that combine in a ‘casual’ way, attending only to the formalities of each language (gender, number, case, etc.), there are also other words that manifest themselves as ‘sequences of signs, of ‘ready’ combinations of signs, which are used as a whole’ (COSERIU, 2007, p. 107)18. These “combinations of signs” are what has been called in this work multiword expressions. According to Sánchez Rufat (2018, p. 261)19, they are plentifully distributed in a language and correspond to more than a half (between 52% and 58%) of native speakers’ speech.

17 Klotz and Herbst (2016, p.152) define culture specific words as ‘cases where a lexeme in the L1 [language one] does not even partially correspond to any lexeme in the L2 [language two]’. Other authors, such as Bugueno Miranda (2010, p. 67), call this phenomenon realia.

18 [Sequenzen von Zeichen handeln, um “fertige” Zeichenkombinationen, die als ganze tradiert werden.]

19 Sánchez Rufat (2018) uses the term formulaic sequences to refer to MWE.
Sánchez Rufat’s (2018) data about the massive presence of MWE in a language has an even greater relevance on FL learning. Regarding collocations, Vasiljevic (2014, p. 50) has noted that learning this kind of MWE is “one of the biggest challenges for second language learners, even in very advanced stages of language proficiency”. This statement can be easily applied to any kind of MWE given that they are not driven by any rule.

EFL dictionaries, in turn, are highly concerned with collocations and colligations. Nevertheless, it is necessary not only to carry on corpus research to improve the language description, but also to consider the user’s MT. In this section, collocations and colligations were analysed in four EFL dictionaries for lower proficiency levels (A1-B1) from the perspective of the Brazilian user, that is, someone who has low proficiency levels in the English language (A1 and A2). I assumed that these dictionaries were designed to learners that want to reach levels of proficiency A2 and B1.

The following dictionaries were consulted:

1. **Oxford Essential Dictionary** (OxED2, 2012), which claims it is ‘for elementary and pre-intermediate learners of English’ (OxED2, 2012, cover) and indicates CEFR (2001) proficiency levels A1-B1 (OxED2, 2012, back cover);

2. **Cobuild Essential English Dictionary** (CoED2, 2014), which claims it is ‘for elementary and pre-intermediate learners of English’ (CoED2, 2014, cover) and indicates CEFR (2001) proficiency levels A1-B1 (CoED2, 2014, back cover);

3. **Cambridge Essential English Dictionary** (CaED2, 2011), which mentions A1-B1 proficiency levels (CaED2, 2011, back cover); and

4. **Longman Wordwise Dictionary** (LWord2, 2008), which only claims it is ‘for pre-intermediate - intermediate learners’ (LWord2, 2008, cover).

The analysis starts with two examples of collocations: ‘to get (the) flu’ and ‘to place an order’.

*Flu* is a word included in the *Cambridge English: Preliminary Wordlist* (CAMBRIDGE ASSESSMENT, 2012), a list of words that English learners are expected to use in decoding and encoding tasks for the Cambridge University test which attests the B1 proficiency level. For encoding tasks, the learner needs to know how the word *flu* combines with other words, such as verbs. However, as with any collocation, from *flu* it is not possible to deduce that one of the verbs that combine with this word is *to get*. For this reason, the learner tends to rely on the collocational patterns of their MT to produce collocations in the FL. In the case of a Brazilian EFL learner, the corresponding collocation is ‘pegar (uma) gripe’ [*to catch (a) flu*] (which also contains a colligational pattern, as will be discussed later).

Among the four dictionaries analysed, the collocation ‘to get (the) flu’ is only registered in the example of OxED2 (2012) without any indication that it is a collocation. LWord2 (2008) indicates another collocational pattern with the verb *to have* in the table ‘Usage’. CoED2 (2014) and CaED2 (2011) do not register any collocational pattern.

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20 LWord2 (2008) is the only one that does not use the reference levels of CEFR (2001). I assumed that the levels indicated are similar to the levels A2 and B1.
**Table 1:** Dictionary entries of *flu*

<table>
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<tr>
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<tbody>
<tr>
<td><strong>OxED2 (2012)</strong></td>
</tr>
<tr>
<td><em>flu</em> /fluː/ <strong>noun</strong> (no plural)</td>
</tr>
<tr>
<td>an illness like a very bad cold that makes your body sore and hot: <em>I think I’ve got flu.</em></td>
</tr>
<tr>
<td><strong>CoED2 (2014)</strong></td>
</tr>
<tr>
<td><em>flu</em> /fluː/ <strong>uncountable noun</strong></td>
</tr>
<tr>
<td>an illness that is like a very bad cold; short for ‘influenza’</td>
</tr>
<tr>
<td><strong>CaED2 (2011)</strong></td>
</tr>
<tr>
<td><em>flu</em> /fluː/ <strong>noun</strong> [no plural]</td>
</tr>
<tr>
<td>an illness like a very bad cold that causes pains and fever</td>
</tr>
<tr>
<td><strong>LWord2 (2008)</strong></td>
</tr>
<tr>
<td><em>flu</em> /fluː/ <strong>also the flu noun</strong> (no plural) a common illness which is like a very bad cold <strong>SYNONYM influenza</strong></td>
</tr>
<tr>
<td><strong>USAGE</strong></td>
</tr>
<tr>
<td>You say <em>She has flu</em> or <em>She has the flu.</em></td>
</tr>
</tbody>
</table>
| × Don’t say ‘She has a flu’.

