

The multilingual university website (MUW) genre ecology: content analysis and translation processes¹

Ezpeleta-Piorno, Pilar. Universitat Jaume I
Borja Albi, Anabel. Universitat Jaume I

Contents

Resumen.....	2
Introduction	3
1. Complex conglomerates of genres, shared cognition and the university website (UW) genre ecology	4
2. Analysis of Spanish UWs: materials and methods.....	6
2.1 Macrostructure: organisation of contents, functionalities and applications	7
2.2 Incorporating multilingual content	11
2.3 Managing the process of creating and authoring multilingual content	13
2.4 Incorporating translation technologies.....	14
3. Conclusions and suggestions for further work.....	14
4. References	16

¹ This article is part of a study carried out within the context of the following research projects: *Prueba de concepto del resultado de investigación del grupo Gentt: plataformas Gentt de gestión de la documentación especializada monolingüe y multilingüe* (VAL-2015-02) funded by the Universitat Jaume I (Spain); and *La mejora de la comunicación clínica interlingüística e intercultural: nuevas metodologías para la formación de los profesionales sanitarios* (FFI2015-67427-P), funded by the Ministerio de Economía y Competitividad (Spain).

Resumen

A partir del análisis de contenidos de las webs universitarias españolas y de los procesos de traducción de los mismos, esta aportación pretende identificar los retos que la internacionalización ha supuesto para estas instituciones y las soluciones técnicas, organizativas y traductológicas que han aplicado hasta el momento para la gestión de sus contenidos multilingües, especialmente en el caso de las universidades de comunidades autónomas con dos lenguas oficiales. Aplicando técnicas de análisis de género textual se estudia la situación comunicativa de la *web universitaria multilingüe (WUM)*, haciendo especial hincapié en los procesos de localización y traducción de sus contenidos. La noción de ecología de géneros, como conglomerado de géneros complejo, que funciona con esquemas de cognición distribuida y autoría compartida ha articulado el estudio empírico de las macroestructuras, los contenidos multilingües y las estrategias empleadas por cada universidad para traducir sus webs. El análisis realizado pone de manifiesto que los procesos de creación de contenidos multilingües requieren estrategias de actuación integrales, la definición de responsables únicos de la gestión, y del control de la calidad y la dotación de los recursos necesarios para ajustarse a las características de multifuncionalidad, dinamismo, interactividad y adaptabilidad que hemos identificado en las webs universitarias monolingües. Finalmente, se apuntan propuestas para mejorar los procesos de creación, gestión y control de los contenidos multilingües y se definen los perfiles de traductor especializado que requieren este tipo de webs institucionales.

Abstract

This article analyses the content of Spanish university websites and the processes involved in translating them, with the aim of identifying the challenges internationalisation poses for these institutions and the technical, organisational and translation-related solutions that have been adopted for managing their multilingual content, particularly in the case of universities in autonomous communities with two official languages. It examines the communicative situation of the *multilingual university website (MUW)* genre by applying textual genre analysis, with special emphasis on translation and localisation processes. The empirical study of the macrostructures, multilingual content and strategies used by each university to translate its website is articulated through the notion of a genre ecology, as a complex conglomerate of genres based on distributed cognition and shared authorship. The analysis shows that the processes involved in creating multilingual content require adopting comprehensive translation and localisation strategies, establishing sole decision-makers for translation management and quality control, and providing the necessary resources to ensure the multifunctionality, dynamicity, interactivity and adaptability we have identified in monolingual university websites. Finally, we offer suggestions for improving the creation, management and control of multilingual content and define the profiles of the specialised translators required for this type of institutional website.

Palabras clave: ecologías de géneros, web universitaria multilingüe, análisis de contenidos web, traducción y localización de páginas web, cognición distribuida

Key words: genre ecologies, multilingual university websites, website content analysis, website translation and localisation, distributed cognition



Introduction

Information technologies have given rise to a remarkable paradigm shift in the area of institutional, corporate and individual communication. Websites have become the key vehicle of communication for public institutions and businesses, both for those that work in them and for third parties that come into contact with them. Institutional communication strategies on the Web are nowadays closely linked to the development of the social web and on exploiting the potentialities and functionalities of what some are already calling Web 3.0, making it possible not only to send messages but also to receive responses and interact dynamically with our respondents, post opinions in forums, consult databases and expand their content, create personalised user profiles, buy and sell services, and so on. Internet users are now not only looking for information, but want to (and in many cases have to) collaborate and participate actively in carrying out actions inherent in the dynamics of the community, such as paying enrolment fees, booking a teaching room, ordering a book by inter-library loan, etc.

In the case of Spanish universities, both public and private, in the last 25 years we have witnessed increasing adoption of the functionalities and exploitation of the resources offered by the Web. This is not surprising, since Spanish universities were where the first initiatives to introduce the Internet in Spain arose.² Since 2004, universities' communication and development strategies have been directly linked to exploiting Web resources. Today we can state that universities' internal and external communication depends on and is almost exclusively conducted through their websites, and printed formats seem bound to disappear in a few years.

To this transformation we must add the GILT³ challenges posed by globalisation, which has obliged universities to internationalise, localising and translating the information offered in that network of networks of universal access, the Internet. Universities have joined this race to multilingualism, but the results of a first approach to multilingual websites indicate that they do not offer the quality or the technological standard that could be expected of a university, which presents itself as the highest expression of knowledge. Consulting university websites in multilingual format reveals untranslated sections, poorly written texts, low quality translations and terminological inconsistencies.

In this study we shall analyse the nature and state of university websites in Spain, and in particular the problems entailed in translating and creating multilingual content in this context. For this purpose we shall firstly present and characterise the *university website (UW)* genre ecology. We shall then present the results of a first empirical approach to the state of *multilingual university websites (MUWs)* in Spain. In the Materials and Methods section we shall review the needs that Spanish UWs satisfy and the functions they perform, the degree of interactivity, the collaboration and distribution applications they offer and how they are organised in terms of mediation and shared cognition. This will be followed by a brief discussion of the challenges of translating, adapting and localising university websites. This part of the study will provide us with quantitative and qualitative information on the macrostructure of the genre, the percentage of sites that have a multilingual structure, the languages into which they have been translated, who carries out the translation and who is responsible for it, and the use of technologies of translation and their integration with document management systems.

