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Building a second-language writing aid for specific purposes: Promotional cheese descriptions



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ABSTRACT

The present paper describes the construction of a text generator (the CDG: Cheese Descriptions Generator), prompted by the need to assist Spanish-speaking professionals in the dairy industry in writing promotional cheese descriptions in English, the current lingua franca in business. This tool aims to bridge the gap between descriptive studies on second language writing and applications in real life contexts. To build this text generator, we compiled a specialized comparable corpus of online cheese descriptions in English and Spanish. The corpus was tagged rhetorically and explored using specific custom-made software to retrieve all the necessary linguistic information. The application offers both professionals in this field and business students the main rhetorical, phraseological and lexical features of this particular text type: a) general guidelines on the structure of these texts, b) an inventory of ready-made phraseological units to be used when describing cheeses, and c) an English-Spanish glossary of specialized and semi-specialized terms in this domain. The CDG generator is a writing assistance system designed for current and future Spanish-speaking professionals in the dairy industries that helps them promote their products internationally and export their cheeses to the rest of the world.

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1. Introduction

In our globalized world, international exchanges have become extremely common in all business areas. Because these transactions often involve participants with different mother tongues, the need for a *lingua franca* emerged and for the past few decades English has fulfilled this role. As a consequence, there has been an increasing demand for the teaching of business English. Much research has been devoted to linguistic studies of business English in general, and to business English as a *lingua franca* in particular, with the development of a new branch within the field of English for Specific Purposes (ESP) called BELF (Business English as a *Lingua Franca*). BELF aims to meet the needs of both business students and professionals who use English for various communicative purposes in business environments, focusing on the teaching of English as an international language shared by speakers of different mother tongues (Charles, 1996; Nickerson, 2005; Gerritsen & Nickerson, 2009; Kankaanranta & Louhiala-Salminen, 2013; Kankaanranta, Louhiala-Salminen, & Karhunen, 2015).

This paper is prompted by the need of non-native speakers of English who work in various professional environments and lack advanced writing skills in English, but are often required to produce texts for specific purposes in that language. These

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texts often include descriptions promoting specific goods and/or services offered by companies in different sectors and publicized on their websites. In Spain, for example, the dairy industry has developed greatly in the recent past and a large number of Spanish cheeses have won international awards and are now being exported all over the world. The Spanish-speaking professionals working in the dairy industry "are members of the global business discourse community and use the language to do their work" (Kankaanranta & Louhiala-Salminen, 2010: 205) and need to produce accurate and detailed descriptions in English of the cheeses they manufacture for successful commercial exchange.

In this study we describe a tool built to assist business professionals in Spanish dairy industries in writing precisely this type of text. This tool, which is a text generator to produce cheese descriptions in English, contributes to the development of the broad research area of second language writing. In learning a foreign language, one of the most difficult competences to develop is an idiomatic and native-like command of writing conventions. This involves the ability to write texts belonging to different genres, with different purposes and for different audiences in the foreign language, important issues that have attracted interest among EAP writing teachers and scholars (Kroll, 1990; Hamp-Lyons, 1991; Casanave, 2003; Hyland, 2019). For an updated selected bibliography on second language writing, see Silva, Wang, and Lucas (2019). One of the main issues in this area is to link scholarly research in writing with teaching practice, so that teachers can benefit from research findings. In the case of business English, it is essential to bridge the gap between academic research and the application to the workplace, often pointed out by different authors (Bhatia & Bremner, 2012; Sing, 2017). In order to accomplish this, for several years now the ACTRES project at the University of León, Spain (http://actres.unileon.es) has been engaged in building software for professional writing in a number of different fields, including online advertisements of electronic products (Labrador, Ramón, Alaiz-Moretón, & Sanjurio González, 2014), instruction manuals for household appliances (Cristobalena, 2016), meeting minutes (Pizarro Sánchez, 2017; Rabadán, 2016), wine tasting notes (López-Arroyo & Roberts, 2014a), herbal tea promotional texts (Izquierdo and Pérez Blanco, 2020), and dried meats (Ortego Antón, 2019). This paper describes the research protocol followed to construct these applications by exemplifying all the steps with one specific text generator: the CDG, a cheese descriptions generator.

2. Theoretical background

Many studies have explored in detail specialized discourses in English (Biber, Connor, & Upton, 2007; Connor & Upton, 2004). Much of the literature focuses on academic writing, including research articles (Swales, 1990, 2004), as well as theses and dissertations (Starfield & Paltridge, 2019),. Other rhetorical studies describe texts in different professional settings, for instance job applications, fund-raising letters or legal discourse (Bhatia, 1993, 2000; Connor & Gladkov, 2004). This type of research is highly relevant for non-native speakers of English who need to write specialized texts, both professional and academic, in English.

All the texts that belong to a particular professional genre share conventions that make them recognizable as belonging together. These conventions imply similarities in the rhetorical structure: texts typically contain a similar number of purposeful communicative units, and share a similar arrangement of these units. There have been different proposals in the literature on discourse analysis to describe these structural elements in a particular genre, including the prototypical phraseological resources employed in each unit (Bhatia, 1993, 2004; Biber et al., 2007; Swales, 1990, 2004). It is often difficult to establish clear boundaries between different genres, as there are frequent cases of overlap. An important approach to the description of these complexities in professional genres is the concept of 'interdiscursivity', put forward by Bhatia (2010). Interdiscursivity "refers to more innovative attempts to create various forms of hybrid and relatively novel constructs" (Bhatia, 2010: 35) by combining functions belonging to different prototypical genres. Drawing on this concept, our texts, cheese descriptions used by dairy industries to promote their products, can be considered an example of a hybrid genre: the product description genre and the promotional genre, thus displaying features of both informative language and persuasive language.

