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Cultural heritage and iconic elements for history education: a study with primary education prospective teachers in Spain

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Cultural heritage, both in its tangible and intangible dimensions, is a very influential element that is closely connected with history education and with identity-building. The present study seeks to identify the cultural iconic elements that pre-service social science educators associate with the history of Spain, as well as their sources of information. A semi-structured questionnaire was administered to 668 prospective teachers of four Spanish regions who were enrolled in bachelor's degrees in primary education. Participants were asked to spontaneously name the four iconic elements (monuments, works of art, places, festivities, traditions, etc.) that they considered the most representative of Spanish history. Finally, they were asked about the sources of information that they used in order to gain knowledge about these elements. Results revealed that some iconic elements connected with cultural and historical heritage were predominant in the collective consciousness of trainee teachers. Furthermore, while the influence of school was noticeable, an even stronger influence of the social context and families was detected in their selection. Results suggest that the educational potential of cultural icons that are familiar to learners should be used in initial teacher training and history education. This would allow prospective teachers to promote engagement and develop an understanding of historical multiperspectivity among their students, fostering critical citizenship.

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Introduction and theoretical framework

Cultural heritage is a broad concept that encompasses a considerable number of elements that surround us (UNESCO, 2014). Cultural heritage is not simply limited to monuments, groups of buildings, or historical sites, which are the categories that have been traditionally used to identify this concept since the early 1970s (Ahmad, 2006). Cultural heritage involves both tangible and intangible elements, something that may include social practices, oral traditions, ritual and festive events, among others (UNESCO, 2003).

In addition to the ample scope of the concept, cultural heritage has been usually characterised by a series of features, according to several authors (Ballart, 1997; Alexander, 2010a; Santacana and Llonch, 2015). Notably, the concept of heritage and what it means is always evolving and is in constant transformation as society changes (Fontal, 2008). In fact, what is usually deemed relevant by a particular group in a specific time period is not necessarily identical to what might be perceived by the same group after some decades or even centuries, and it may also differ between collectives. In relation to this last point, heritage is considered to be always connected with particular and distinct contexts due to the fact that people attribute specific and unique values to heritage. Finally, because of this, heritage is not considered to have a universally intrinsic value as a result of its connection with specific societies and identities (Hall et al., 1999), usually of a very diverse nature.

Taking all this into account, it is possible to consider in which ways the connections between cultural heritage and society can also have a reflection in education, and specifically, in history education. For this reason, and in order to understand how the conception of heritage can influence social science educators' teaching practices, this research aims to analyse which cultural iconic elements pre-service teachers associate with the history of Spain. In addition, to corroborate the influence of historical culture, this research also seeks to identify their main sources of information regarding cultural heritage.

The connection between cultural heritage, identity and history. Paraphrasing the title by Ashworth (1994), to speak of heritage also entails speaking of history and identity. Similarly, heritage and collective memory can be considered intimately related: collective memory and heritage are community-specific (Lowenthal, 2011). In addition, heritage implies an existing legacy or inheritance, one that can be easily linked to a collective memory and is only definable in terms of how it is put to use by its recipient (Ortuño et al., 2023).

The construction of heritage has been a part of the national discourse developed over time, usually as part of the generation of master narratives traditionally connected with the romantic approach to history education (Carretero, 2017). In this regard, Hall et al. (1999) defended that it might be possible to think of heritage as a discursive practice, because 'it is one of the ways in which the nation slowly constructs for itself a sort of collective social memory' (p. 15). In his words, 'just as individuals and families construct their identities in part by *storying* the various random incidents and contingent turning points of their lives into a single, coherent, narrative, so nations construct identities by selectively binding their chosen high points and memorable achievements into an unfolding *national story*' (Hall et al., 1999, p. 15).

In this sense, heritage can be considered something to use as part of historical research and history education, and also a catalyst of feelings, values and emotions. Heritage provides, on the one hand, a framework for analysing and criticising visual and iconic discourses and, on the other hand, a series of material or

intangible symbolic elements to show the most significant socio-cultural features of a given group. Hence, heritage points to the foundational elements of a group rather than its existence in the contemporary (Ortuño et al., 2023).