On the basis of the results and by way of a conclusion, we suggest initiatives for future improvement that include implementing translation workflow management systems, using machine translation

2 In 1993, taking advantage of the CERN directory, the first Spanish web server appeared, that of the Universitat Jaume I. The person responsible for it, Jordi Adell, became a pioneer of the Web in Spain and continued the Internet trend in Spain, always in close association with the world of academia and knowledge.

3 An acronym (for Globalisation, Internationalisation, Localisation and Translation) used by GALA (the Globalization and Localization Association: <https://www.gala-global.org/joining-gala-grow>) to define the steps or processes required to localise a software or Internet product for it to be used by an international audience. See also Anastasiou et al (2010).

programs with post-editing, and developing new profiles for translators capable of tackling the major challenges posed by online multilingual institutional communication.

1. *Complex conglomerates of genres, shared cognition and the university website (UW) genre ecology*

In 1999 a feature on the Internet published in the newspaper *El País* stated that the most important requirement for planning a website was to have something to say and an audience to address. Today, 18 years later, websites are no longer essentially communicative and one-directional; they are not created to say something and address an audience, they are created to “do” things and to “interact” with their potential discourse community. In this section we shall try to work out how this interaction is formalised from the perspective of textual genre analysis.

Large social structures use genres in complex conglomerates. In the case of the communication and mediation activities connected with technological platforms, the complexity is even greater. University websites, the entry portal to any higher education institution, are nowadays, without exception, large containers for networks of various kinds of genres: digital, textual, hybrid, etc., which interact with one another and are not always clearly delimited or defined. How, then, can we approach the study of these conglomerates? How can we examine them and theorise about them?

To describe the processes by which textual genres act and interrelate with each other in the context of complex activity systems, various models and terms of greater or lesser aptness and practical usefulness have been proposed in the literature: genre sets (Devitt, 1991), genre colonies (Bhatia, 2002; 2004), genre constellations (Swales, 2004), systems of genres, genre systems (Bazerman, 1994; Yates & Orlikowski, 2002), genre repertoires (Orlikowski & Yates, 1994), genre ecologies (Spinuzzi, 2004), etc. We shall briefly review them, finally concluding that the framework that best fits our object of study, MUWs, and the interests of our research is the one coined most recently: *genre ecology*.

Bhatia defines a *genre colony* as “a constellation of closely related and overlapping genres, sometimes within but often across discourse communities” (2002, p. 10). Genres considered as belonging to a particular genre colony have similar communicative purposes, share certain rhetorical conventions and show similar lexical and grammatical features. However, they may be different in other respects, such as the professional community they pertain to and their contexts of use, or the relationships between the participants. Swales (2004) uses the notion of a *genre constellation* (linked to the previous concept) to refer to different modes of generic interrelation and identifies four different types of constellation: *genre hierarchies*, which account for how genres are ordered hierarchically according to the qualitative differences they present; *genre chains*, which refer to the chronological sequence in which they appear; *genre sets*, taken from Devitt (1991), referring to the set of genres that an individual uses in conducting his or her usual professional or institutional practice; and *genre networks*, which he defines as “the totality of genres available for a particular sector (such as the research world) as seen from any chosen synchronic moment” (2004, p. 22). The notions proposed by Bhatia and Swales have proved their usefulness for describing commonalities and dissimilarities between genres, for teaching and for making cross-sectional classifications of genres, but we feel that they do not have the necessary scope to explain the complexity of the flows in university websites.

The notion of *genre systems* or *systems of genres*, proposed in the past by Bazerman (1994) and Yates and Orlikowski (2002), describes interaction phenomena that occur in a sequenced, ordered and very often hierarchised manner. This model not only makes it possible to explain how a particular community interacts and performs its typical recurrent social actions, it also defines and stabilises them. However, we need to highlight the asymmetry of the intergeneric relationships it describes, in which some genres depend on others in hierarchical relationships, the lack of dynamism in structures that focus on products rather than communicative processes, and the individualised nature of the agents who participate in the processes described.

[Genre systems] appear to serve serial and strictly communicative functions, not self-mediational ones. [...] They are asymmetrical in Latour's sense. They foreground the agency and the work of individuals. (Spinuzzi, 2004, p. 3)

This model would include very stable and consolidated genre sets such as official documents, or those pertaining to more conventionalised and regulated actions, such as medicinal product information, for example. Genre systems enable and at the same time delimit the development of professions, and make it possible to attain a profound knowledge and understanding of the complex communicative relationships established within socio-professional communities (Ezpeleta-Piorno, 2012a; 2012b).

Orlikowski and Yates also introduce the notion of *genre repertoires*:

[...] we develop the concept of genre repertoire to designate the set of genres enacted by groups, organizations, or communities to accomplish their work. (1994, p. 2)

From the perspective of genre repertoires, genre networks are regarded as a dynamic phenomenon which allows us to describe the discursive practices of social groups in which genre networks not only occur sequentially but are also superimposed. Thus members of a particular discourse community may be exposed to several genres simultaneously in typical recurrent situations in their communicative practices. The concept of genre repertoires explains the superimposition of sequential communicative actions and accounts for how they develop, making it possible to overcome the rigidity imposed by genre systems and to describe other processes of social interaction. Genre repertoires emphasise individual and collective communicative actions. Orlikowski and Yates point out that in order to understand the communicative practices of a community we have to examine the genre repertoire routinely used by the members of that community (1994, p. 542), but the concept reflects an asymmetric understanding of genre that focuses exclusively on communication rather than interaction, failing to address mediation actions and genres (such as e-mail and forums) and other functionalities that point the way to Web 3.0.

