The Switchover: Teaching and Learning the Text Encoding Initiative in Spanish.

María Gimena del Rio Riande y Susanna Allès Torrent.


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Thank you for your submission to the Journal of the Text Encoding Initiative, "The Switchover: Teaching and Learning the Text Encoding Initiative in Spanish". The editors have decided to accept your article but ask that you resubmit with revisions. Comments from the peer reviews are below.

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Sincerely,

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Ex-Managing Editor 2013-2015
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Reviewer C:

This is a well-structured article, which sets out the context and its objectives very clearly, and then works through different stages of the argument methodically.

Suggestions for the author(s) regarding research quality:

Overall, this is an excellent, and very welcome article from two of the leading scholars in this domain. I make a number of comments below in the spirit of making a wide-ranging, and therefore, complex essay stronger.

In TEI journal terms, this is very important, and very well-presented research. The main concern I have is that it presents the argument very much in technology terms, rather than in terms of humanities needs. This is perhaps a natural problem with a journal focused on a particular technology, rather than the article itself, but it's a point worth making. If someone is already familiar with TEI, they will have no problem reading this article, but if they are not, they may well ask how it relates to their research. The line "Precisely because of this centrality of the textual and philological materiality, the study of TEI should be at the heart of a revitalization of the humanistic studies" is a good example of this. The connection between textual and philological materiality and the use of an electronic markup
framework is assumed, rather than explained.

A related issue, although I realise that there are problems of scope/length, is that the article does not connect closely to editorial theory, or wider textual theory, beyond passing references to issues such as different philological traditions. One argument against what you propose here is that, in general, initiatives are likely to be more successful where they congregate around research areas (e.g. the classics, or medieval studies) rather than around language use. I would argue that we have moved away from blanket approaches covering everyone in the humanities (and beyond) to more research community-focused initiatives, and that general approaches like this at least need to engage with common research groups (e.g. the medieval group mentioned here), both with intellectual argument (how does this resolve their research needs) and with focused examples.

You don't consider the work on internationalising TEI in any depth, which seems strange given the overall argument. See early work by Rahtz and others, by Alex Bia on Spanish, and more recently Priani. I have heard different opinions about the value of translating TEI tags, but this debate is important both in narrowly linguistic terms (is it important to see the tags in your own language?) and in broader cultural terms (do we all understand the same by a given tagname, even with documentation?).

You provide a list of competencies on page 6 and 7, which are all focused on the technology, and on technical skills. This seems rather in contradiction with the wider focus on pedagogy. Digital literacies (or competences) in DH are about much more than this, and I would recommend re-writing, or at least making clear you are focusing at that point on technical skills (which would seem a shame).

Some minor issues:

• The article seems to suggest that the TEI gained interest in DH training terms in 2013, which is absolutely not the case. There were training courses much earlier than that (Alex Bia can advise here), including the UCLM online MA, which is briefly mentioned elsewhere
  • The article is well written, but could do with copy editing for minor issues with the English
  • Other work you might consider:
    o Priani and others' work on the Biblioteca Digital del Pensamiento Novohispano project
    o Earlier work by the Madison seminary (materialised as ADMYTE), which while not in TEI, certainly influenced thinking and made even people who were not part of the DH community aware of electronic markup very early on
  o You might consider Jose Calvo's work on cataloging digital editions http://www.morethanbooks.eu/atlas-de-datos-digital-editions-spanish/
  o You might also consider the influence, and work of Carmen Isasi, Helena Bermudez and Carlos Dominguez/Mercedes Sanchez
  o The comparison between the UCLM and the UAB courses is in no way
equivalent, and the concept of "success" needs more careful thought here. The UCLM course was very successful by many accounts - it had relatively high numbers, and was intellectually strong. It ended for purely, and idiosyncratically Spanish, political reasons, as far as I understand. It might be helpful to explain why the UAB course was hard to make happen (or perhaps, to be less personal, why courses in Spain are hard to get off the ground), since this relates to another element which is missing here, namely the wider academic dynamics which make these things easy/difficult in different locales. It doesn't seem accidental that flexible programming and interdisciplinary degrees are more popular in countries with strong neoliberal agendas, for example. And why are people in countries like Spain, which lean more toward the community than the individual in comparison to somewhere like the US, for example, less likely to commit to collaborative digital projects? This has to do with the social economics of academic participation, which you rather skirt over, I would argue. Later on you argue that "there are no actors in the Spanish-speaking world taking the lead". Why is this? It needs explaining
  ○ You mention CHARTA but give no reference. Do you mean this? https://www.redcharta.es/investigacion/ This is an example of the community initiative mentioned earlier, with examples and workable documentation in Spanish.
  ○ The French community example was really helpful, but perhaps some more detail (and references) would be useful here. Why has the French TEI community been so successful? Has it all been about the funding and the macro focus of the CNRS and French EU aspirations, or is there something more intellectual going on here?
  ○ Is the Xarxa d'Humanitats Digitals Catalan-wide? I thought it was focused on the UAB, specifically, but could be wrong.
  ○ I think the Codice Mendoza has lost some of its earlier functionality, but the significance is not its image focus, but its focus on the spatial representation of the codex, which TEI/text-based modelling is very poor at
  ○ You make an interesting point about EVI-LINHD, but was it developed from an actual research need? In which case, where is the evidence? What was that need? Elsewhere you point out that tools and frameworks are not language or culture neutral, but is a language-specific tool needed, or could more general tools, translated into Spanish, do the job?
  ○ In the pedagogy section, which is excellent, you might consider the influence of DHSI, or the now regular mini-conferences on pedagogy which happen before the annual ADHO conference
  ○ The Tthub initiative sounds great, but the url does not work (important to check all your urls!)