One of the most widely used methods for analyzing discourse structure in terms of genre is the move-step method proposed by Swales (1990, 2004) and further developed by other authors. According to Biber et al., a move "refers to a section of a text that performs a specific communicative function. Each move not only has its own purpose but also contributes to the overall communicative purpose of the genre." (Biber et al., 2007: 23). In addition, one particular move can be subdivided into steps and substeps, if required. All these units together give shape to the texts in a particular genre, so that they exhibit "various patterns of similarity in terms of structure, style, content and intended audience." (Swales, 1990: 58).

In addition to the rhetorical conventions of particular text-types like cheese descriptions, texts belonging to the same genre and field also share a number of lexico-grammatical patterns, as well as phraseological combinations. Recurrent multiword expressions have been the focus of many previous studies, which distinguish different types of combinations: collocations (Firth, 1957), units of meaning (Sinclair, 1991), lexical bundles (Biber, Johansson, Leech, Conrad, & Finegan, 1999), formulaic sequences (Wray, 2002), semantic sequences (Hunston, 2008), grammar patterns (Hunston & Francis, 2000), lexico-syntactic patterns (Montiel-Ponsoda & Aguado de Cea, 2011), among others Regular combinations that are shared by prototypical members of a particular genre constitute characterizing features of such genres. Providing corpus-based information about these naturally-occurring combinations is extremely useful for non-native speakers when writing in a foreign or second language, as language is made up of frequent word combinations. For this purpose we have compiled a comparable corpus of authentic cheese descriptions to be representative of this genre and extracted the relevant information regarding regularities in language use. Because all the texts are promotions of dairy products, the specialized and semi-specialized

terminology related to the field is also a common element. Therefore, the text generator The CDG includes not only prefabricated chunks of language, but also a glossary of cheese terminology that can be employed by the final users in writing their own promotional texts.

3. Second language writing aids and a brief description of the CDG

Writing in a non-native language is a complex task, but users can find a wide range of web-based tools available to assist them in the process, such as online dictionaries, grammar and spell checkers, word-processing systems, machine-translation tools, and bilingual corpora. Among the most complete applications for second language writing are Writing Assistance Systems (WAS), which are highly automated suites of tools containing different types of linguistic information, not only grammatical or lexical, but often also rhetorical and/or relevant contextual information. Existing WAS are either generallanguage oriented or specialized, mostly addressed to scholars writing scientific papers or abstracts in English. Some examples of WAS for general language writing include: CANDLE (Corpora And NLP for Digital Learning of English), an online English learning environment for learners in Taiwan (Chang & Chang, 2004) and FLOW (First-Language-Oriented Writing Assistant System), an interactive system for assisting EFL (English as a Foreign Language) writers (Chen, Huang, Hsieh, Kao, & Chang, 2012). Among WAS for specific purposes, we can find AMADEUS (AMiable Article DEvelopment for User Support), aimed at assisting non-native English users in scientific writing (Oliveira, Zucolotto, & Aluísio, 2006), SWAN (Scientific Writing AssistaNt), a tool to help scholars to identify and correct potential writing problems in their scientific papers (Kinnunen, Leisma, Machunik, Kakkonen, & Lebrun, 2012), the Scientific Abstract Generator, a text generator for producing abstracts in the bio sciences (López-Arroyo & Roberts, 2014a,b), and BEAR (Building English Abstracts by Ricoh), a tool based on rhetorical templates extracted from a parallel corpus and developed to help Japanese software engineers to write abstracts in English (Narita, Kurokawa, & Utsuro, 2002).

Taking into account the amount and variety of linguistic information provided, the tool described in this paper can be considered a specialized language WAS system. Our CDG text generator is a writing assistance system conceived and designed to enable non-native users to write a specialized document – promotional texts - in English in a very specific field – cheese descriptions – without necessarily having a high command of the target language. It includes information on the prototypical moves and steps identified, as well as examples of the most common phraseological structures used in English. Additionally, an English-Spanish glossary of technical and semi-technical terms is integrated in the generator. The CDG presents a high degree of automation and is specifically addressed to native speakers of Spanish, as the glossary implemented is a Spanish-English unidirectional lexicon. Also the interface and all the guidelines for the different sections are written in Spanish. Further versions of this tool may be addressed to speakers of other languages.

The CDG can be used in the second language writing classroom, especially in Business and Marketing degrees, but also in specialized training at the workplace. Previous studies of the teaching of business English include case studies based on authentic business materials (Chan, 2017; Walker, 2011), technology-enhanced pedagogical task proposals (Evans, 2012; Giménez, 2014), evaluation of business textbooks (Chan, 2009), and feedback given by business practitioners on texts produced by students (Zhang, 2013). CDG can be used either as an in-class activity in a formal training setting, or, alternatively, as a self-study tool for further practice outside the classroom.

The aim of this study is two-fold: a) to provide a detailed account of the procedure followed to build an innovative text generator of promotional cheese descriptions in English to assist Spanish professionals working in the dairy industry who need to write these descriptions, and b) to explore the language of a very specialized field, cheese descriptions, at several linguistic levels, from rhetoric to lexico-grammar and phraseology with potential pedagogical applications in mind. The CDG can enable Spanish cheese manufacturers to promote their products more efficiently at an international scale, thus improving their chances of success in exporting their produce to the rest of the world. Additionally, the CDG can be employed in the second language writing classroom to raise awareness of genre-specific conventions among Business students, who will need this skill in their future professional careers.

4. Material and methods

In this section, we will describe the English-Spanish comparable corpus and the procedure followed to build the the CDG, with separate sections devoted to each of the three linguistic levels included in the application: the rhetorical structure, the phraseological module and the lexical component.