Recently, the concept of a *genre ecology*, which accentuates the ideas of dynamism and adaptability in relationships between genres, has been attracting interest among researchers. It is a relatively novel idea which incorporates mediational theories of mind and cognitive science, such as activity theory and distributed cognition (Hutchins, 1991), into genre theory (Bazerman, 1994; Russell, 1997; Freedman & Smart, 1997). Cognition is understood in Vygotsky's sense, as a complex dialectic process involving mental transformation by the interrelation of internal and external factors in processes of integration, through which subjects respond to the demands of the social environment (Vygotsky, 1978). In the case of a genre ecology, genres are interrelated with one another in complex and intricate networks which, in turn, are interwoven and mutually reinforcing. These networks include superimposed connections and levels in which genres are not necessarily related sequentially, nor necessarily superimposed in the sense described by Orlikowski and Yates (1994) and Yates and Orlikowski (2002). On the contrary, they can be connected and used in very diverse ways. The emphasis is on dynamicity, interactivity and adaptability to demands and to change. In this framework, genres are not only practised or communicated; they represent the "thinking out" of a community that performs an activity or a series of activities cyclically. They represent "distributed cognition", in the sense that the cognitive development of the community as a whole extends among the genres and artifacts it makes use of, promoting both the consolidation of certain collective practices and the development of new ones. This dynamism allows new genres to be incorporated or other existing ones to be developed to respond to new eventualities, contingencies or needs. Spinuzzi & Zachry (2000) underline the following as features of genre ecologies: 1) contingency, or the opportunistic connections people make between genres; 2) decentralisation or distribution of usability, design, and purposes or uses through the ecology of genres (in other words, *distribution of cognition*); and 3) the tendency of users to stabilise and consolidate genres and the interconnections between genres that they use regularly and are useful to them for their communicative or operational purposes.

Genre ecologies allow for constant importation, hybridisation and evolution of genres, and also for their possible disappearance and replacement by others. The dynamicity of these genres and of the

relationships they establish between them tends to change completely the way in which groups participating in ecologies carry out their activities (Spinuzzi, 2004). However, this dynamicity is offset by a certain stability, facilitated by the development of relatively constant connections and coordinations with other genres. Thus a kind of “dynamic equilibrium” is reached within the genre ecology (2004, p. 5).

Since genres are contingent upon each other, the success of a given genre depends on its interconnections with other genres and on how these genres jointly mediate a particular activity. This is important, because instead of concentrating on more or less one-directional communication, as genre systems or repertoires do, the genre ecology framework focuses on the actions and modes by which a genre mediates or articulates an action or an activity, something it does not do alone but in association with the ecology of the genres with which it coexists. In *Tracing genres through organizations*, Spinuzzi notes that:

Mediated actions are not just a detour from unmediated actions, a different set of goal-directed steps leading to the same outcome. Rather, mediating artifacts qualitatively change the entire activity in which workers engage. (2003, p. 47)

For all these reasons, we consider that using the genre ecology concept may be particularly productive for analysing and studying university websites, which are subject to constant abrupt changes prompted by social demands and facilitated by the new functionalities, in the sense of the extra possibilities for interaction that the medium offers the user in Web 2.0 and 3.0.

2. Analysis of Spanish UWs: materials and methods

According to the Ministry of Education, Science and Sport’s Register of Universities, Centres and Degrees there were 50 public universities and 35 private universities in Spain on the date we consulted it. For the purposes of our study we initially took all Spanish universities as our sample and extracted qualitative data on their structure and functionalities by direct observation. We soon realised that there are important differences between websites in bilingual and non-bilingual autonomous communities. The organisational structures of universities in areas with two official languages are different from the rest, as they have had translation and language policy services for years. Since one of the issues we are analysing is the presence of multilingual content, we decided to work with a coherent sample, and then, in later studies, compare the results obtained with universities that have not traditionally had language policy services.

As regards public versus private universities, we observed very marked differences of culture and practice to which we could not do justice on this first approach. Comparative analysis of multilingual content between public and private institutions and between institutions in autonomous communities with one official language and in those with two is a research challenge beyond the scope of this study. In our view, comparing the UWs of public and private universities is a research subject in itself, because the differences they present can be detected in every aspect of the site and involve a whole range of variables, including the more or less commercial ethos of each and the way in which this factor is reflected in their design and macrostructure.

For these reasons we finally decided to limit our object of study and to concentrate exclusively on public universities in bilingual autonomous communities. Thus from the methodological point of view this preliminary study explores the features of multilingual university websites using quantitative and qualitative methods of content analysis on a sample of 18 Spanish public universities located in autonomous communities with two official languages: 1 in the Balearic Islands, 8 in Catalonia, 1 in the Basque Country, 3 in Galicia and 5 in the Valencian Community.

University	Autonomous Community	URL
Universitat de les Illes Balears	Balearic Islands	http://www.uib.es/es/
Universidad Autónoma de Barcelona	Catalonia	http://www.uab.cat
Universidad de Barcelona	Catalonia	http://www.ub.edu

Universitat de Girona	Catalonia	https://www.udg.edu/ca/
Universitat de Lleida	Catalonia	http://www.udl.es/ca/
Universitat de Vic	Catalonia	https://www.uvic.cat
Universitat Politècnica de Catalunya	Catalonia	http://www.upc.edu
Universitat Pompeu Fabra	Catalonia	https://www.upf.edu
Universitat Rovira i Virgili	Catalonia	http://www.urv.cat
Universidad del País Vasco	Basque Country	http://www.ehu.es/es
Universidad de Santiago	Galicia	http://www.usc.es
Universidade da Coruña	Galicia	https://www.udc.es
Universidade de Vigo	Galicia	https://uvigo.gal
Universidad de Alicante	Valencia	https://www.ua.es
Universidad Miguel Hernández	Valencia	https://www.umh.es
Universitat de València	Valencia	http://www.uv.es
Universitat Jaume I	Valencia	https://www.uji.es
Universitat Politècnica de València	Valencia	http://www.upv.es

Table 1. List of public universities located in autonomous communities with two official languages.