Heritage, that set of elements *selected* by a community as defining signs of its identity and collective memory, coincides (or is made to coincide), in many cases, with what that community considers historically significant. Heritage selection becomes iconic insofar as it embodies the identity principle of a community or historical culture, but also has a clear significance for that community or culture (McGregor, 2010). As such, cultural heritage also establishes a connection to the idea of *historical culture*, conceptualised as 'people's relationships to the past' (Grever and Adriaansen, 2017, p. 73), as well to the concept of *uses of history*, which has been conceptualised as the way 'people actively use the historical culture available to them (...) [to] explain, build, and transform identities and societies' (Nordgren, 2016, p. 479).

Cultural heritage and history education. The use of heritage in educational settings may help students appreciate a particular heritage, as well as promote an identification with certain historical actors (Van Bostel et al., 2016). The use of cultural heritage might also help to foster students' historical knowledge: despite its enormous emotional and symbolic or identitarian connotation, heritage can be a perfect tool to promote the acquisition of historical competences (Van Bostel et al., 2015). It is worth highlighting those conceptions connected to the aims and relevance of history (Miguel-Revilla, 2022), as well as the idea of historical significance (Seixas and Morton, 2013; Seixas, 2017) as key elements of examination that might help explain why some iconic elements, events or historical actors are remembered over others. After all, 'significance is the valuing criterion through which the historian assesses which pieces of the entire possible corpus of the past can fit together into a meaningful and coherent story that is worthwhile' (Seixas, 1994, p. 281), something that can be addressed, discussed, and even deconstructed in the classroom.

Iconic heritage elements are used as a form of collective representation that play a key role in the construction of meanings in today's society (Alexander, 2010b). Hence, their value as a tool for teaching history: using these elements in the classroom allows a complex idea to be represented visually through a simple concrete reference (Truman, 2017). Analysing the selection of these elements may allow researchers to focus on cognitive elements (for instance, analysing simplistic or complex visions of the past), or, additionally, to identify those iconic elements that they consider most significant. Understanding which are considered significant, relevant or representative by teachers (the main educational agents and transmitters of dominant social values) can help understand how they support their historical discourse and the role they play in history education.

In this regard, a series of studies published during the last few decades have focused on analysing some of the historical icons that are prominent in each nation, and that are deemed significant by either teachers or students. The analysis of cultural heritage has not assumed a prevalent role, and research has explored instead which historical actors or historical events are usually considered relevant. For instance, Gibson et al. (2022) focused on historical events in Canada, indicating that regional identities can have an important influence in the way teachers observe the past, and that educators assign historical significance to events according to diverse criteria, including the connection

between the past and the present. These criteria are found to be mediated by teachers' educational perspectives, as well as by history narratives that are closely connected to identity-building.

While research focusing on trainee teachers is not abundant, studies in different nations have explored students' conceptions regarding those events and historical actors they find more relevant. In these cases, understanding the criteria of historical significance that was used was fundamental for understanding their selection (Yeager et al., 2002), as well as the way national and social identities can determine particular responses (Wineburg and Monte-Sano, 2008; Ibagón and Miralles, 2022), or how relevant events or historical actors are embedded in specific and sometimes recurrent narrative patterns (Martínez-Rodríguez et al., 2024; Kim, 2018). Finally, the role of teaching practices and formal history education (in contrast to that learnt outside school) is still seen as prevalent (Barton and McCully, 2005; Coudannes Aguirre and Ruiz, 2018).

Being aware of how students think about their past, and the way different identities interconnect when they establish a relationship with the present, might help trainee teachers understand how to address topics such as history and cultural heritage in the classroom. At the same time, exploring the role of formal education can also foster a more nuanced understanding of students and teachers' preconceptions and how to approach specific topics in the classroom. In any case, surveys such as the one published by the *American Historical Association* indicate that non-formal and informal sources of information (popular culture, as well as families and friends, for instance) play a relevant role (Burkholder and Schaffer, 2021). Going beyond events and historical actors, and focusing on cultural heritage and its connection with history might provide a novel vision that might help understand different perceptions about historical culture.

