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Dissemination of Corporate Web Information in Spanish: The Case of the US Healthcare Sector

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Abstract. In the business context, to achieve international projection the use of several languages is essential. The healthcare sector is not an exception, as it is a remarkable domain of specialization. So, the analysis of the keys to corporate language management –considered as the application of communicative management strategies regarding business internationalization processes– on the Web is fundamental. The main objective of this work is to identify the main features that multilingual corporate web communication presents, specifically in the English>Spanish language combination. To this end, a sample of corporate websites of US companies in the healthcare sector extracted from the Fortune 500 ranking, published annually by Fortune magazine, is analyzed. A statistical analysis of frequencies and correlations has been carried out. Results show that 58.3% of the websites studied have undergone some kind of linguistic management processes from a multilingual perspective. In addition, Spanish language occupies a prominent role in the processes of corporate web information dissemination. The data obtained seem to indicate that healthcare US corporations tend to make considerable efforts to disseminate their web information in a wide range of languages. This endeavor seems to increase in the case of Spanish language. However, these efforts are still limited.

Keywords: Web Marketing, Multilingual Information, Healthcare Sector.

1 Introduction

The healthcare sector is one of the largest in the world. In particular, the US healthcare sector is probably one of the major industries in the world. For this reason, studying the characteristics of the dissemination of corporate web information of these companies is especially relevant to know the keys of a successful language management for the internationalization of companies.
The Web is an established means of disseminating information because it is not subject to geographical limits and it reaches a very large audience. Given this nature and, above all, its easy access from anywhere in the world, it is necessary to offer multilingual information capable of meeting the needs of a wide range of users, thus overcoming language barriers [1]. Specifically, in the business context, for most companies, the first step in getting started in digital marketing is to create a website [2]. Regardless of the

size of the corporations and their field of activity, in order to achieve an international projection, the use of one or several foreign languages is essential [3], since it allows to bring users from diverse linguistic and cultural contexts closer together.

In the United States, this circumstance is compounded by the fact that it has a considerable population of speakers of languages other than English. According to the United States Census Bureau [4], there are more than 65 million people living in the United States who speak a language other than English in their homes. This suggests that the United States has a significant population that would need to access information (including online information) in a language other than English.

It is estimated that there are about 40 million Spanish speakers living in the United States [5]. In addition, Spanish is the third most used language on the Web, and is even the second most used on Twitter in a mostly English-speaking city like New York [6]. This makes it especially important for US corporations to disseminate their web information in Spanish. In this way, their language management processes will be geared towards both an international and a national Spanish-speaking audience.

The main objective of this work is to identify the main features that characterize multilingual corporate web communication, specifically in the English>Spanish language combination. To this end, a sample of corporate websites of US companies from the healthcare sector extracted from the Fortune 500 ranking [7], published annually by Fortune magazine, is analyzed. This main objective is subdivided into two specific objectives: SO1) To identify the strategies applied in the multilingual dissemination of the corporate websites of the US healthcare sector and, SO2) To determine the role of Spanish language in the dissemination of the information in these websites and the particularities it presents.

2   Theoretical background

Globalization brought about by technological advances has opened the world to international trade more than at any other time in history [8]. However, this new scenario has also given rise to many communication problems [9]. One of these problems is the language and cultural barriers between users.

In response to these communication problems, in the language service industry new professional profiles characterized by the use of new software tools, the mastery of communication channels and the acquisition of market knowledge have emerged [10]. Among these profiles, localization and transcreation stand out.

Localization is understood as a communicative, technological, textual and cognitive process through which websites are modified to be used by audiences around the world other than those initially intended [11]. Transcreation is understood as the process through which certain parts of a text are translated and others are creatively reinterpreted [12–14]. Both activities entail key activities in the internationalization processes of companies of all sizes and from all sectors through the Internet.

The Web has increasingly become a regular source of health information by connecting people to health content, experts and support [15]. Medical corporate websites (among

other types of medical materials, such as leaflets, clinical guides or online forums) have recently emerged as the main source of information for the general public [16]. Therefore, websites with medical information have a considerable volume of users.

The healthcare sector is also one of the largest business industries in the world. A small proof of this is its outstanding presence in the renowned Global 500 [17] ranking, an annual classification of the 500 largest corporations in the world, according to their income, compiled and published annually by Fortune magazine. In 2019, the 26 healthcare corporations included in the ranking –of which 15 are US corporations– exceeded 2 trillion dollars in turnover. For these companies, localization and transcreation processes are key to overcome the linguistic and cultural barriers that separate them from potential customers, both international and national.