Suggestions for the author(s) regarding audience.: See comments above - are you just aiming this at people currently using TEI, or do you want people involved in textual scholarship more broadly to be able to read it and get something out of it?

Are the problems with legibility, cropping, or aesthetics of any of the images that would prevent them from being displayed "as is" when published?
Keep in mind that authors who submit in a word-processor format provide bitmap images as supplementary files and embedded low-resolution versions. These supplementary files should be consulted. If such image files not visible to you, ask the editors if they forgot to make them visible.

No images visible (but would be welcome!)

Reviewer E:

Suggestions for the author(s) regarding structure of the argument:

The authors focus in extensive on the lack of TEI pedagogical resources in Spanish (Spanish technical vocabularies, web based tools, DH video training). The article also provides a very detailed historical introduction of TEI practices and projects in Spain and Latin America. Clearly the authors want to contextualize the actual practice and problems of teaching and learning TEI in the Spanish classroom, and by extension the difficulties of creating TEI content in Spanish. However this necessary emphasis makes the article mainly descriptive, leaving only a brief section (#5) to present resources and strategies for providing a platform and for improving the adoption and practices of TEI in the Spanish language academia.

Since section #5 of the article is the most essential and valuable part of it, I’d suggest the authors work in abbreviating section #2, which might not be of specific interest to the English speaking TEI community, and expand section #5 to include more details about the resources presented. Although TTHub is still a work in progress the authors still can provide descriptive documentation about its antecedents and creation; its current and future structure; its specific plans (if any) of creating a net of collaborators in Latin America, Spain and US. TTHub could become an important platform of interest in the Spanish speaking DH academia, thus a better elucidation of the project and its goals could attract collaborators also in the DH global community.

In the case of TEI, the authors could present “Introducción a la edición de textos digitales” as a model or case of study that is actually a response to improve the lack of TEI teaching resources in Spanish mention all across the article. A better description of this resource is needed, particularly its pedagogical structure; the sequence of content materials; description of teaching units. The authors should also include documentation or description of teaching practices, and also provide examples of how issues of English language terminology are solved / translated in Spanish. If in depths details are provided “Introducción a la edición de textos digitales” as very specific example of TEI resource in Spanish could be wider interest to the audience of jTEI.

Journal of the Text Encoding Initiative
http://journal.tei-c.org/
The Switchover: Teaching and Learning the Text Encoding Initiative in Spanish
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Abstract
This article analyses the overall situation of TEI training and the development of resources, tools, and projects in the Spanish-speaking context. It also examines the challenges faced when teaching TEI in Spanish taking into consideration two main issues: the still non well-defined DH curriculum and the different pedagogical approaches depending on the context of the learning experience, in our case, the face-to-face instruction, the online education, and the Foreign Language Class. This work aims as well to raise awareness about the lack of resources in Spanish that hinders the growth of a community of practice interested in the use of the TEI in Spain and Latin America. Consequently, it proposes some strategies and new resources that could benefit the outreach and adoption of the TEI inside the Spanish-speaking DH community, while facilitating TEI training in a higher education context.

Keyword: teaching resources, Spanish, Latin America, Spain, Humanidades Digitales, inclusion, online teaching.

1. Introduction
In recent years, there has been an increasing emergence of digital humanities (DH) training in higher education¹. The methods and tools developed by the Text Encoding Initiative (TEI)² have become part of the DH core curriculum all over the globe with TEI undergraduate and graduate courses and workshops. This is especially true for the English-speaking world, that quickly understood the advantages of having standards for creating searchable, enriched, interoperable and well preserved texts and databases. However, these advances have created a need for intensive training in TEI to scholars in Spain and Latin America.

The leading role of the anglophone community, as well as the obvious importance of English for global scientific communication³, have outlined a landscape where resources in other languages are still difficult to find. Still, in the last five years, one can observe how DH, as a discipline, lays in the midst of a significant global turn that has come to question many aspects of our linguistic and technical practices, therefore underlining the barriers to the participation of a globalised population and other equity-seeking groups within the field (O’Donnell 2012; Galina 2013; Fiormonte 2014; O’Donnell et al. 2016a; O’Donnell et al. 2016b; Fiormonte and del Rio Riande 2017). As the use and study of computation in the Humanities grows, its core literature is beginning to incorporate increasing amounts of work by researchers from other disciplines and from networks and regions outside the English-speaking Academies in the

¹ DARIAH -Digital Research Infrastructure for the Arts and the Humanities- has recently created a Registry of DH courses https://registries.clarin-darium.eu/courses/, but, so far, only European initiatives are collected there.
² TEI will be used both to address to the consortium and the markup language.
³ Such is the case of several communities like Japan, India or South Africa, that use English as a koiné language inside Academia. This is not the case in Latin America and other Spanish Speaking countries where English is still a barrier in communication.
Global North (del Rio Riande 2015a, 2015b, 2016a, 2016b). This same situation applies to TEI practices and the global community.