4.1. The corpus: empirical data and tools

To build the text generator, we compiled an English-Spanish comparable corpus of specialized texts: promotional texts describing cheeses. This corpus contains two subcorpora, one in each working language, Spanish and English. Each subcorpus includes 150 online cheese descriptions with a total number of 22,834 words in English and 24,736 words in Spanish. The average number of words is 152 per text in English and 163 per text in Spanish. Spanish cheese descriptions are slightly longer. All the texts were downloaded in 2014) from freely available British and Spanish websites of either cheese manufacturing companies (http://www.wensleydale.co.uk, https://www.quesoelpalacio.com/, for example.), retailers or general websites describing different types of cheese (e.g. https://www.cheese.com, www.mundoquesos.com). The selection

of these websites was determined by the needs of the study and based on criteria of availability. All the texts included in each subcorpora were manually selected by the researchers to ensure homogeneity in the informative-promotional genre. In order to compile a sufficiently representative number of texts we selected a wide range of different sources in each language. As for the size of the corpus, it is less relevant in the case of specialized corpora than in general language corpora: "anywhere from about ten thousand to several hundreds of thousands of words in size have proved to be exceptionally useful in LSP studies" (Bowker & Pearson, 2002; 48).

The websites used are designed to encourage the consumption of cheese, either directly or indirectly (see Aappendix 1 for the list of English websites used to build the CDG); therefore, all the texts included in the corpus can be considered informative-promotional. Cheese descriptions are informative because they give objective data about the product, such as shape, size, weight, texture, flavour, and type of coating. The manufacturing process is also described in detail and can also be considered descriptive and objective. at the same time, the promotional nature of these texts is closely linked to the persuasive language that typically characterizes this particular genre: positive evaluation of the cheeses (e.g. with adjectives like *excellent*, *unique*, *delicious*, etc.), serving suggestions, as well as prizes and awards. The ultimate aim of the authors of these cheese descriptions is to convince the readers to buy their products; the names of the authors are never displayed in these websites and the readership is made up of all potential customers, namely adults interested in learning about different kinds of cheeses and/or buying them.

All the texts downloaded were originally in html format. The vast majority of the texts selected contained not only the description of the cheese but also one or more pictures, as well information on prices, instructions about how to place an order and shipping details, in the case of retailers/ manufacturers. Figure 1 shows an example of a cheese description including two pictures, the name of the cheese as a title, a paragraph describing the main characteristics of the cheese and its ingredients, and a list of features for quick reference. This sample text illustrates the frequent co-occurrence of two different formats in this genre: a) a paragraph where the characteristics of the cheese are described in the form of full sentences, and b) lists of phrases and/ or semitechnical terms summarizing the main features.

Pictures and the extra information concerning the purchasing process were deleted from the final texts to be included in the corpus. We saved the texts in txt format using UTF-8 encoding to enable the processing of the data with the software developed by the research team.

Once the two subcorpora, with the same number of texts and a similar number of words, were compiled, we annotated and explored the corpus using two tailor-made tools which had been specifically developed for this purpose: a tagger and a browser. First, because we are dealing with a specialized genre, it became necessary to tag our corpus with rhetorical labels indicating the main moves and steps in cheese descriptions. After analysing a small number of texts, we decided on a provisional list of rhetorical tags such as 'ingredients', 'serving suggestions'. These labels were implemented into the tagger by computer engineers so that we could annotate every single text in the corpus, one by one. We divided each text into chunks,



Figure 1. Sample text in the English subcorpus.

according to their function in context, and subsequently assigned a particular rhetorical label to each chunk (see Appendix 2 for a sample text labelled with moves and steps). This process was carried out manually. To ensure inter-rater reliability, the process was carried out separately by the two authors of the study, and we discussed all the differences encountered during the rhetorical tagging in order to reach an agreement about the final labels. Figure 2 shows an example of a text tagged assigning moves and steps by clicking on the corresponding section shown at the top of the window. The moves are shown in capital letters and the steps in lower case after the move they belong to.

Once the corpus was tagged rhetorically, we could start extracting data according to moves and steps in order to describe the language employed in each functional unit of cheese descriptions. The browser designed for this purpose was then used to retrieve the concordance lines of the relevant key words. The interface of the browser (see Figure 3) shows the screen divided into two halves, each one displaying the results of the searches in each language.

The dual screens allow for comparisons between English and Spanish, although the browser may also be used to search in only one subcorpus. It is possible to carry out searches in the whole subcorpus, or in particular moves and/or steps/ substeps. It is also possible to extract an entire move/ step/ substep without searching for a particular key word or multi-word expression. Another feature of the browser is that it can be used to obtain statistical data: frequency lists, number of words and percentage of texts in that language containing a particular move/step/substep. Finally, the browser can export the results in MS Word or pdf formats.

The English subcorpus of promotional cheese descriptions was used to build the CDG generator, following the top-down working procedure described below.

4.2. Rhetorical structure

The corpus was tagged following a rhetorical structure of 10 moves, some of which also have steps. A statistical analysis of the percentages of occurrence of the various moves/steps of the texts revealed that they were not present in all texts. Previous authors have classified moves according to whether they are obligatory, conventional or typical, and optional (Biber et al., 2007; Kanoksilapatham, 2005; Suter, 1993). Because the aim was to construct a generator of prototypical cheese descriptions in English, we established the minimum threshold of occurrence at 20% (Suter, 1993). Consequently, any moves or steps occurring in less than 20% of the texts in the corpus were discarded and not included in the generator. A total number of 3 moves and 1 step were excluded from the final rhetorical structure of the generator for this reason. Eventually, a total of 7 different moves were selected as prototypical in the rhetorical structure of promotional cheese descriptions in English:

Move 1: IDENTIFYING THE CHEESE

Step 1: name of the cheese (and PDO (Protected Designation of Origin))

Step 2: name of the company/ manufacturer

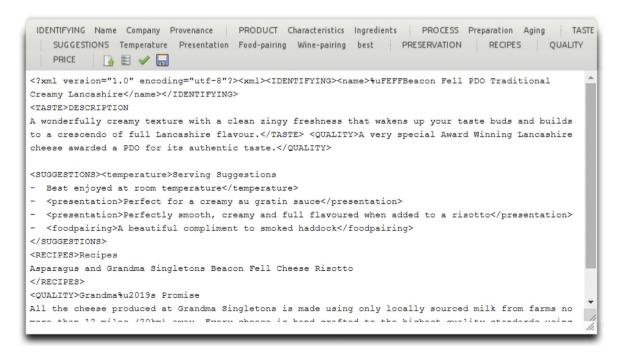


Figure 2. Interface of the rhetorical tagger with an example of an English cheese description.