According to the United States Census Bureau [5], out of the more than 65 million people who speak a language other than English at home, 25 million consider their level of English to be "less than very good". Thus, failing to adapt this type of product imposes a series of barriers to access the healthcare system for certain population segments [18] and implies a potential loss of consumers for companies [19, 20].

Specifically, in the United States, interest has grown in recent years in adapting linguistically and culturally healthcare information resources, from leaflets to IT tools, to make them more accessible to the Spanish-speaking population. According to the 2018 census, there are currently more than 16 million Spanish speakers in the US who consider their English skills to be "less than very good" [5]. In addition, some research suggests that for the Latino population, the language problems in healthcare settings and the lack of information in Spanish are barriers to seeking healthcare [21, 22].

Some authors have worked on transcreation techniques (defined differently by each author) to adapt health information material for the Latino population in the U.S. [23–28]. These works range from analyzing translation errors in order to establish a guide to properly transcreate information materials for Latino population, to actively carry out processes of transcreation (leaflets and informational materials mostly, but also IT tools). Authors define transcreation differently in their works, but there seems to be a shared notion of transcreation as a combination of translation and cultural adaptation. Thus, the concern with linguistically and culturally adapting health information for the Spanish-speaking population has been a concern in the United States over the past decade, and transcreation techniques seem to be acknowledged as a useful tool to do so.

Still, Spanish is the second language in the world with the highest number of native speakers, and is the second language of international communication. In 2018, 7.6% of the world's population is Spanish-speaking [6]. Thus, Spanish becomes a language of great relevance in the international context, but also, in the national context of the US.

3   Methodology

For this work, data regarding the linguistic management of the sample websites were collected such as: 1) How many companies are offering their website in more than one language, 2) In how many languages companies show their content, 3) How many websites adapt their content into Spanish language, 4) To which extent Spanish language

variants are used, and 5) How they manage the URLs on the websites adapted into Spanish. The data were treated with the SPSS statistical package –version 22– through the analysis of frequencies and correlations.

The prestigious Fortune 500 ranking –which is complementary to the already mentioned Global 500 ranking– was used to select the analysis sample. This is an annual ranking of the largest 1000 U.S. corporations published by Fortune magazine. It ranks corporations based on their revenue in the last year and only includes companies that are incorporated and operating in the United States [7]. It also classifies the companies included according to the sector to which they belong. For this work, only the 72 companies included under the heading 'Health care' have been considered. The annual turnover of these companies ranges from $19 billion to $226 billion.

According to the Fortune 500 ranking, the analyzed websites belonged to 7 subsectors: Insurance and Managed Care (9 companies, 12.5%), Wholesalers: Health Care (6 companies, 8.3%), Pharmacy and Other Services (12 companies, 16.7%), Pharmaceuticals (15 companies, 20.8%), Medical Facilities (11 companies, 15.3%), Medical Products and Equipment (18 companies, 25%) and Scientific, Photographic and Control Equipment (1 company, 1.4%).

4   Results and discussion

4.1   Linguistic management and diversity

Data were obtained regarding the language in which the websites offered their content. Of the 72 websites analyzed (see Fig. 1), 3 were not available if accessed from Spain, the location from which the analysis was carried out. Of the remaining 69, 27 offered their content in only one language and 42 offered their content in more than one language. That is, 58.3% of the websites in the sample had undergone some kind of multilingual management process. The total number of websites that were available from Spain (n=69) offered their content in English, the official language of the US.
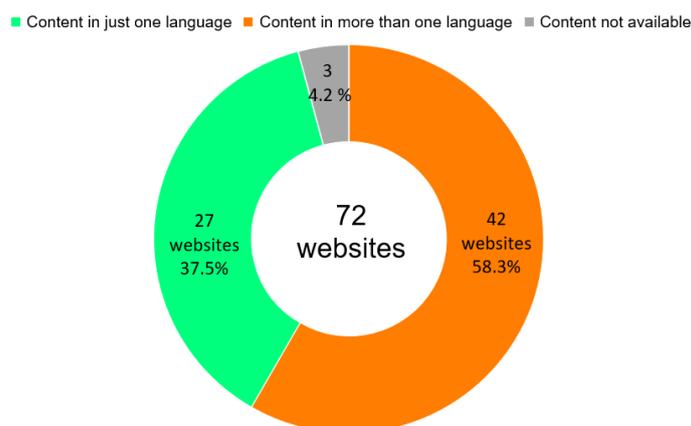

Fig. 1. Distribution of the sample according to the available languages.

After analyzing how many languages the available websites offered, a frequency analysis showed that they presented their content in 7.28 different languages on average (including the original English). The maximum number of languages available in a single website was 34. However, 53.6% of the sampled websites had their content available in 3 languages or less. Therefore, there is a tendency to make language management efforts only in a small number of languages.