Throughout this work, we would like to examine what it means to teach and learn TEI in a Spanish-speaking context through three main points: (1) a general overview of the interest on the TEI and its methods, resources, tools, and projects; (2) the challenges of teaching TEI in Spanish within a non well-defined and emerging DH curricular context, as well as the different pedagogical environments, such as face-to-face instruction or online education, and in a Foreign Language Classroom; (3) an outline of our practical problems and concerns, and a proposed roadmap for improving the overall situation, while also mentioning some strategies and resources that we have developed since we started teaching TEI using Spanish as our communication language in class with pedagogical materials in that language.

2. The landscape of academic training in Humanidades Digitales and the use of the TEI as standard

In the Spanish-speaking context, despite the early interest in the intersection between Humanities and the use of technology (Marcos Marin 1986; del Rio Riande 2015, 2016a), only in recent years has the DH landscape become recognizable as a field, mostly due to the dominance of the Anglophone DH. Several DH associations in Latin America and Spain have emerged since 2012, such as RedHD in Mexico, AHDig: Associação das Humanidades Digitais in Brazil, or Sociedad Internacional de Humanidades Digitales Hispánicas (HDH) in Spain. In Argentina, the Asociación Argentina de Humanidades Digitales was created in 2013, during THATCamp Buenos Aires. More recently, the Xarxa d’Humanitats Digitals under the auspices of Catalan institutions, and in Latin America the Red Colombiana de Humanidades Digitales, have also come into play, as well as some other initiatives in Perú and Uruguay.

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4 Most of the themes and topics in this section are studied more extensively by del Rio Riande in another article in this issue, “Humanidades Digitales: Life on the other Side”.
5 Red de Humanidades Digitales (RedHD), www.humanidadesdigitales.net.
6 Associação das Humanidades Digitais (AHDig), https://ahdig.org/.
8 Asociaición Argentina de Humanidades Digitales (AAHD), http://aahd.net.ar/.
9 See http://buenosaires2013.thatcamp.org/.
10 Red Colombiana de Humanidades Digitales, http://www.rehdi.co/.
11 Asociación Uruguaya de Humanidades Digitales (HDU), https://www.facebook.com/DHUUruguay/. This institutional growth of associations is also a European trend, that in the last years has also seen the creation of the Associazione di Informatica Umanistica (AIUCD), http://www.aiucd.it/, in Italy, the Digital Humanities im deutschsprachigen raum (DHD), https://dig-hum.de/, in Germany, and Humanística-Association francophone des humanités numériques/digitales, http://www.humanisti.ca/, smartly created as a Francophone association in which it is the linguistic liaison that prevails, rather than the geographic element. All of them count with listserv as their main channel of communication to spread the news.
As far as DH training in Spain is concerned, there are several events devoted only to TEI that seem to have gained interest in 2013, such as the “Introducción a los lenguajes de marcado de texto: XML y TEI” (Alejandro Bia), a TEI workshop at the First Conference of the HDH association (Paul Spence, Universidade da Coruña, España), and the very specific “XML-TEI for Ancient and Medieval Lexicographical Works”, celebrated at the Institución Milà i Fontanals, CSIC- Barcelona. Moreover, there have been also some unsuccessful attempts to offer graduate certificates in Spain, such as at the one of the Escuela Superior de Ingeniería Informática at the Universidad de Castilla-La Mancha during the early 2000s, or the MA in Digital Humanities in the Department of Spanish Philology at the Universitat Autònoma de Barcelona. However, in the last years, some universities have tried to join forces with other disciplines, such as the Universidad de Salamanca, which offers a MA in Textual Heritage and Digital Humanities, and the Universidad Pablo Olavide (Seville) that does the same in a MA in History and Digital Humanities. Regarding Digital Literature, the Research Group LEETHI has been organizing a Digital Literature postgraduate course at the Universidad Complutense de Madrid, and also the University of Barcelona. In the realms of online education, the Laboratorio de Innovación en Humanidades Digitales (LINHD), at the Universidad Nacional de Educación a Distancia (UNED), is the only institution, so far, offering a continuous and academic variety of DH courses since 2014 in which professors from Spain and Latin America participate (González-Blanco et al. 2017a). There are three noteworthy certificates, the Experto en Humanidades Digitales, Experto en Edición Digital Académica, and, Análisis de textos y estilometría con R, and, many summer schools. On the other side of the world, DH training in Latin America can be described in terms of MA degree offered by the Universidad de Los Andes (Colombia), while some other initiatives seem to be arriving soon. However, there are many initiatives worth highlighting, such as the Seminario HD in México, inside the RedHD at UNAM (Universidad Nacional Autónoma de México, Facultad de Filosofía y Letras) (Priani 2007), and the many DH events organized between the Asociación Argentina de Humanidades Digitales (AAHD) and Humanidades Digitales CAICYT Lab (CONICET), that have been offering courses and conferences for researchers; of these, the TEI workshops