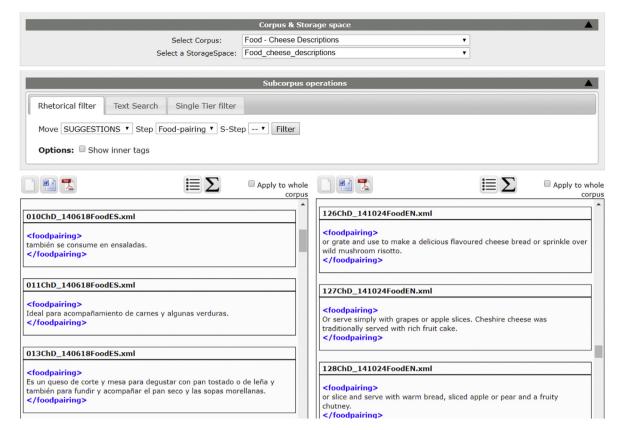


Figure 3. Sample search of Move 6: Suggestions, Step 3: Food Pairing, in Spanish and English in the browser.

Step 3: (geographical and historical) provenance

Move 2: SHOWING A PICTURE

Move 3: DESCRIBING THE PRODUCT

Step 1: characteristics: shape, size, texture, coating and weight

Step 2: ingredients: type of milk and rennet used

Move 4: DESCRIBING THE PROCESS

Step 1: preparation

Step 2: aging

Move 5: DESCRIBING THE SMELL AND TASTE

Move 6: OFFERING SERVING SUGGESTIONS

Step 1: temperature

Step 2: presentation

Step 3: food-pairing

Step 4: wine-pairing

Move 7: PROVIDING QUALITY ASSURANCE (quotations, awards, quality tests)

Because these 7 rhetorical unit were identified as prototypical, native speakers of Spanish should be aware that all the cheese descriptions they write in English should contain these parts, with a certain degree of flexibility. By using these moves and steps as a guide the non-native user can have some certainty that the final text produced will be idiomatic in the target language and successfully accepted by the target audience.

4.3. Phraseological structure: model lines

Once the initial stages of establishing the moves and steps and annotating the corpus with those labels was done, the browser was used to retrieve concordance lines within particular moves and steps. In doing so, we could isolate the most frequent lexico-grammatical patterns found to express one particular communicative function, as "language use in a conventionalized communicative setting [...] gives rise to stable structural forms by imposing constrains on the use of lexico-grammatical as well as discoursal resources." (Bhatia, 2004: 23). In some cases, we noticed that different authors had used

different formats to convey the same information. For example, to describe the characteristics of the cheese, some texts make use of lists of items, others make use of phrases, and still others present this information in the form of full sentences:

1. List:

- Fat content: 20%

- Texture: close and smooth

Rind: natural Colour: yellow

2. Phrase:

- Moist, hard pressed cheddar with a mature flavour.
- Shaped in small, round, flat cylinders and coated with a white rind.

3 Full sentence

- Single Gloucester is a light, crumbly, hard cheese.
- It is also available prepacked in blocks, ready grated (in 250 g packs), ready sliced (10 slices per pack) and from the service counter.

Similarly, in each of these different formats, we identified the recurrent phraseological patterns that are most commonly employed to convey each different communicative function within each move or step. We then decided which aspects of these patterns may be common to any cheese description and which would have to be edited by the final user to adapt the suggestion given to each particular cheese. This was done by deleting some words from the authentic examples taken as prototypes and leaving blanks between brackets with a short indication of what type of information should be inserted there to complete the sentence or paragraph. Our research team has coined the term 'model lines' to identify these template-like lexico-grammatical patterns or suggestions with gaps to be filled by each user as deemed appropriate. For instance, the following sentence extracted from the corpus was considered relevant for inclusion in the text generator: *It has a tangy flavour with a nice touch of salt and a lingering finish.* To adapt this particular sentence to any potential cheese description, we deleted the words *tangy* and *salt*, and left gaps to be filled by the end user. In the interface the gaps are shown in green together with a generic term in Spanish referring to what is required to complete the sentence, in this case *cualidad* (quality) and *alimento* (food).

It has a cualidad flavour with a nice touch of alimento and a lingering finish.

4.4. Glossary of technical and semi-technical terms

In addition to the rhetorical and phraseological information, we also used the corpus to compile a unidirectional Spanish-English bilingual glossary of technical and semi-technical terms identified as relevant lexical items in the particular field of cheese descriptions. The browser provided wordlists with the most frequent lexical items in our corpus and these were used as a starting point for the glossary. All the grammatical words were discarded, together with general vocabulary unrelated to the domain of cheese. Each entry contains a) the term in Spanish for which the user might need an equivalent in English, b) the equivalent(s) in English, and c) examples of usage. In addition, we added the part of speech to each term in the glossary (noun, verb, adjective or adverb), which later enabled us to establish grammatical restrictions for some of the gaps to be filled in the model lines. For instance, the gaps requiring 'quality' or 'food' in the example above would not show any equivalents of verbs as suggestions given to the user to fill the gap.

The glossary contains a total of 831 technical and semi-technical term entries in Spanish related to the production, description and consumption of cheese, both single terms and multi-word expressions. Because the final user is expected to write the texts in English, each entry includes an example from the corpus as a model of authentic use, where the equivalent is highlighted in capitals. Below we can see an example of an entry:

grabado con cincho o pleita: basket weave pattern

It is an un-pressed cheese, quite firm, with a slightly open texture and has an attractive shape with its BASKET WEAVE PATTERN on its surface.

All the linguistic information extracted from the three stages of the analysis - rhetorical, phraseological and lexical - was then fed into the CDG generator to construct a user-friendly application which will assist the final Spanish-speaking user in writing highly idiomatic cheese descriptions in English. The following section will describe and illustrate this tool in detail.