Overall, the websites offered up to 40 different languages. The frequency analysis determined that the most frequent was English, since it is the original language in which these websites were developed.

4.2 Presence of Spanish language

Among the foreign languages identified, Spanish was present in 39 of the 72 websites (54.2%), meaning that it is the most common foreign language (Fig. 2).
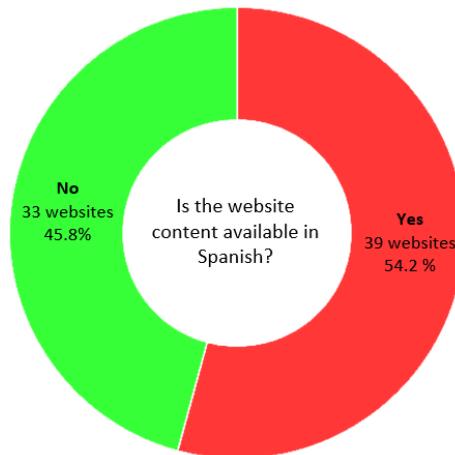
Fig. 2. Distribution of websites according to the presence of content in Spanish.

In fact, after applying the correlation analysis, Spearman's rho coefficient revealed that there was a very significant very strong positive correlation (coefficient = .919**) between the availability of the content in more than one language and the presence of Spanish among those languages (see Table 1).
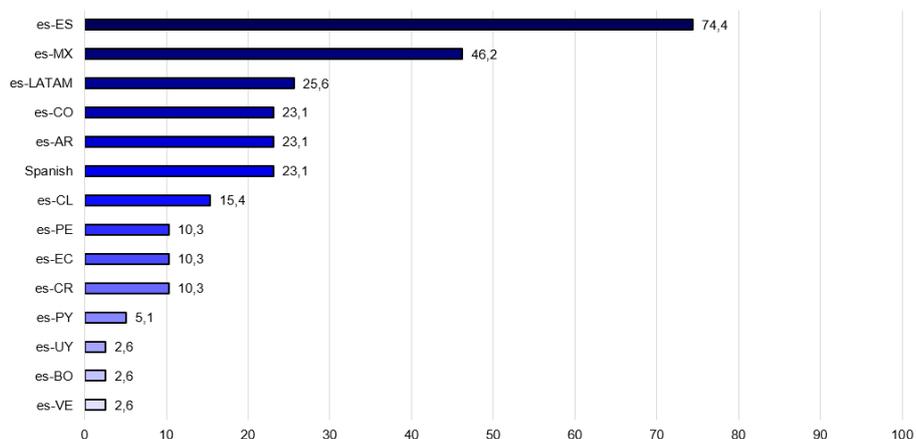
Moreover, the correlation analysis showed that there was a considerable very significant positive correlation (coefficient = .842**) between the number of languages in which a website offered its content and the presence of Spanish among those languages. That is, the more languages a company offered its content in, the more elevated was the probability of finding Spanish among those languages.

Table 1. Spearman's rho correlation for Content available in Spanish*Content available in more than one language

			Is the content available in Spanish?	Is the content available in more than one language?
Spearman's rho	Is the content available in Spanish?	Correlation Coefficient	1,000	,919**
		Sig. (2-tailed)	.	,000
		N	72	72
	Is the content available in more than one language?	Correlation Coefficient	,919**	1,000
		Sig. (2-tailed)	,000	.
		N	72	72
**. Correlation is significant at the 0.01 level (2-tailed).				

Moreover, two trends were observed in the sample to label the content in Spanish. On the one hand, 23.1 % (n=9) of the websites labelled their content as "Spanish", in a generic way, without specifying a country or geographical area (Fig. 3). The rest of the websites localized their content in Spanish according to countries or wide geographical areas, e.g., "Latinoamérica" [Latin America]. Special mention should be made of Quest Diagnostics website, which presented both strategies (combining the "Spanish" label and localizing the content for Mexico). Figure 3 shows all the varieties of Spanish present in the sample sites ordered by the percentage of sites offering them (out of 39 presenting their content in Spanish). The codes of the ISO 639-4:2010 [29] standard have been used to identify each Spanish language variety.

Fig. 3. Distribution of Spanish varieties in the sample (percentages).

On average, these websites offered their content in Spanish in 2.74 locations or varieties, but 41.3% of the sites did it in 2 varieties, being this the most common value. The

maximum number of Spanish-language locations on the same website was 11, which is a relatively wide range.