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17 See: http://linhd.es/.
18 See: http://linhd.es/p/titulo-propio-experto-profesional-en-humanidades-digitales/. There is one subject taught by Susanna Allés-Torrent in which students gain a general understanding of text encoding and to the TEI Guidelines.
19 See: http://linhd.es/p/titulo-propio-experto-en-edicion-digital-academica/. It should be highlighted that the course follows a complete TEI approach in the methods and practices for encoding and text publishing.
21 See: https://tinyurl.com/vcm9ns3
23 See: http://www.humanidadesdigitales.net/seminario-hd/.
held at the First National Conference of the AAHD (2014) and the International Conference of the AAHD (2016) stand out, along with many others held at the Universidad de Buenos Aires, Universidad de La Plata, and Universidad Nacional de Mar del Plata in Argentina, at Pontificia Universidad Católica in Chile, and at different events in Cuba.

Even though the interest in the use of TEI for Digital Scholarly Edition (DSE) started really early in Spain (Marcos Marín 1986, 1994), scientific literature about it only finds some continuity in this country since 2008 (Lucía Megías 2008). Gradually, other articles came to light regarding general overviews that concentrate just on Spain, however, they do not reflect any research about the TEI in Latin American (Spence 2014; Spence and González-Blanco 2014; Allés-Torrent 2017) or they only cover study cases of projects (Revenga 2014; Rojas Castro 2017). There are few publications dealing with TEI and its use in Spanish and Latin American projects (Faulhaber 1996; Fradejas 2009; Allés-Torrent 2015; González-Blanco et al. 2014, 2015; del Rio Riande and Zubillaga 2015; Priani 2017, among others).

The landscape of projects and DSEs related to Hispanic texts shows some very specific features. Taking a look at the two existing catalogues (by Greta Franzini and Patrick Sahle) we can establish that:

- DSEs are common among scholars interested in Hispanic Medieval texts (such as Cantar de Mio Cid) and Early Modern Literature —the so-called Golden Age period, in which we find editions of classical plays such as Miguel de Cervantes’ La Entrenenida or Lope de Vega’s La Dama Boba, and others regarding Don Quixote through largely funded projects (Allés-Torrent 2017). Yet, early Mexican manuscripts are also represented with El sitio de Guaman Poma, or the Codice Mendoza. Other initiatives deal with 19th and 20th century, such as “En el ojo del huracán” Cartas de Yltramar a España, 1823 - Edición Digital, The Pérez Galdós Edition Project, the Manuscrito digital de Juan Goytisolo or Obras Completas de José Luis Romero, among others. It is interesting to note that many of them were carried out in non-hispanic institutions (Cantar de Mio Cid, El sitio de Guaman Poma, Manuscrito digital de Juan Goytisolo), and that others, like the Quijote Interactivo, a great site funded by the Biblioteca Nacional de España, were built with technologies such as 26.

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26 See the first DH four-month course taught by Gimena del Rio Riande at Facultad de Filosofía y Letras in 2015: https://tinyurl.com/ycsbjyzu and others as part of the Medieval Hispanic Literature classes (2017).
28 See: https://tinyurl.com/y8eryh7d.
31 See: https://miocid.wlu.edu/?v=nor.
Adobe Flash Player, or not using have textual markup, as in the case of the Códice Mendoza, funded by the INAH in Mexico, which seems just to be focused on the fascinating images of the mesoamerican manuscript.

- If using it, few of these editions declare the use of TEI. Just to name a few of them, we may point to La Dama Boba, La Entretendra, the Castilian Cancionero, the digital edition of the Cartas de Yltrimar, Repertorio Métrico de la Poesía Medieval Española (ReMetCa), Poetriae, Obras Completas de José Luis Romero, Biblioteca Digital del Pensamiento Novo Hispano, or Diálogo Medieval (Priani 2017).

- TEI suffered from discontinued use in the two big Spanish projects in Digital Libraries, such as Biblioteca Virtual Miguel de Cervantes and Corpus Diacrónico del Español (CORDE).

With regards to infrastructures and software for editing, annotating and publishing texts, it must be said that the progress done in digital textual scholarship has also lead to the creation of research environments, frameworks, and platforms in different countries: TAPAS, Boilerplate, Juxta, Version Machine 4.0 (English), TextGrid, Ediarium (Germany), eLaborate (Holland), Edictor (Brazil). For the Spanish community, to date the only example is Virtual Research Environment (EVI-LINHD)33, developed at the Laboratorio de Innovación en Humanidades Digitales (LINHD-UNED) in Spain. EVI-LINHD creates digital projects, and uses an intuitive XML-TEI platform to encode texts (González-Blanco et al. 2016, 2017b).