The quantitative data were obtained through direct observation of the object of study. The qualitative data were obtained using open questionnaires and personal interviews, which enabled us to explore issues of authorship, responsibility and control with respect to website content and functionalities, as well as the organisational and technological strategies employed to translate and localise the sites. The websites of the selected universities were analysed according to four criteria:

1. Macrostructure: organisation of content, functionalities and applications.
2. Incorporation of multilingual content.
3. Managing the process of creating and authoring multilingual content.
4. Incorporating translation technologies.

2.1 Macrostructure: organisation of contents, functionalities and applications

Designing university websites poses very demanding and specific challenges. These are enormous sites containing hundreds of subsites and thousands of pages, with distributed systems using multiple applications, SEO (Search Engine Optimisation) web placement strategies and SMO (Social Media Optimisation) strategies to optimise social content distribution (Bhargava, 2017; Enge et al. 2012; Halvorson 2008). They are sites that have to serve multiple user communities (the institution itself, potential students, enrolled students, teaching staff, administrative staff, researchers, society in general, and so on) with different needs, wanting not only to be informed but also to choose the information and how they access it, participate actively and interact with various groups of users, contribute content to the site and carry out a range of actions through it.

In this study we have collected data on the various sections, organisation of content and functionalities of the sample of 18 selected UWs so as to obtain a clear picture of the genre we are studying before moving on to analyse questions of translation and localisation. To obtain these data the whole website of each university needed to be thoroughly analysed, since examining the homepage and the main sections did not provide sufficient information. The procedure we followed consisted of extracting the prototypical sections that appear in the index or main menu of each site. Next we checked for the presence of prototypical sections in sub-menus, banners, etc. The site depth and volume of content vary enormously from site to site, but all the sections finally included in Table 1 appear on the homepages of all the universities analysed, whether or not as part of the main menu.

One of the main difficulties in this phase was the large number of terms used for sections with the same content and functionalities and the differences in the position and relative importance ascribed to them in each university. The names used to identify generic sections were systematically matched by comparing content matrices. If we had included private universities and non-bilingual regions in the study, the results would have been more diverse. Let us just note in passing that private universities, in general, have much simpler and more linear websites than public ones and that universities in bilingual

autonomous communities are generally more complex and have many more levels of depth than those in non-bilingual regions.

Prototypical sections	Number of universities where it appears in the main menu	Number of universities where it appears in other positions on the homepage
1. Study / studies / studies and teaching / courses offered / studies and training / studies and degrees / education available / learning	18	18
2. Research / research and business / research and knowledge transfer	18	18
3. The university / about the university / governance / centres / departments / institutional matters	18	18
4. Virtual campus / Intranet	17	18
5. International / visitors / foreign students / international relations	10	18
6. Access / admissions / admissions and grants / prospective students	8	18
7. Life on campus / university life	5	18
8. News / current events / what's on / press/TV	3	18
9. Directory / structure / profiles / subject areas	4	18
10. Information / home / contact	6	18
11. Services / administration and services	3	18
12. Business / society and business/territory/enterprise	6	18
13. Access to profiles (Teaching and research staff, Administration and services staff, Students, etc.)	6	18
14. Leisure / culture / sports	2	18
15. Library	2	18
16. Access to social media	0	18

Table 2. Prototypical sections of websites of Spanish public universities in autonomous communities with two official languages.

To analyse the content structure found in the Spanish *multilingual university website* genre ecology according to the data included in the above table, our starting point is the five axes proposed by Spinuzzi (2004) for analysing complex assemblages of genres (*perspective, model of action, agency, relationship between genres, foregrounded genres*). In taking multilingual websites as our object of study, we shall also have to consider the new layers of complexity resulting from the introduction of new language modules. The following are our general observations arising from an initial survey of the selected websites.

According to the *perspective* axis of analysis, genre ecologies are articulated and constructed around the needs of individuals, groups or actions. In the case of UWs, we have examined the prototypical sections to determine the individuals and groups that take part in the communicative act, the needs these sections serve and the actions they make it possible to perform.

The needs of the institution and the university community that we identified include a great concern to publicise what it has to offer and to consolidate its international prestige. As Wernick (1991) says, universities have become consumer products and their potential students are now consumers. One of the main functions universities' websites perform is to sell their services through the sections on the courses of study they offer and applications for enrolment on regulated teaching programmes or the institution's own courses. The design of UWs, the portentous, emphatic tone of the presentation and the section on successes (About the university; Courses; Life on campus...) and the SEO placement strategies (inclusion of blogs and links to social media, among many other applications) that we observed on the UWs we analysed demonstrate their concern to extend the reach and spread of the educational services they offer. The inclusion of language modules (English in all Spanish universities) shows the university's determination to extend the limits of the student market to the international sphere.

As for international prestige, UWs seek to reinforce it with their presentation pages, research results and commitments to Corporate Social Responsibility and Transparency. These sections also aim to meet another need of vital importance to universities: attracting subsidies and grants.

A further institutional need met by UWs is to provide the university with multimodal teaching spaces to fit the new educational settings that will enable new student profiles to obtain access to their services.

[...] a good web product not only helps the institution to create its corporate image and enhance its prestige; it constitutes another tool for educating its students, by also offering closed materials using the distance learning model and open materials in spaces such as blogs or other intercreative policies. (Pardo Kuklinski, 2005, p. 92).

On the UWs analysed we found virtual classrooms, video conference platforms and repositories of videos, images and documents that facilitate synchronous or asynchronous contact between teachers and students and promote ICT literacy (Pasadas Ureña, 2010).

The Intranets we found on practically all Spanish university websites are nowadays the internal communication and management vehicle through which relations between the institution and the members of the university community are conducted (e-mail services, timetable management applications, administering teaching rooms and monitoring compliance with teaching obligations, among other things). Through the Intranet, members of the university community can query various databases and populate them with new information, submit their complaints or suggestions for improvement and receive information on the evaluation of students they are teaching, among many other things. Similarly, the institution keeps them informed and questions them on work satisfaction issues, for example. It is worth noting that in the *Anuario de la Comunicación* (2017) the “internal audience” is identified as one of the pillars of communication in organisations, with a marked tendency to increase in relative importance over the next few years. The Intranet is also the channel of communication between students who are already enrolled and the institution on academic and administrative questions.