Overall, the websites presented 14 Spanish-language locales. A total of 74.4% (n=29) of the sites offered Spanish language content from Spain (es-ES), making it the most common Spanish language variety in the sample. The second most common variety of Spanish was Mexican (es-MX) Spanish (n=18, 46.2%). In the third place, 25.6% (n=10) of the sites localized to Latin American Spanish (es-LATAM).

Table 2. Spearman's rho correlation for Number of languages available in a website*Spanish content labelled as generic "Spanish"

			Number of languages available in a website	Spanish content labelled as generic "Spanish"
Spearman's rho	Number of languages available in a website	Correlation Coefficient	1,000	-,592**
		Sig. (2-tailed)	.	,000
		N	39	39
	Spanish content labelled as generic "Spanish"	Correlation Coefficient	-,592**	1,000
		Sig. (2-tailed)	,000	.
		N	39	39
**. Correlation is significant at the 0.01 level (2-tailed).				

The calculation of Spearman's rho coefficient revealed that there was a very significant medium positive correlation between the number of languages available on a website and the number of varieties of Spanish it offered. Conversely, there was a very significant medium negative correlation between the number of languages of a website and the tendency to label Spanish content in a generic way (see Table 2). That is, the more languages a website offered, the less likely it was that they would not specify a region or country for Spanish content. That is, when a company adapts its web content to a wide variety of languages, there is a tendency to include a large number of Spanish-speaking locales.

4.3 URL management

Three ways of dealing with URLs where content is available in Spanish were identified. The division of Aguillo [30] was taken as a reference:

- Top-level domain: physical place interconnected to the Internet network where the information is deposited in electronic format accessible through http protocol; a computer acting as a WWW server with its own differentiated IP number.
- Web page or directory: file or set of computer files that constitute an identifiable html document through the network with its own characteristic URL, which can be in any format.

- Web Site: a set of hierarchically linked pages that constitute a differentiated and independent unit, both in terms of content (documentary unit) and organization (institutional unit).

According to this classification, in the sample 48.7% of the websites adapted their URL for content in Spanish through a directory within the main website, 41% did so by creating a top-level domain for that content and only 10.3% did so through a Web Site. In other words, the efforts to host content in Spanish were mostly directed at creating a division within the server, although there is a significant tendency to create a new server.

5   Conclusions

This work has involved the study of the language management from a multilingual perspective of a sample of 72 websites of large corporations in the US healthcare sector. The statistical analysis of frequencies and correlations made it possible to draw a series of conclusions.

More than half of the websites in the sample (58.3%) had been subjected to some sort of linguistic management, i.e. they displayed their content in more than one language. This suggests a general trend in this type of companies: to carry out some kind of linguistic adaptation in order to reach audiences different from the original one.

Overall, websites offered up to 40 different languages, with the maximum number of languages available on a single website being 34. However, 53.6% of the sites have their content in 3 languages or less. This implies that although some companies are making great efforts to disseminate their web information in a wide variety of languages, for most companies these efforts are still limited.

The Spanish language occupies a prominent place in the sample: it is present in 54.2% of the websites and it is the most frequent foreign language. In addition, correlation analysis shows that, if linguistic management efforts are made, the probability of them being made towards Spanish is very high. This probability also increases with the number of languages towards which the website content is adapted.

Websites that offered their information in Spanish did so in up to 14 different varieties. The maximum number of varieties on a single website was 11 and on average, 2.74 varieties were offered per website. Correlation analysis shows that the more languages there are on a website, the more Spanish varieties are available. This seems to suggest that the more international and varied the public a corporation wants to access through the web, the more interest there is in adapting that content to different Spanish varieties. However, 41.3% of the sites offered two varieties or less, so, again, efforts to adapt to different language varieties are still limited. The most common variety was Spanish from Spain (es-ES), while the generic label "Spanish is present in only 23.1% of the websites. This shows that, when these companies adapt their content into Spanish, they do so with an international audience in mind, rather than a national Spanish-speaking one. So, their linguistic management strategies will be in line with localization or even transcreation processes.

Finally, the characteristics of the URL management for the content in Spanish were analyzed. While 48.7% locate their Spanish content through a directory, 41% do so through a top-level domain. Although the majority makes a moderate IT investment, there is a great tendency to make a greater investment by purchasing a specific domain for that content. Furthermore, this shows again that there is a great tendency for US companies in the healthcare sector to target an international Spanish-speaking audience. After achieving the objectives proposed for this study, future lines of research are now opened. For example, the possibility of conducting a similar study with a sample of websites developed in other geographical locations to compare the results of both samples. In any case, the analysis of the multilingual dissemination of corporate web information seems to be a very promising research line.

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