As stated in this section, the history and actual landscape of the training in Humanidades Digitales in Spain and Latin America, and, specifically, in the use of the TEI as the standard for encoding and exchanging data, lacked continuity and has been mostly limited to Spanish projects in the last ten years. The general feeling perceived is a lack of awareness and mastery when compared to the rest of the Anglophone DH field, as well as little communication with other research groups. The case of the TEI is paradigmatic, marginal and not well known, especially if contrasted with other neighbour countries, such as France, where it was adopted early. Also, the use of open access tools and open access to data is not a very common practise.

3. Pedagogy and TEI in Spanish

3.1. What do we want to teach or what can we teach

The growing interest in DH has resulted in an increasing number of courses, modules, certificates and even degrees covering a broad range of topics at the cross-section of humanities and ICT-based methods. Despite numerous efforts to formally train students and researchers in the wide-ranging field of DH, as Hirsch (2012) points outs, "scholarship in this area has tended to focus on research methods, theories and results rather than critical pedagogy and the actual practice of teaching". One of the most important questions in our

33 See: http://evi.linhd.uned.es/
field remains whether we can—in both theoretical and practical terms—pursue not only new ways of thinking about the humanities, but also new ways of teaching and interacting with students. To that end, open educational resources, tools and training materials play a main role.

The relevance of facilitating teaching and training for DH emerges in many academic publications such as—just to name a few—the special edition of the DH Quarterly, on Undergraduate Education, or in the companion of Battershill and Ross (2017), about DH in the Classroom; but also in the re-establishment of the Education SIG of the Text Encoding Initiative (http://www.tei-c.org/Activities/SIG/Education/) at the TEI members meeting in November 2017, and the envisioned establishment of an ADHO SIG on Digital Pedagogy. Other initiatives boost the recollection of teaching materials, such as the well-funded platform #dariahTeach under the heading “DH teaching material open-source, high quality, multilingual teaching materials for the digital arts and humanities”. All in all, these initiatives reflect more than ever how we—as instructors—want to communicate, interact, and form our students, and, at the same time, underscore the challenge of what we can teach depending on everyone’s educational context.

Many debates on the anglo-US centrism as well as on the heterogeneity of approaches to the discipline are taking place, such as how to understand DH, what to teach, and, essentially, if digital humanities equals humanidades digitales (del Rio Riande, 2015, 2016ab). What seems obvious is that all global practices are born out of local contexts that shape the way through which we jump the different levels, locally to globally, and vice versa. In addition, it must be highlighted that each country has a different academic tradition and a different methodological approach to the cultural, literary, and artistic heritage. This is especially true in the field of textual scholarship, the so-called Critica textual, which has strong and philological roots in Academia, notably in Spain, and from there to other countries like Argentina (Rodríguez Temperley 2008). Precisely because of this centrality of the textual and philological materiality, the study of TEI should be at the heart of a revitalization of the humanistic studies. Teaching TEI then would imply that digital practices might be adapted to different cultural traditions. The problem of this adaption lays in the fact that, if there are no actors in the Spanish-speaking world taking the lead, and if there is no external and global willingness to support and diversify the resources linguistically, then the change for the better remains a complicated issue.

The absence of Spanish resources is also related to the weak interest in the relationship between DH and Modern Languages in general. Some capstone publications on DH and Pedagogy, such as Debates in Digital Humanities (Gold 2012; Klein and Gold 2016) or Digital Humanities Pedagogy (Hirsh 2012) do not explore the topic, nor do Spanish case studies appear in international publications on DSE (Discroll and Pierazzo 2016).

The necessity of being a multilingual community and the need to recognize the role of the Spanish Language goes without saying: as previously mentioned (see section 2), Latin America and the Caribbean are showing a great interest in DH, while in the US the Hispanic

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35 See: https://teach.dariah.eu/
community, the largest minority, is demonstrating some impressive digital initiatives and projects, such as the *Relaciones Geográficas* (providing data for 71 towns in New Spain)\(^\text{36}\) or the first US Digital Humanities Center for Latina/o Studies at the University of Houston.

In the case of TEI learning, we think that the instruction should be rooted in multiple competencies and goals, some of which must target global trends of best practices, while others must be adapted to local practices. On the one hand, students should:

- Gather the fundamentals of XML standards and related languages.
- Understand the mechanisms of TEI.
- Navigate and use the TEI Guidelines.
- Be aware of the good practices of the TEI community.
- Independently face the markup of different textual types.
- Create and customize schemas.
- Be able to draft technical documentation about encoding and digital projects.
- Be acquainted with the existing tools for using, exploiting and preserving TEI documents.
- Practise collaborative work.

On the other hand, we as instructors should be able to readjust these general and global goals, to local or national praxis, melding tradition with new digital practices. We should aim to:

- Renew traditional textual approaches through digital methods, such as text encoding and TEI.
- Adapt practices and guidelines to our own work and draft documentation in order to facilitate learning.
- Teach TEI and other text encoding methods, apply truly digital processes and deliver digital outcomes.
- Be aware of job opportunities requesting DH expertise in libraries, archives, cultural institutions, research project, or universities and consequently prepare students for the market.