To sum up, the UWs we studied are very close to the idea of Web 3.0, in the sense that they allow people to access information from a range of devices and to interact to achieve results beyond sharing “information”. They are distributed systems that make it possible to access multiple servers and applications in a very intuitive way and with efficient performance parameters.

The second axis of analysis, *model of action*, enables us to determine how the genres in the ecology affect users, how they use them and how using them modifies their activities. We observed that UWs tend to model action through communication or mediation. In other words, the site not only communicates outwards on the university > community pattern but interacts with individuals and with the community. The static university websites of the past, conceived as enormous repositories of information (based on HTTP + HTML technologies), have given way to dynamic sites that allow interaction with users by incorporating applications characteristic of Web 2.0, which has been called the social or collaborative web. Incorporating applications such as blogs, wikis, forums and social media enables the university community and third parties to consult and publish content (images, repositories of research work, a CV section that academic staff can edit, departmental news, and so on). UWs are distributed systems whose hardware and software components are to be found in networked computers which communicate with each other and coordinate their actions by passing messages to achieve specific objectives. These systems make it possible to perform actions of various kinds: reserve books, update CVs, request book purchases, book teaching rooms, request infrastructure, ask for computer equipment to be repaired, enrol, etc.

However, the genre ecology also influences the way in which users use genres and the inherent features of genres themselves by imposing macrostructures, maximum length, pre-determined sections, controlled input, etc. Thus academic staff using the site can update their CV, for example, or

publish the course descriptions for their course units, but their format and length will be determined by the web interface, which conditions the genre and its content.

The third axis of the analytical model we used refers to *agency* — authorship, control or ownership — of the genres that make up the UW ecology. From observation of the UWs selected for our study we can see that they function as distributed cognition systems, but are conditioned by a content strategy that depends on the institution.

In complex organisations web communication is under the authority of the communications directorate, which has ultimate responsibility for overall coherence in the company's or institution's communications. The director answers directly to the head of the organisation (CEO or Rector) and is, in general, closely connected with and participates from the outset in defining strategies. As the volume of communication is gradually transferred to the website, the figure of the website communication manager, who reports directly to the director of communications and is in charge of digital content, acquires increasing weight. This position has become vitally important in corporate structures. Once a single head of web communication has been identified, the creation and publication of multilingual content is conducted between this figure, the head of computer architecture and the head of translation and creation of multilingual content.

Universities invest very substantial personal and financial resources every year in adapting their content to fit the needs and preferences of their users by means of web analytics tools. They can be said to interact asymmetrically in the most important areas, since control of the content lies with the institution. However, in certain sections control passes to users, who can publish through specific applications, normally with space limitations and variable levels of supervision and control by the institution.

In the case of Spanish universities, from consulting the communication service directors of the universities analysed we observed that the initial process of defining MUWs normally involves a management committee (the rector, the vice-rectors and the communication service directorate). The work then passes to mixed working groups (normally the communications service and the web IT service), which are responsible for technical solutions and time planning. From the data obtained in this preliminary study, these working groups do not include experts in translation or in integrating translation technologies.

A website is a medium of communication, and as such its content is the responsibility of communication services. However, the size and number of subsites included, as well as the history of each university, make managing these macrospace a very complex task. Communication services are normally responsible for the institutional sections (presentation, the university, governance, research), together with current events and news.

However, the content of other sections of UWs is under the authority of and directly managed by other university services, such as departments, faculties, infrastructure services or doctoral schools, with a greater or lesser degree of supervision. In some universities the communication service delegates or franchises authorship of the other subsites, with the obligation of complying with certain conditions, such as having them translated into the two official languages in the case of bilingual autonomous communities, for example. Supervision is complex and is often exercised through alert systems.

The fourth axis of analysis in the proposed model explores the *relationship between genres*. As we have already indicated, the current structure of UWs is far removed from the first university websites, in which the sections and documents were presented sequentially or hierarchically in a relatively static way. In the UWs we analysed the various genres coexist and overlap, interacting to attain an objective or perform an action.

The final axis to be discussed is *foregrounded genres*: the status of genres in the complex organisation of the UWs analysed, which is directly related to the questions of authorship and control we have just

examined. Among the sections identified in Table 2, we can see that those most frequently included in the index or main menu of the websites analysed are 1) courses offered; 2) research; 3) about the university; 4) virtual campus; 5) foreign students. This coincides, in part, with the relative importance university website users attribute to their various contents according to the results of a qualitative study carried out by Pardo Kuklinski (2005, p. 268).

As regards the more or less official status of the many genres that make up the UW ecology, we find genres we could describe as “institutional” (presentation, about the university, corporate responsibility, etc.), which are carefully written in a lofty and at the same time publicity-oriented, sometimes complacent style, and are asymmetrically dictated by those in charge of the university’s communication strategy. They serve the purposes of the institution’s declaration of intent and its social, political and ideological stance and indicate its future plans.

On the same level of relative importance (in terms of the position they occupy in the UWs analysed) we find the information on the courses available, which is normally very detailed and includes the course unit programmes (course descriptions). This genre has the status of a normative standard, a “binding contract”, as it obliges the institution to conform to the terms set out in it regarding the course unit in question. It is authored, in principle, by the academic staff member responsible for teaching the course unit, but in this case each institution has supervisory mechanisms, given the binding nature of the content just described.

Then we have “decentralised” sections, authorship and control of which are in the hands of specific services or departments of the university (presentation of departments or degrees, doctoral services, sports service, and so on) and others authored by specific individuals in the university community, supervised to a greater or lesser degree by the institution, as we have already explained above (CVs of teaching staff, web pages of research groups, alumni section, etc.). Finally, as already mentioned, all the UWs we analysed provide access to social media in which communication is completely free, informal and in some cases not subject to any kind of control. To protect their reputation and measure and analyse their presence on the Internet, universities have systems for monitoring social media. Normally this monitoring is done by the communication services, which are also responsible for providing an institutional reply when this is considered appropriate.