5. The Cheese Description Generator (CDG)

The previous compilation of empirical data and the subsequent linguistic treatment and analysis led to the construction of the CDG text generator, a semi-automatic tool which enables Spanish-speaking end users to write a new cheese description in English from scratch. The CDG interface, shown in Figure 4, was designed to guide the user through the

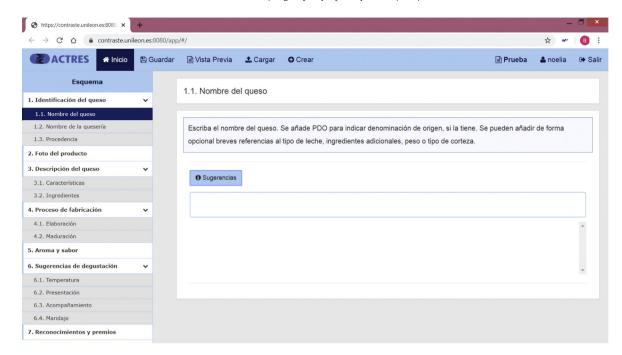


Figure 4. Cheese Description Generator (CDG) interface.

writing process in an intuitive way (a free demo is available at https://actres.unileon.es/demos/generadores/applications. html#generators2Section).

The left-hand column provides an overview of all the rhetorical sections that need to be included: the moves and the steps, with the names in Spanish, as the tool is for use by to Spanish speakers. The central part of the screen will show a separate writing area for each move and step, which will appear one by one as the user selects them. For each step/move there is a specific writing tip indicating what should be included in that particular section. This includes suggestions like the number of sentences, the type of format, and the contents. All these data were gathered during the previous corpus-based analysis. For example:

5.1. Elaboración (Cheese-making process)

Escriba entre 1 y 5 oraciones describiendo el proceso de elaboración del queso. (Write between 1 and 5 sentences describing the cheese-making process.)

Some steps/moves include the option to select one out of two or three different formats for the content, as in the case of 3.1 *Characteristics*, where the user may choose between lists, phrases or full sentences (see Figure 5). Only one format may be chosen, as they are mutually exclusive.

Next, a variable number of model lines is displayed in the form of a pop-up menu. For example, in section 3.2 *Ingredients*, after choosing the format "full sentences", we get the following list of suggestions, with one tip advising the user to select only one of them (see Table 1):

As we can see, all the model lines are pre-fabricated sentences with only a small number of gaps shown in green to be filled by the end user. The gaps are not empty but contain words in Spanish which are superordinate terms of the possible fillers in English. It is the user who will fill these gaps with a word that belongs to that particular semantic field. By sliding the cursor over each of the suggestions, it will be highlighted and an example from the corpus will appear automatically. This example will show in bold the gaps the user has to fill in. For example, if we choose the model line: It has a characteristic (color) hue given by the addition of (ingredient) to the milk, we have two gaps to fill: one with a colour and another with an ingredient. Once a particular model line has been selected, during the whole writing process, the user will always see the example as a model displayed above the writing area, in this case with light orange and annatto in bold, as in Figure 6.

When the actual typing process begins, the user can start filling the gaps with the missing parts in English. However, if users are not sure about a particular word in English, they may enter it in Spanish and, if this word is in the glossary, one or more equivalents in English will appear automatically in a pop-up window. The user is then free to choose from the suggestions given or decide to use a different option. The glossary is unidirectional, i.e. it is intended for users to search exclusively for Spanish terms to find their English equivalents. One particular Spanish term may have only one equivalent in

1. Características		
as característi	cas pueden aparecer en forma de l	lista, fragmentos u oraciones completas. Elija uno de los 3 formatos
Elija Formato:	Selecciona	•
	Selecciona En forma de listas En forma de fragmentos oracionales.	

Figure 5. Selection of format in Move 3: Describing the product, Step 1: Characteristics: (The characteristics may appear in the form of lists, sentence fragments or complete sentences. Choose one of the 3 formats).

English: desuerar/drain off the whey. These 1-to-1 correspondences tend to occur mostly in the case of more technical terms. All the English equivalents are given along with an example from the corpus. When the user accepts the suggestion given, the generator automatically introduces the English equivalent in the gap. Figure 7 shows how the glossary identifies terms (suero) by detecting them while they are being typed in Spanish (suer-). The equivalent is provided (whey), together with an authentic example from the corpus. Just by clicking on it, the equivalent will be added to the draft being written.

In some cases, one Spanish term has two or more potential equivalents in English; this usually happens with less technical or semi-specialized terms. In this case the user can choose the most suitable term for their purposes. Authentic examples from the corpus are offered to guide the user through this process of selection. For example: if a user types the Spanish adjective *blando*, the application will show the following options, always highlighting the search term in blue and the various equivalents in English in red:

- suave, delicado, blando MELLOW Garstang Blue is a unique, rich, MELLOW and indulgent blue cheese with an open body and a velvety, smooth and creamy texture.
- blando, húmedo, acuoso MOIST A crumbly MOIST texture with a tang similar to a Wensleydale.
- suave, cremoso, blando, liso SMOOTH Close and SMOOTH in texture, the cheese contains a minimum of 20% milk fat and a maximum of 60% water.
- blando, fresco SOFT Mild and smooth with a slight tang which is creamy in colour with a SOFT moist open texture.
- elástico, colante, blando, fundente, soluble SPRINGY When young it is SPRINGY and mild but as it matures subtle sweet flavours develop and the texture becomes firmer.
- blando, elástico, flexible SUPPLE The result is a sweet flavoured cheese with a SUPPLE texture.

A total of 6 equivalents are suggested for *blando*. Taking into account that the CDG user must have at least an intermediate level of English to be able to use this tool, the real examples provided together with the synonyms of *blando* in each different entry will be sufficient for the user to decide on the most appropriate option for their particular purposes. As in the previous case, just by selecting one option, the English term will automatically appear in the draft being typed. As only lexemes are provided, the end user may need to edit the suggestions given by the glossary following the rules of English morphology. The adaptations that need to be made are mostly: singular/plural forms, 3rd person singular –s ending, tenses, etc.