As the summary above has made clear, what we aim to teach is most of the times hindered by local constraints that need to be surmounted by an adjustment of the local community’s expectations. Moreover, within the sphere of DH teaching, more broadly, we also have to take into consideration where the teaching happens, as discussed in the next section.

### 3.2. Different Pedagogical Contexts

There are different pedagogical and linguistic contexts in which TEI could be taught. From our teaching experience, we can give account of at least three different scenarios where we have worked with students on the use of TEI. Each of them would require different pedagogical

\(^{36}\) See: https://www.arcgis.com/apps/Cascade/index.html?appid=1fcabf740a844d9d80d5bf0248416f47.
approaches. The first one, the traditional face-to-face classroom teaching using a common native language; the second one, the online class using also Spanish as a native language; and the third one, the Foreign Language Classroom where learning TEI is performed using a second language.

1) Teaching TEI to Spanish Speakers in a face-to-face classroom

The face-to-face teaching, also known as *frontal teaching, chalk-and-talk, teacher-centered instruction* (Dee 2014), is the one we have put into practice in a Spanish-speaking physical environment. This is the most traditional and unexceptional learning situation, also the one that favors a more active learning. However, we can only find this approach nowadays as workshops, due to the fact that TEI is not yet offered as part of a semester course at the undergraduate or graduate level at universities. As it is expected, among the general benefits of this modality are the possibility of doing hands-on practice in the classroom and correcting the students work in class in a process that can involve professors, but also interchanging materials among students and doing peer-revision. In addition, it creates an environment that facilitates a *situated learning* experience, as proposed by Lave and Wenger (1991). These authors argue that the learning process should be in service of the activity, context and culture in which it occurs (that is why its is understood as *situated*). Social interaction is one of the most important components in this approach, as it empowers the construction and feeling of belonging to a *community of practice*. Being TEI precisely a community of practice, this seems to be a perfect environment for students to use a hands-on approach and feel more involved with the class. Nevertheless, as mentioned before, taking into account the fact that this kind of training is represented mostly by isolated two or four hour long workshops, there is a lack of time to deal with a full-stack array of technologies involved in the process of TEI publication.

2) Teaching TEI to Spanish Speakers in an online classroom

Online education is nowadays a leading force in the academic and professional world: online universities, courses, MOOCs have reconfigured the way we teach and learn.

In our case, the typical students of our TEI online courses is an adult audience with an academic background, small amount of time available (due to work or family reasons), and engaged in a continuous educational training. The main advantage highlighted here is that the permanent access to platforms and course materials confer a bigger flexibility to this audience in terms of “the learner’s own time” and of their “familiarities and motivation” (Dee, Foradi, Šarić 2016: 20, following Mahony and Pierazzo 2012: 224). However, in an online environment, both teachers and students lose communication immediacy, since it has to be done through forums and emails; and also the audience can be bigger and much more heterogeneous, which might hinder the proximity with the instructor (Terras, Van Den Braden, Vanhoutte 2009: 299).

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37 For some examples, see notes 26, 27 and 30.
38 See notes 19, 20 and 28.
In this kind of environment, teaching TEI or other specific technologies faces one main problem, which is learning an eminently hands-on field only through a distant method and virtual learning. Thus corrections and feedback results are sometimes difficult to explain, highlight and follow, so as to turn them into an active learning experience.

In the case of Spanish TEI training, two are the main goals targeted: the need of completeness and explicitness of the materials in an online educational space, and the use of learning materials in Spanish, flexible enough to respond to a transatlantic and diverse Spanish community (Spain, Latin America). In the online courses in which we were involved (see section 2), the emphasis was put in creating our own learning materials in Spanish, materials that involved translation of some parts of the TEI website content, but also new materials with content adapted to projects and examples of Spanish text encodings, and strategies for creating interactive quizzes through which students can test their learning.

3) Teaching TEI to non Spanish speakers in Spanish

There is a third and perhaps more complex scenario where we teach TEI: the Foreign Language Classroom in which we deal with DH and, more specifically, with the use of the TEI 39. In the case of the American Academy, for example, many departments of Modern Languages and Literatures are hiring DH faculty, who are bringing technologies, methods and concepts to apply them to the FL classroom. Obviously, we work with advanced undergraduate learners who master a second language, although sometimes not comprehensively. In this case, we encounter great challenges, such as the lack of materials adapted to different language levels. Students go through a twofold process: they learn new DH concepts and they improve their language skills. Thus, they need additional materials, such as bilingual glossaries, as well as extremely detailed and self-explanatory. The learning and encoding practice and publishing with the TEI can be a way to engage with the literary (Baldwin 2013), entailing a certain type of hermeneutics and appropriation of the texts (Burnard 2001) in a foreign language, and also using this second language (in this case, Spanish) to teach and communicate in class.

4. The many different dearth of resources in Spanish

Despite the enthusiasm to dive into DH topics and methods, we still face a dearth of resources written in the Spanish Language, that hinder the adoption of the TEI in the Spanish-speaking world, as well as in TEI teaching in academic environments. This problem affects trainers, students, TEI and DH global community in general, and emerges in many different ways.