2.2 Incorporating multilingual content

Having characterised Spanish UWs, we now address the process of incorporating new language layers and how far this process has influenced the dynamics of the UW genre ecology. The data obtained come from direct observation of the 18 selected websites and from the open questionnaires and personal interviews we conducted with heads of communication services, heads of web planning, translation services staff (where applicable) and lecturers in translation at the universities studied.⁴

The growing concern for internationalisation manifested in Spanish universities has prompted the incorporation of modules in other languages into the genre ecologies which constitute university websites, already very complex in themselves, as we have just seen. The 18 universities analysed in this study had very pressing GILT (Globalisation, Internationalisation, Localisation and Translation) requirements because of the need to publish content in the two official languages of bilingual autonomous communities and in English as a lingua franca and an indispensable instrument for internationalisation. From the 18 websites analysed we obtained the following data on the presence of language modules:

⁴ We included lecturers in translation as they are cited in the responses to questionnaires as people who are asked for advice and even “obliged” to translate in universities that have departments of translation studies.

University	Official language	Own official language	English	Other languages
Universitat de les Illes Balears	Castilian	Catalan	English	
Universidad Autónoma de Barcelona	Castilian	Catalan	English	
Universidad de Barcelona	Spanish	Catalan	English	Chinese, Arabic
Universitat de Girona	Spanish	Catalan	English	
Universitat de Lleida	Spanish	Catalan	English	
Universitat de Vic	Spanish	Catalan	English	Chinese
Universitat Politècnica de Catalunya	Spanish	Catalan	English	Chinese
Universitat Pompeu Fabra	Spanish	Catalan	English	
Universitat Rovira i Virgili	Spanish	Catalan	English	Chinese
Universidad del País Vasco	Spanish	Basque	English	
Universidad de Santiago	Castilian	Galician	English	
Universidade da Coruña	Spanish	Galician	English	
Universidade de Vigo	Castilian	Galician	English	
Universidad de Alicante	Spanish	Valencian	English	
Universidad Miguel Hernández	Spanish	Valencian	English	
Universitat de València	Castilian	Valencian	English	
Universitat Jaume I	Spanish	Valencian	English	
Universitat Politècnica de València	Castilian	Valencian	English	

Table 3. Languages into which the web pages of the universities analysed have been translated.

All the universities in bilingual autonomous communities offer their website content in the two official languages and in English. As we can see in the table, the names used for the official languages vary according to the university. In addition, four Catalan universities have a Chinese language module and the Universitat de Barcelona also includes an Arabic module. Although private universities are not part of our object of study, it is worth noting that some of them have several further language modules in addition to Spanish and English (Universidad Antonio Nebrija: Chinese, Italian and Japanese; Universidad Europea del Atlántico: Chinese, French and Portuguese; Universidad Europea de Madrid: French and Italian, etc.). Even though we have no numerical data, from the time we began collecting information for this study up to its date of publication we have observed that public and private universities are incorporating new language modules into their websites at an ever-increasing rate, according to the academic markets at which their institutional strategy is aimed.

Technically, the ideal procedure is to design the architecture of the site with a multilingual structure *ab initio*. Although we can presume that the initial structure of MUWs with two official languages envisaged a double layer from their inception, universities have historically followed different paths. In any case, the successive and rapid incorporation of new languages (initially English and more recently other languages) complicates the coordination of the whole ecology. It necessitates a complete restructuring of the original architecture to create new file directories for each language, implement redirects, replicate page structures, translate (or “replace texts”, as IT specialists conceptualise the process of translation, localisation and, where appropriate, adaptation), rename pages and images, optimise texts at code level, revise the site’s internal links, update the sitemap, check for correct indexing and make sure that the SEO placement methods are working properly, among many other things.

The technical issues associated with linguistic and translation-related questions (translation and localisation) can pose additional difficulties. “Replacing” texts can be a technically complicated operation. For languages with special alphabets (such as Chinese, Arabic or Japanese) appropriate coding is needed. In addition, sentence length can vary considerably according to the language, affecting the design of pages and section titles. Moreover, the directionality of writing must be taken into account (in Arabic, for example, writing goes from right to left), which can affect page design.

From a strategic point of view the move to multilingual websites involve making decisions on the geographical dialect to be applied: US, UK or Australian English? Spanish from Spain or Latin America? These decisions will depend on the potential audience selected in the communication

strategy and will have repercussions for SEO placement. Finally, design and usability will need to be reviewed and it may even be necessary to change the appearance and content if it is intended that that they should be different in the various languages and cultures.

2.3 Managing the process of creating and authoring multilingual content

As we have already said, these matters are dealt with nowadays by mixed working teams, in which universities' communication services collaborate, with ultimate responsibility for image management and institutional communication, together with computing services, responsible for providing technical solutions. These services have specific budgets and highly competent human resources. However, as the data obtained in our empirical study confirm, the presence of experts in translation, localisation and translation technologies during the phase of establishing multilingualism strategies on MUWs is non-existent.

As far as the axis of content authorship and agency in other languages is concerned, our study shows that most of the universities studied lack a clear, uniform policy on multilingual content production strategies. We have found that ownership, control and supervision of translations on MUWs are not clearly defined. Communication services are normally responsible for the translation of content in the "official" sections of MUWs. However, the sections we have called "decentralised" do not have a set budget or HR provision for translating their content and in many cases they have to resort to enlisting external services or unrevised automatic machine translation.

On the open question of who does the translations of the various sections of MUWs, the sources cited for them are language and translation services (in universities that have such services and normally for translations between official languages), communication services, planning departments, offices of vice-rectors for international relations (all with the various different names used in each university), doctoral services, and academic staff in translation departments, among others. When the question was put to specific members of these services we found that each applies different and contingent solutions. It should be emphasised that all universities in bilingual autonomous communities have language policy services, which provide advice, revision or translation for the two autonomous community languages and to a lesser extent for English, but do not cover all the genres in the ecology, often being limited to institutional genres within the remit of the governing bodies. This lack of clarity as to their functions can be attributed to their historical development, since they initially arose to meet the need for translation between the two official languages, but some of them gradually took on responsibilities for other languages, specifically for English.