As for extralinguistic features, because many cheese descriptions are written for online publication, our text generator also offers the option of adding one or more pictures of the cheese, making the final outcome a multimodal text. This option is given in Move 2, although the user may eventually move the picture somewhere else in the final text.

After filling in all the necessary gaps in the selected model lines within all the moves and steps of a particular cheese description, the user can preview the outcome, edit it and finally save it as an MS Word file. The resulting cheese description will be highly idiomatic and follow the rhetorical and phraseological conventions typical of this genre in English, but it will always be a completely new text with all the particular information about the cheese described in each instance. All the model lines suggested, a total of 190, have been taken and adapted from 150 different cheese descriptions in English, thus ensuring a wide range of lexico-grammatical options to choose from and scarce likelihood of repetitions in different texts written with the help of the CDG by either the same or different users. The use of the CDG enhances the quality of cheese descriptions written by Spanish speakers, which have the potential to improve the international promotion of these cheeses and, hopefully lead to an increase in their sales abroad.

The first prototype of the CDG was tested by professionals from the dairy industry. The authors contacted a local cheese company (*Quesería El Palacio*) and invited part of their staff to an informal trial session. After making use of the CDG text

Table 1Model lines suggested for Move 3: Describing the product, Step 2: Ingredients.

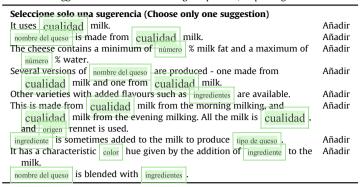




Figure 6. Sample model line with gaps and an example from the corpus in Move 3: Describing the product, Step 2: Ingredients.



Figure 7. Term search in the glossary.

generator, the users provided a few suggestions regarding the layout of the interface to make it more user-friendly, and the inclusion of certain terms in the glossary. Their feedback was implemented in the final version, which was then registered as intellectual property by the University of León under the Spanish acronym GDQ (Generador de Descripciones de Quesos) with reference numbers 00/2017/883 and 00/2017/884. There are also plans to implement the use of the CDG in the Business and

Marketing degrees at the University of León, to improve genre-based second language writing in professional environments. The idea is to assign each student one particular cheese from a real Spanish dairy and ask them to write an informative-promotional description of it in English as if it was going to be marketed internationally in the near future. The students will need to look for information on that particular cheese to inform themselves and then use the CDG to complete the writing task to be handed in and marked. Therefore, the CDG text generator can be applied both in real professional environments and in business teaching contexts. Using the CDG may not always guarantee perfect outcomes, as it largely depends on the proficiency of the user; however, we believe that it constitutes a helpful writing assistance system and it can be the basis for more sophisticated future developments along the same line.

6. Conclusions

Two research areas underpin this study: English as a *lingua franca* for business contexts and second language writing. The use of English as the main language for communication in business and trade has led to a widespread increase in second language writing practice, thus making writing assistance for non-native speakers of English more necessary than ever. The present paper has described the construction of the CDG, a text generator, prompted by the need to assist Spanish-speaking professionals in the dairy industry to writie informative-promotional descriptions of cheese following the prototypical rhetorical, phraseological and lexical features of this particular text type written in English. The CDG is a very rich template-like resource including a) detailed guidelines on the structure of this type of texts, b) an inventory of ready-made phraseological units to be used when describing cheeses (model lines), and c) a Spanish-English glossary of specialized and semi-specialized terms in the dairy industry. With such materials at hand, online cheese vendors can easily make their products visible in the global market, leading to the possibility that their cheeses will probably be more appealing to potential buyers when they are presented in the form of rich and idiomatic descriptions.

The main features of our text generator, as well as the working procedure followed to obtain the relevant data to build it, can easily be replicated to improve second language writing in other specialized genres with similar needs. Therefore, the line of research described in this paper shows a high degree of transferability from the dairy industry to other professional areas and from the genre of informative-promotional texts to other genres, which may also benefit from specific writing aids.

The CDG assists non-native speakers of English in writing texts promoting cheese; however, this tool could also be useful to write online promotional descriptions of other products in other sectors, as the rhetorical structure and the model lines will probably share similar features. Regarding the glossary, the technical words related to the cheese industry may be too specific for other sectors, but the glossary of the CDG also contains semitechnical words that can be suitable in other professional contexts. For specific needs, the whole process described in this paper is replicable from scratch using texts from any particular genre in any pair of languages.

The starting point for constructing the generator was the compilation of an English-Spanish comparable corpus of authentic cheese descriptions. Customized software was developed by computer specialists to enable us to tag the corpus rhetorically and later extract the relevant linguistic information at different levels. Finally, a user-friendly text generator was built including many highly detailed guidelines and resources aimed at the linguistically accurate and pragmatically acceptable production of one particular text type by non-native speakers. The whole procedure described in great detail in section 2 above can be reproduced to construct new text generators for any genre where professional writing strategies are required.

The CDG clearly facilitates text production, making end users more confident about the quality of their texts, speeding up the writing process, and reducing costs, as fewer translation services will be needed. This application will hopefully provide much-needed support for the Spanish dairy industries, in particular small and medium-sized businesses, in expanding their markets more efficiently and increasing their sales worldwide.

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Appendix 1

List of websites from which the texts in the corpus were retrieved:

CHEESE.COM-SPECIALTY CHEESES (https://www.cheese.com). Accessed 10 October 2014.
BRITISH CHEESE BOARD (http://www.britishcheese.com). Accessed 10 October 2014.
WEST COUNTRY FARMHOUSE CHEESEMAKERS (http://www.farmhousecheesemakers.com). Accessed 10 October 2014.
GRANDMA SINGLETONS (http://www.grandma-singletons.co.uk). Accessed 16 October 2014.
THE SWALEDALE CHEESE COMPANY (http://www.swaledalecheese.co.uk). Accessed 16 October 2014.
STILTON-BRITAIN'S HISTORIC BLUE (http://www.stiltoncheese.co.uk). Accessed 16 October 2014.
WENSLEYDALE CREAMERY (http://www.wensleydale.co.uk). Accessed 16 October 2014.