*Order* is also registered in the *Cambridge English: Preliminary Wordlist* (CAMBRIDGE ASSESSMENT, 2012), and is included in a list of collocations that are difficult for Brazilian EFL learners too (ORENHA-OTTAIANO, 2015, p. 849). Just as with *flu*, the learner needs to know how *order* combines with other words, like verbs, but there is no way to know which verbs are these. In the case of Brazilian EFL learners, it is necessary to consider that the collocation equivalent to ‘to place an order’ in Portuguese is *fazer um pedido* [to make an order]. If the Brazilian learner translates this collocation word by word, the meaning s/he produces is pretty different from the intended one.

Among the four dictionaries analysed, the collocation ”to place an order” is included in OxED2 (2012, sense 4) and highlighted in bold, and in CoED2 (2014, sense 2), without highlighting. LWord2 (2008, sense 3) registers another collocation. CaED2 (2011) does not include the sense related to this collocation.
The collocation ‘to put an order’ indicated in LWord2 (2008) apparently is an alternative to ‘to place an order’. However, a search in the British National Corpus (BNC, 2007) revealed that ‘to put an order’ appears only three times, while ‘to place an order’ has 63 hits. For learners of lower proficiency levels in English, the most appropriate collocation seems to be the one with the highest frequency.

In general, there is a lack of systematicity in the inclusion of collocations and in the typographic highlighting used to call the learner’s attention to them.

The second part of the analysis focuses on colligations. There are several proposals to identify and classify colligations, such as Atkins and Rundell (2008, p. 305), Hoey (2005), and Legallois (2012, p. 39-42). These authors coincide in asserting that there are the following types of colligations: (1) Lexical item + part of speech; (2) Lexical item + syntactic function; (3) Lexical item on a syntactic position; and (4) Lexical item in a preferable inflection. Table 3 illustrates three types of colligations with examples from Brazilian Portuguese and English.

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The examples provided are contrasting to demonstrate the importance of including colligational patterns.
The first type of colligational pattern is followed by an example with the word flu. In this specific case, the colligational pattern is inserted into a collocational pattern. English and Portuguese choose different articles to go before gripe in Portuguese and flu in English. Brazilian EFL learners on A1 and A2 proficiency levels inevitably need to realize how is this colligation pattern in English in order to do not follow their MT pattern in Portuguese. Among the four EFL dictionaries (see Table 1 with entries on the previous pages), the colligation is included only in LWord2 (2008), in the usage note 'Usage', highlighted in bold and with an example of error.

The second and third types of colligational patterns are illustrated with the adverb already, which is also included in the Cambridge Assessment (2012) vocabulary list to reach the B1 proficiency level. It is an adverb used with perfect tenses (pattern 2) and disposed between the auxiliary verb and the main verb (pattern 3). It is also used in affirmative sentences. Its Portuguese equivalent is the adverb já, which can be used not only in affirmative sentences but also in interrogatives. Moreover, the verb tenses that follow the adverb já are not the same as those used in English with already. First, Brazilian Portuguese does not have a tense that corresponds to the present perfect; second, in Portuguese, the adverb já can be used in the past and also in sentences with future tense; finally, the adverb já is always before the main verb or sequence of verbs.

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22 See Bechara (2009, p. 252-266) for the tense and the aspect of Brazilian Portuguese verbs.
The colligational pattern (2) is clearly indicated in CoED (2014) in the ‘Language help’ box. In the other dictionaries, this information needs to be interpreted from the definition and/or examples. All dictionaries analysed require their users to interpret the colligational pattern (3) from the examples.

In broad terms, OxEd2 (2012), CaEd2 (2011), CoEd2 (2014), and LWord2 (2008) record collocational and colligational patterns. Nevertheless, the way these dictionaries include collocations and colligations is different in each case. The analyses in this section show that many times the Brazilian user (and in some cases any other user, I dare to say) will have to interpret collocational and colligational patterns from the definitions and/or examples. In other words, these dictionaries are not as efficient as they could be when they require an extra and preventable effort from their intended user, that is, someone who probably lacks the proficiency needed to interpret those pieces of information. For this reason, any learner’s dictionary should relate the information included to a well-defined user profile in order to be really user-friendly, considering at least the user’s MT (Brazilian Portuguese in this case) and their learning needs (represented here by the vocabulary list of Cambridge Assessment (2012)).

6 FINAL REMARKS

This work aimed to claim that it is possible to rely on and to systematise theoretical contributions from Psycholinguistics, Contrastive Linguistics, Applied Linguistics, Lexicology, and Cognitive Psychology to make learner’s dictionaries even more user-friendly.

First, Psycholinguistics offers another perspective to specify the user profile of learner’s dictionaries regarding their MT. It is a valuable contribution that reinforces what lexicographers and metalexicographers have been insisting on for at least twenty years. It is clear that much work still has to be done to explore ways to take advantage from the user’s MT.

Second, Applied Linguistics and Contrastive Linguistics draw our attention to the users’ needs, which emerge from the learning needs related to the proficiency level the intended user wants to reach and also emerge from the influences of the MT into the FL. Learners may certainly have many other needs, but, for this work, I could isolate these two.

Third, specifying the user profile and the user’s needs helps in selecting information to be included in the dictionary, but does not indicate how to do so. That is when other theories related to language (Lexicology) and cognition (Cognitive Psychology) come to play. As commented in section 4, Lexicological theories can give support about how to present MWE in an even more user-friendly way. Theories from Cognitive Psychology, in turn, can assist metalexicographers in determining how to take more advantage of pictures and salience effects in order to help the user realise, for example, that some words ‘go together’ with the word they are looking up, which words are these, and how they are disposed in a clause.
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DICTIONARIES


FURTHER REFERENCES


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