So as regards the multilingual content of the sections that we have described as being of "delegated or franchised authorship", some universities have incorporated applications that make it possible to publish in several languages using automatic translation systems, so that people who add content to these sections can translate their documents themselves. Thus, for example, in one of the universities analysed, the application through which the departments publish content is connected to automatic machine translation programs (*SALT* for Catalan and *Apertium* for English), enabling users to publish their content easily in three languages. One would hope that in such cases the translations would be revised, but this desideratum is not always met, and users therefore run the risk of publishing content in an institutional space that is badly written and contains serious errors. In other cases, the translation is subcontracted to outside translators using the funds of the service or department in question or is assigned to members of the service with a knowledge of languages.

Another example of this absence of a coherent policy on translation of content on MUWs is the fact that in several of the universities analysed the course descriptions are translated using automatic machine translation programs and are not revised, or are revised by the academic staff members responsible for each course unit, whose level of proficiency in English and co-official languages is not always sufficient (resulting in errors and nonsensical phrases). Bearing in mind the axes of authorship and of foregrounding or status of genres we have addressed in previous sections, it is paradoxical that this genre, which constitutes a binding contract with students and evaluation agencies, has such a low status for translation purposes.

The absence of coordinated and supervised solutions leads to problems of inconsistency in the use of institutional terms (names of vice-rectors' offices, course units, departments, etc.) and non-observance of the institution's house style rules. We find the post of *rector* translated into English in different ways in the same university (*Rector, Vice-Chancellor, President*). The same is true of academic staff grades (we find *catedrático* translated as *full professor, associate professor* and *senior lecturer*), names of vice-rectors' offices, names of departments, and so on.

A further striking point is that many universities offer professional translation services for members of the university and outside persons who need to publish the results of their research or to translate academic degree certificates. Thus they publicise the services of outside professionals through their institutional web pages. It is somewhat paradoxical, in terms of the perspective and model of action axes, to be marketing services in direct competition with those that will be offered by their graduates.

2.4 Incorporating translation technologies

There are comprehensive translation management systems nowadays that facilitate interconnectivity between different content management systems and tools, making it possible to design optimal and uninterrupted workflows. These are tools that connect content management systems with translation processes and technologies and include quality control systems.

With regard to the use of translation technologies in this rapid and inexorable process of incorporating new language modules into UWs, from the preliminary data we have obtained through indirect questionnaires and investigation of their institutional websites, we can conclude that more than 70% of these universities do not use advanced translation technologies. Admittedly, some of the translation services (or language or language policy services) in the universities analysed now work with translation memories (TMs) and terminology databases (TDBs) to feed computer-assisted translation (CAT) systems. We have also collected evidence that the external translation suppliers used by universities do have this type of technology.

Even in universities with translation services (as such or in the form of language or language policy services) there are important differences of authorship, agency and procedure. Some of these services outsource some or all of their translations and do not keep memories or glossaries of the work carried out externally. Others use CAT or MT systems (with no post-editing) in their translation services for particular sections of their websites, as we have noted, with all the problems this entails (lack of quality, serious errors, lack of consistency of institutional information).

3. Conclusions and suggestions for further work

The university website (UW) genre ecology enables universities to use tools with great potential for constructing their public image, disseminating their research and teaching achievements, marketing their products, delivering their teaching through online platforms, handling their administration, and creating discourse communities with the members of the university community and with third parties. We have seen that university websites, with their multiple applications and functionalities, act as a vehicle for all the institution's activity and also shape that activity, whether serving as a means for people to communicate or being used to enable individual actions to be performed; in other words, they represent the "thinking out" of universities and articulate the distribution of cognition.

Our chosen framework of analysis has given us a better understanding of how MUWs function. The genre ecology model, which emphasises the mediated and interactive nature of the relationships established between genres themselves and between genres and the community which uses them, calls into question the sequential approaches of other models that focus solely on (non-interactive, non-mediational) communicative factors.

University websites are not stabilised; they are constantly changing, and in our view it is not so much that we are in a phase of consolidation of these sites but that it is in their very nature: "distributed" management of universities, participation tending to become universal and democratic, promotion and

constant advancement of knowledge and technology, and so on. These are genre ecologies based on constant negotiation and mediation, which also tend to foreground other genres: idiosyncratic, unofficial and often invisible. Moreover, the functionality parameter is basic to the evolutionary and revolutionary stages in the development of university web sites. The evolution takes place gradually as the university adapts to new social demands, needs and requirements and incorporates new functionalities (Web 2.0 and Web 3.0). These two factors reinforce each other, so each redesign includes utilities, functionalities and features that were previously much less common, and these, once incorporated, constitute a source of differentiation, establishing new modes of distribution of cognition and new layers of complexity.

Once we have established the macrostructure of the UW genre ecology, the *perspective, model of action, agency, relationship between genres and foregrounded genres* axes of analysis enable us to tackle the analysis of the organisation of content, the functionalities and applications offered and how the latter are related to each other and interact with the user community. Multifunctionality, interactivity, dynamicity, complexity and adaptability to change are fundamental features of the university website genre ecology. Clearly the design of university web sites is evolving at a dizzying rate, responding to the needs of the community that uses them and adapting to the growing demands of present-day society, but also shaping and modifying them by incorporating technological developments.