Without being exhaustive, the most prominent obstacles to be faced urgently can be outlined as follows:

- The TEI Guidelines, originally written in English, have never been completely translated into Spanish. Despite the first efforts, thanks to Verónica Zumárraga and Marcela Tabanera, who wrote a Manual para la codificación e intercambio de textos informatizados. Normas de la Text Encoding Initiative, a very first translation of the TEI Guidelines (Marcos Marín 1986: 89); and later, Alex Bia and Carmen Arronis Llopis, and the impulse of CHARTA, this translation was never finished\(^{40}\). Also, other community channels, such as the TEI listserv, CfPs, or journals, use English as the main language.

- The main channel of discussion in the TEI listserv is only in English, while just a few other communities have their own, such as the case of the French TEI listserv. This fact sometimes limits Spanish speakers from raising their doubts, both because they are afraid of not expressing themselves correctly, and because of the philological problems that they encounter, that are oftentimes difficult to contextualize from an anglophone Textual Studies perspective. Also, most of the news and updates on really useful materials such as TEISimple are not known or used in Spanish or Latin American projects.

- Unfortunately, the differences in the global economy hinders many Global South researchers from becoming members of the TEI consortium. Consequently, extremely useful resources such as TAPAS are not known and/or used by these communities.

- There is an absence of teaching materials in Spanish, such as websites, videos, presentations, or modules. While there are multiple web resources dealing with technical documentation in Spanish—like tutorials on XML, XSLT, XPath,—they are not conceived from a DH perspective, and thus they suffer of inadequacy. In addition, even if there are a lot of open access materials on the web on DH training and Digital Scholarly Edition in TEI in English\(^{41}\), it is not enough for the Spanish-speaking community to translate them, since it is necessary to re-create the problems, to adapt existing materials to their own needs and examples.

- There is a shortage of open source examples of real projects in Spanish\(^{42}\). As the TEI By Example team has addressed, “being able to view the markup approaches of established scholars and projects in the field is an essential tool for TEI teaching which is currently not utilised (Terras, Van den Branden, Vanhoutte 2009: 300).” Some of the few examples of encoded text in Spanish are the ones published by the Computergestützte literarische Gattungsstilistik\(^{43}\).

\(^{40}\) For a list of translations, see http://www.tei-c.org/Tools/I18N/

\(^{41}\) This is the case of, for instance, DiXit materials, http://dixit.uni-koeln.de/programme/materials/.


\(^{43}\) Collection of 19th Century Spanish-American Novels (1880-1916), edited by Ulrike Henny-Krahmer (which contains 24 novels), or the Corpus of Spanish Novels from 1880-1940, edited by José Calvo Tello (with 39 novels).
- As a global trend, detailed documentations on editorial projects and other implementations of TEI are not common. This best practice should be highlighted by the TEI community and council as a benefit for the whole collectivity of TEI practitioners.

- Finally, it is not only the scarcity of available tools to work and publish in TEI, but also the difficulty to access digital tools and the absence of well implemented and integrated tools for the creation of cultural and humanistic objects. For example, in the case of DSEs, under its different approaches (critical, genetic, etc.), there are tools that are either not well known, or they depend on websites or software entirely developed in English, German, Dutch, that are not always open, or require advanced technical knowledge. As in many languages, there is still not an editing platform and text processing of reference that responds to the Spanish-community's needs.

5. The need of online teaching materials and a case study: *Introducción a la edición de textos en XML-TEI*

From what we have presented here, it can be deduced that, in order to adopt the TEI, the academic community, individuals and institutions, need to have more resources available in their native language.

In the case of specific technologies tutorials are commonplace (W3Schools, Lynda.com, CodeAcademy, among many others) and are conceived for a broad array of learners from a beginner to an advanced level. Inspired by these kinds of resources, TEI By Example was developed several years ago, providing explanations, online tests, and exercises, although in English. This research team underscored by 2010 that:

If the digital humanities community wants to promote the TEI markup framework as a serious candidate for dedicated courses in the booming curricula on digital humanities (...) then there is an urgent need for an on-line TEI course by example which is less generic than the two tutorials published on the TEI website (A Gentle Introduction to XML and TEI Lite: An introduction to Text Encoding for Interchange) and more general than the 29 guides to local practice on that site. (Van den Branden, Terras, and Vanhoutte 2010)

They also stressed there the need for a “more user friendly, comprehensive, and interactive than the online workshop materials which are currently presented as stand alone teaching materials” (Terras, Van Den Branden, and Vanhoutte 2009: 299). After all these years, while some of the issues that they emphasized remain the same, the success of this resource has been proved extensively and has significantly improved the overall situation for TEI users.

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44 Such is the case of the Dutch environment eLaborate: [https://www.elaborate.huygens.knaw.nl/login](https://www.elaborate.huygens.knaw.nl/login).