STAFFORDSHIRE CHEESE CO (http://www.staffordshirecheese.com). Accessed 24 October 2014.

SMARTS – THE CHEESE HOUSE (http://www.smartsgloucestercheese.com/cheeses.html). Accessed 10 October 2014.

WAITROSE (http://www.waitrose.com/content/waitrose/en/home/recipes/food_glossary/cheese_hard.html). Accessed 24 October 2014.

Appendix 2

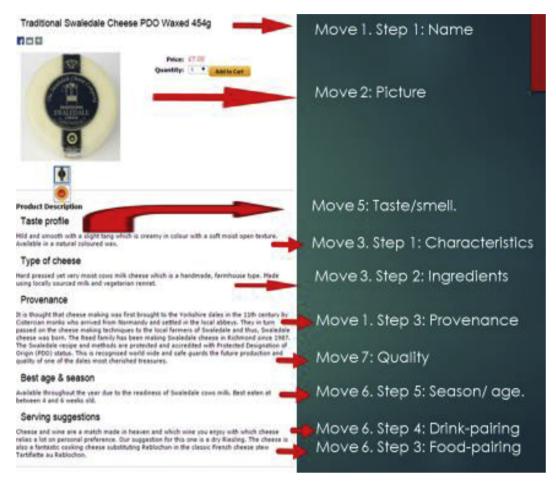


Figure 8. Sample text with move and step labels.

References

Bhatia, V. K. (1993). Analysing genre: Language use in professional settings. London: Longmanhttps://doi.org/10.4324/9781315844992.

Bhatia, V. K. (2000). Discourse of philanthropic fundraising. New Directions for Philanthropic Fundraising, 22, 95-110.

Bhatia, V. K. (2004). Worlds of written discourse. London: Continuum.

Bhatia, V. K. (2010). Interdiscursivity in professional communication. *Discourse & Communication*, 21(1), 32-50. https://doi.org/10.1177/1750481309351208. Bhatia, V. K., & Bremner, S. (2012). English for business communication. *Language Teaching*, 45(4), 410-445. https://doi.org/10.1017/S0261444812000171. Biber, D., Connor, U., & Upton, T. (2007). *Discourse on the move*. Amsterdam: John Benjamins.

Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). Longman grammar of spoken and written English. London: Longman.

Bowker, L., & Pearson, J. (2002). Working with specialized language: A practical guide to using corpora. London: Routledgehttps://doi.org/10.4324/9780203469255.

Casanave, C. P. (2003). Controversies in second language writing: Dilemmas and decisions in research and instruction. Ann Arbor: University of Michigan Press. Chan, C. S. C. (2009). Forging a link between research and pedagogy: A holistic framework for evaluating business English materials. English for Specific Purposes, 28(2), 125-136. https://doi.org/10.1016/j.esp.2008.12.001.

Chan, C. S. C. (2017). Investigating a research-informed teaching idea: The use of transcripts of authentic workplace talk in the teaching of spoken business English. *English for Specific Purposes*, 46, 72-89. https://doi.org/10.1016/j.esp.2016.12.002.

Chang, J., & Chang, Y. (2004). Computer assisted language learning based on corpora and natural language processing: The experience of project CANDLE. *IWLeL* 2004: An Interactive Workshop on Language e-Learning, 15-23.

Charles, M. (1996). Business negotiations: Interdependence between discourse and the business relationship. Business English, 15(1), 19-36.

Chen, M., Huang, S., Hsieh, H., Kao, T., & Chang, J. S. (2012). FLOW: A First-Language-oriented writing assistant system. In *Proceedings of the 50th annual meeting of the association for computational linguistics*, 157–162, Jeju, Republic of Korea, 8-14 July. Association for Computational Linguistics.

Connor, U., & Gladkov, K. (2004). Rhetorical appeals in fundraising direct mail letters. In U. Connor, & T. A. Upton (Eds.), Discourse in the professions: Perspectives from corpus linguistics (pp. 257-286). Amsterdam/Philadelphia: John Benjamins.

Connor, U., & Upton, T. A. (Eds.). (2004). Discourse in the professions: Perspectives from corpus linguistics. Amsterdam/Philadelphia: John Benjaminshttps://doi.org/10.1075/scl.16.

Cristobalena, A. (2016). Análisis contrastivo inglés-español de los manuales de instrucciones de electrodomésticos - English-Spanish contrastive analysis of instruccion manuals for household appliances. PhD Thesis. León: University of León.

Evans, S. (2012). Designing email tasks for the Business English classroom: Implications from a study of Hong Kong's key industries. *English for Specific Purposes*. 31(3), 202-212. https://doi.org/10.1016/j.esp.2012.03.001.

Firth, J. R. (1957). Papers in linguistics 1934-51. Oxford: Oxford University Press.

Gerritsen, M., & Nickerson, C. (2009). BELF: Business English as a lingua franca. In F. Bargiela-Chiappini (Ed.), *The handbook of business discourse* (pp. 180-192). Edinburgh: Edinburgh University Press.

Giménez, J. (2014). Multi-communication and the business English class: Research meets pedagogy. English for Specific Purposes, 35, 1-16. https://doi.org/10. 1016/j.esp.2013.11.002.

Hamp-Lyons, L. (Ed.). (1991). Assessing second language writing in academic contexts. Norwood, N.J.: Ablex Pub. Corp.

Hunston, S. (2008). Starting with the small words: Patterns, lexis and semantic sequences. *International Journal of Corpus Linguistics*, 13(3), 271-295. https://doi.org/10.1075/jicl.13.3.03hun

Hunston, S., & Francis, G. (2000). Pattern grammar: A corpus-driven approach to the lexical grammar of English. Amsterdam: John Benjaminshttps://doi.org/10. 1075/scl.4.