In recent years, the funding problems afflicting universities have led them to try to attract new students and to extend the search to foreign students. All this, combined with the requirements for publication in English to obtain international certificates of excellence, has obliged universities to translate thousands of pages and to redefine the design of their websites to accommodate new languages. In the last few years this process has accelerated exponentially, and the co-official languages and English have been joined by other languages like Arabic or Chinese in an inexorable trend towards internationalisation. As has been shown, implementing multilingual websites is an extremely complex task requiring a clear medium- and long-term strategic policy with respect to objectives, timing, use of the latest technologies, availability of a specific budget and establishment of a sole decision-maker with responsibility for management and quality control. Regrettably, we observe a worrying inattention to the linguistic and translation-related aspects of MUWs. The solutions adopted up to now have been fragmentary, and overall action strategies with a specific budgetary allocation have not been designed or applied.

This lack of centralised services for managing and creating multilingual content under the supervision of a single entity, which would be the ideal situation in terms of translation quality, results in a lack of terminological and stylistic consistency and adversely affects the quality of the translation and the soundness of the university's corporate image. In our view, the fact that the MUW genre ecology involves shared authorship and functions through distributed cognition systems, which we have identified as one of its most important features, does not justify the lack of comprehensive translation strategies and does not reflect the difference in status for translation of the genres of this ecology.

We consider that the need to involve experts in web translation and localisation in this process of changing UWs and adapting them to the international context has been sufficiently demonstrated. In this regard, Spanish universities face the challenge of preparing translators capable of tackling the training demands and professional opportunities that web communication raises for translators. Undergraduate and master's translation degrees already include translation technologies in their content, but in our judgement this content should be adapted to the needs identified in this preliminary study and reinforced in view of the revolution taking place in the creation of multilingual web content in public institutions and private companies. A thorough revision of the translator's profile has become necessary to fit the new communication paradigm being imposed by what is already being called Web 3.0: intelligent multilingual websites in which translators should play a part right from when they are first defined and conceived so that they can effectively tackle the complex problems and challenges we have described in this article.

Future studies could include a thorough analysis of the translation methods and strategies employed and the degree of localisation, adaptation or foreignisation that is desired or desirable, using quantitative and qualitative approaches. In these studies it would be relevant to examine specific translation-related issues such as equivalences of degrees, grading and other matters that do not exactly correspond in other systems. It would also be of interest to obtain empirical data on the sections of the website that are translated in full or in part, the degree of localisation of the various modules and the underlying ideological and university policy implications. In addition, the results obtained in this first empirical approach could be the object of later studies comparing them with those from private universities, companies or universities from other countries and cultures.

4 References

- Anastasiou, Dimitra, & Schäler, Reinhard (2010). Translating vital information: Localisation, internationalisation, and globalisation. *Syn-thèses Journal*, 3, 11-25.
- Asociación de Directivos de la Comunicación (2017). *Anuario de la Comunicación*. Madrid: Asociación de Directivos de la Comunicación.
- Bazerman, Charles (1994). Systems of genres and the enactment of social intentions. In A. Freedman & P. Medway (Eds.), *Genre and the new rhetoric* (pp. 79-101). London: Taylor & Francis.
- Bhargava, Rohit (2017). *Non-obvious 2017: how to think different, curate ideas and predict the future*. Ideapress Publishing.
- Bhatia, Vijay K. (2002). Applied genre analysis: a multiperspective model. *Ibérica*, 4, 3-19.
- Bhatia, Vijay K. (2004). *Worlds of written discourse: a genre-based view*. London: Continuum International.
- Devitt, Amy J. (1991). Intertextuality in tax accounting: Generic, referential, and functional. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 336-357). Madison: University of Wisconsin Press.
- Enge, E., Spencer, S., Stricchiola, J. C., & Fishkin, R. (2009). *The art of SEO: Mastering search engine optimization*. Sebastopol, CA: O'Reilly Media.
- Ezpeleta-Piorno, Pilar (2012a). An example of genre shift in the medicinal product information genre system, *Linguística Antwerpiensia*, 11, 139-159.
- Ezpeleta-Piorno, Pilar (2012b). Metagenres and medicinal product information. *Panace@*, 13(36), 327-332.
- Freedman, Aviva, & Smart, Graham (1997). Navigating the current of economic policy: Written genres and the distribution of cognitive work at a financial institution. *Mind, Culture, and Activity*, 4(4), 238-255.
- Halvorson, Kristina (2008, dic. 16). The discipline of content strategy. *A List Apart*.
- Hutchins, Edwin (1991). The social organization of distributed cognition. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 283-307). Washington, DC: American Psychological Association.
- Ministerio de Educación, Ciencia y Deporte. *Registro de Universidades, Centros y Títulos (RUCT)*. Consulted on 6 September 2017 at <https://www.educacion.gob.es/ruct/consultauniversidades?actual=universidades>.
- Orlikowski, Wanda, & Yates, JoAnne (1994). Genre repertoire: The structuring of communicative practices in organizations. *Administrative science quarterly*, 39(4), 541-574.
- Pardo Kuklinski, Hugo (2005). *Un modelo de aplicación web institucional universitaria. El caso de los webcom: webs de facultades de comunicación de Iberoamérica* (Doctoral thesis) Universitat Autònoma de Barcelona. Departament de Comunicació Audiovisual i de Publicitat.
- Pasadas Ureña, Cristóbal (2010). Multialfabetización y redes sociales en la universidad. *RUSC. Universities and Knowledge Society Journal*, 7(2), 17-27.
- Russell, David R. (1997). Rethinking genre in school and society: An activity theory analysis. *Written Communication*, 14(4), 504-554.

- Spinuzzi, Clay, & Zachry, Mark (2000). Genre ecologies: An open-system approach to understanding and constructing documentation. *ACM Journal of Computer Documentation (JCD)*, 24(3), 169-181.
- Spinuzzi, Clay (2003). *Tracing genres through organizations: A sociocultural approach to information design*. Cambridge, MA: MIT Press.
- Spinuzzi, Clay (2004). Describing assemblages: Genre sets, systems, repertoires, and ecologies. *Computer Writing and Research Lab*, 1-9.
- Swales, John (2004). *Research genres: Explorations and applications*. Cambridge, England: Cambridge University Press.
- Vygotsky, Lev S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wernick, Andrew (1991). *Promotional culture: Advertising, ideology and symbolic expression*. London: Sage.

Pre-print