45 EVI-LINHD, the Spanish platform and editor we have mentioned before, is still a work in progress.
Recently, other interesting initiatives offering pedagogical materials have emerged, such as the above mentioned #dariahTeach. This European project has inaugurated a collection of courses, three of which deal with TEI: “Text Encoding and the TEI” by Susan Schreibman and Roman Bleier in an English and a French version, and “Digital Scholarly Editions: Manuscripts, Texts and TEI Encoding” by Elena Pierazzo and Marjorie Burghart. These three courses with explanatory videos, detailed contents, and exercises that can be considered as pioneer in the field of DH online teaching are available just in English.

The global landscape of teaching resources could be very much improved in many ways. For example, it would be interesting to conceive a publishing platform for multilingual teaching resources, where all resources might be translated and adapted to different languages. An initiative alike would finally support multilingualism in text encoding and DH, in general. In any case, and for the Spanish-speaking community, it is extremely necessary to make available more reliable resources, following some of the inaugurated lines of the TEI By Example and #dariahteach.

With this in mind, we have recently decided to undertake a still emerging project that aims to function as an open access hub of text technologies materials in Spanish and devoted to the Spanish community. We called this project Text Technologies Hub or TTHub. Our goal is to serve as a hub of available online materials, resources, news, softwares and technologies that can potentially serve those interested in textual studies, digital editing, corpus construction, and digitization processes in Spanish. We think that many users of these kind of resources, and specially, textual scholars, feel the need to know where to search and find materials to uncover potential solutions in textual studies, and to use learning resources.

In the case of the TEI, we have made available a version of the teaching materials inspired by the several seasons of the Experto Profesional en Humanidades Digitales created in January 2014 at the LINHD-UNED. The course is presented under the name of Introducción a la codificación de textos TEI-XML. The reasons that compel, especially, the author of these materials, are basically the student’s solid feedback during these three years and the already mentioned lack of online resources in Spanish.

The targeted goals are assumed from the above mentioned distinction of global and local scales. Notably, we aim to give a general understanding of TEI mechanisms from the true beginner’s perspective, as we collaborate to distribute learning materials to the Spanish speaking community. A resource as such can facilitate the learning experience of scholars and students in a self-taught experience, or as part of the materials of an academic syllabus, or even as the common ground for workshops and other training events.

Our audience, thus, remains constituted by those neophytes looking for a first approximation to the TEI, that is to say, those students and researchers with little or no prior experience in markup languages or textual data structures that would like to undertake a digital project or DSE.

47 See: http://tthub.io
48 Temporarily available at http://tthub.io/materiales/introduccion-a-tdi/
So far, the deliverable consists of an open course, where one can access with an internet connection, and with the knowledge of the Spanish language. There is also a flat version in PDF of the single modules to be downloaded under the license of creative commons. The current organization is based on topics: 1. Introduction, 2. Fundamentals of XML Languages, 3. General structure of a TEI document, 4. General TEI Elements, 5. The TEI Guidelines, 6. Textual typologies, 7. Customization of schemas; and 8. Creation and use of the ODD. Every topic has four sections: explanation, examples, online quiz, and a still-provisional part of exercises.

As stated, TTHub is a work in progress that envisions to broaden its scope. In relation to the materials of the Introducción a la codificación de textos TEI-XML, it should be open to the user’s feedback and to a general forum of Q&A. As the community grows, the examples section should be enriched with documentation and real case encoding samples, ideally framed within a widget for comments and annotation. The exercises section should have an interactive feedback component. Finally, the creation of a bilingual glossary would also be a useful tool to jump to other more advanced resources especially those written in English.

The project is undertaken with no funding or external support and the current appearance of the resource is still in the making.

6. Some conclusions

Teaching TEI using Spanish as a communication language for both written materials and written or oral communication in the different pedagogical contexts is a challenging experience. On the one hand, we face the specific physical characteristics of the different scenarios we have studied here (face-to-face, online, Foreign Language Classroom), which entail a different and specific strategic approach. On the other hand, we basically work within two linguistic levels since English is always present in the primary materials used or referred to, from the TEI codes to the TEI website, TEI Guidelines, scientific articles or books.

Nevertheless, the slow process of creating and incorporating translated, but mostly, new pedagogical materials adapted to the examples and needs of our students in Spain and Latin America, and in the United States of America, was, in fact, a turning point, because it helped students see how adaptable a standard language, such as the TEI, can be, and how a markup language can enhance scholarship in the digital age. Moreover, having examples and good documentation in the native language proved that the English in the metadata, as in elements, attributes or values, was not an insurmountable bias to surpass in order to work successfully in TEI, for instance, in the making of a digital scholarly edition.

A situated learning process based on Spanish literary texts and the creation of pedagogical materials in Spanish, such as our TTHub initiative, may facilitate the adoption of the TEI by the Spanish-speaking community around the world, and may help in other contexts, like the

49 The fact that an editor like Oxygen helps learners significantly in this process must be highlighted, as it offers a translation of the tags while using those in the encoding activity.
foreign language Class (where Spanish is the foreign language). Therefore, the global community should welcome the propagation of this type of multilingual resources since it opens the way to consolidate DH as an academic discipline not only in Spain and Latin America, but also around the world.

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