Hyland, K. (2019). second language writing. Cambridge: Cambridge University Press.

Izquierdo, M., & Pérez Blanco, M. (2020). A multi-level contrastive analysis of promotional strategies in specialised discourse. *English for Specific Purposes*, 58, 43-57.

Kankaanranta, A., & Louhiala-Salminen, L. (2010). "English? – Oh, it's just work!": A study of BELF users' perceptions. *English for Specific Purposes*, 29(3), 204-209. https://doi.org/10.1016/j.esp.2009.06.004.

Kankaanranta, A., & Louhiala-Salminen, L. (2013). "What language does global business speak?" – the concept and development of BELF. *Iberica*, 26(2013), 17-34

Kankaanranta, A., Louhiala-Salminen, L., & Karhunen, P. (2015). English in multinational companies: Implications for teaching "English" at an international business school. *Journal of English as a Lingua Franca*, 4(1), 125-148. https://doi.org/10.1515/jelf-2015-0010.

Kanoksilapatham, B. (2005). Rhetorical structure of biochemistry research articles. English for Specific Purposes, 24, 269-292. https://doi.org/10.1016/j.esp. 2004.08.003.

Kinnunen, T., Leisma, H., Machunik, M., Kakkonen, T., & Lebrun, J. (2012). SWAN-scientific writing AssistaNt: A tool for helping scholars to write reader-friendly manuscripts. In *Proceedings of the demonstrations at the 13th conference of the European chapter of the association for computational linguistics* (pp. 20-24). https://doi.org/10.13140/2.1.3284.4808.

Kroll, B. (Ed.). (1990). second language writing: Research insights for the classroom. Cambridge: Cambridge University Press.

Labrador, B., Ramón, N., Alaiz-Moretón, H., & Sanjurjo González, H. (2014). Rhetorical structure and persuasive language in the subgenre of online advertisements. English for Specific Purposes, 34, 38-47. https://doi.org/10.1016/j.esp.2013.10.002.

López Arroyo, B., & Roberts, R. (2014b). A corpus based writing aid for Spanish language authors: The scientific abstract generator prototype. *International Journal of Linguistics and Communication*, 2(2), 13-42.

López-Arroyo, B., & Roberts, R. (2014a). English and Spanish descriptors in wine tasting terminology. *Terminology*, 20(1), 25-49. https://doi.org/10.1075/term. 20.1.02lop.

Montiel-Ponsoda, E., & Aguado de Cea, G. (2011). Using natural language patterns for the development of ontologies. In V. Bhatia, P. Sánchez Hernández, & P. Pérez-Paredes (Eds.), Researching specialized languages (pp. 211-229). Amsterdam: John Benjamins. https://doi.org/10.1075/scl.47.15mon.

Narita, M., Kurokawa, K., & Utsuro, T. (2002). A web-based English abstract writing tool using a tagged EJ parallel corpus. In *Proceedings of 3rd international* conference on language resources and evaluation (pp. 2115–2119).

Nickerson, C. (2005). English as a lingua franca in international business contexts. English for Specific Purposes, 24(4), 367-380. https://doi.org/10.1016/j.esp. 2005.02.001.

Oliveira, O. N., Zucolotto, V., & Aluísio, S. M. (2006). Developing strategies to produce better scientific papers: A recipe for non-native users of English. CoRR abs/cs/0611013.

Ortego Antón, M. T. (2019). Las fichas descriptivas de embutidos en español y en inglés: Un análisis contrastivo de la estructura retórica basado en corpus. Revista Signos. Estudios de Lingüística, 53(102), 170-194. https://doi.org/10.4067/S0718-09342020000100170.

Pizarro Sánchez, I. (2017). A corpus-based analysis of genre-specific multi-word combinations: Minutes in English and Spanish. In T. Egan, & H. Dirdal (Eds.), Cross-linguistic correspondences. From lexis to genre (pp. 221-252). Amsterdam/Philadelphia: John Benjamins. https://doi.org/10.1075/slcs.191.09san.

Rabadán, R. (2016). Proposals in meeting minutes: An English-Spanish corpus-based study. Languages in Contrast, 16(2), 213-238. https://doi.org/10.1075/lic.16.2.03rab.

Silva, T., Wang, Z., & Lucas, K. (2019). Selected bibliography of recent scholarship in second language writing. *Journal of Second Language Writing*, 45, 93-104. https://doi.org/10.1016/S1060-3743(96)90016-8.

Sinclair, J. (1991). Corpus, concordance, collocation. Oxford: Oxford University Press.

Sing, C. S. (2017). English as a lingua franca in international business contexts: Pedagogical implications for the teaching of English for Specific Business Purposes. In F. Rainer, & G. Mautner (Eds.), Business communication: Linguistic approaches (pp. 319-356). Berlin: De Gruyter.

Thesis and dissertation writing in a second language: Context, identity, genre. In Starfield, S., & Paltridge, B. (Eds.), Special issue of journal of second language writing, (2019). Amsterdam: Elsevier.

Suter, H. J. (1993). The wedding report: A prototypical approach to the study of text types. Amsterdam/Philadelphia: John Benjamins.

Swales, J. (1990). Genre analysis: English in academic and research settings. Cambridge: Cambridge University Press.

Swales, J. (2004). Research genres. Explorations and applications. Cambridge: Cambridge University Presshttps://doi.org/10.1017/CB09781139524827.

Walker, C. (2011). How a corpus-based study of the factors which influence collocation can help in the teaching of business English. *English for Specific Purposes*, 30(2), 101-112. https://doi.org/10.1016/j.esp.2010.12.003.

Wray, A. (2002). Formulaic language and the lexicon. Cambridge: Cambridge University Presshttps://doi.org/10.1017/CB09780511519772.

Zhang, Z. (2013). Business English students learning to write for international business: What do international business practitioners have to say about their texts? English for Specific Purposes, 32(3), 144-156. https://doi.org/10.1016/j.esp.2013.01.002.

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