Purpose of the study and research questions. The main aim of the present study is to identify those iconic cultural elements connected to historical heritage that pre-service social science educators associate with the history of Spain, as well as their typology, while also examining potential contrasts between different regions. The research also aims to highlight the sources of information that influenced prospective teachers' ideas, such as history lessons at school and other sources of non-formal learning, including the role of families, popular culture or the use of new technologies. The research questions which guide this study are:

- (1) Which iconic cultural elements did pre-service teachers spontaneously select? What were their characteristics (nature, typology, original function and historical period)? In which ways did the regional context influence the responses in each region?
- (2) What were the main sources of information that participants indicated about the selected iconic elements? What information could be inferred about the role of history education at schools? What sort of influence did non-formal learning (including the social and familial environments, as well as popular culture or social media) exert in the perception of cultural heritage?

Methods

This study adopts a mixed-method research design (Greene, 2007; Creswell, 2014), in which a quantitative approach has been supplemented by qualitative procedures, with the aim of obtaining a comprehensive vision of prospective teachers' conceptions. First of all, from a quantitative point of view, descriptive

and inferential analysis was performed on the data obtained from pre-service teachers, attending to both the selection of iconic cultural elements, as well as participants' sources of information. This quantitative approach allowed researchers to measure the level of agreement with different items and helped establish comparisons between specific categories and regions.

Due to the interpretative nature of educational research, and the need to understand specific contexts and frames of reference (Stake, 2010), open responses regarding the sources of information of the cultural iconic elements were also examined to supplement the quantitative data. Combining both approaches, the mixed-methods study adopted a convergent parallel design in which the implementation sequence can be described as concurrent (Biesta, 2017), allowing for a corroboration of both quantitative and qualitative results.

Context and participants. The research was carried out within the framework of the project 'Teaching and learning of History in Primary Education: multiperspectivity and analysis of cultural icons for the construction of a critical citizenship', funded by the Ministry of Science and Innovation of the Government of Spain. This project begun in 2021 and has been scheduled to finish in 2025, with the participation of six different Spanish universities: the University of Valladolid, the University of Murcia, the Complutense University of Madrid, the University of Lleida, the University of Oviedo and the University of Sevilla (CEU Cardenal Spínola).

This project focused, since its inception, on primary education, analysing ideas and preconceptions of students, in-service teachers and trainee teachers. This last group, was the focus of the present research. Specifically, a sample of 668 primary education pre-service teachers from four different regions in Spain was used: 310 participants (46.4%) from Castile and Leon, 214 (32.1%) from Andalusia, 89 (13.3%) from the Region of Murcia, and 55 (8.2%) from Catalonia. Sampling can be described as non-probabilistic, attending to a purposive and typical strategy (Cohen et al., 2018), with the intention of including a wide selection of participants capable of providing a variety of data and, at the same time, of supplying information regarding the specificity of each region.

All participants were enrolled in courses connected with social studies didactics at the bachelor's degree in primary education level. Exploring the distribution of the participants by gender, three quarters of the sample, that is, 504 participants, were female (75.4%), 153 students were male (22.9%), and 1.6% did not identify with either option. This figure is consistent with the predominance of female students in this specific bachelor's degree at Spanish universities, where male trainee teachers are in the minority. The average age of the participants was 20.3 years.

Research instrument and data analysis. A semi-structured questionnaire was used in order to collect information from the participants. The instrument was developed with the aim of identifying those iconic cultural elements connected to the history of Spain (for instance, monuments, works of art, places, festivities, traditions, etc.) that pre-service teachers deemed the most relevant, but also the sources of information used to know about said elements.

A combination of open and closed items was included. First of all, trainee teachers were asked to spontaneously name four iconic cultural elements. Secondly, for each of said elements, participants had to indicate how they came to know about them: the sources of information. A 10-point Likert-like scale (on a continuum from 1 = *Completely disagree* to 10 = *Completely agree*) was used to measure agreement in five categories (Table 1),

Table 1 Likert-like scale items about sources of information.		
Question	Likert-like scale items	Categories of analysis
To what extent do you think the information you have about this historical or cultural iconic element comes from the following learning sources?	1. History classes at my school or high school	School lessons
	2. My personal and social environment (family, friends, acquaintances, etc.)	Social and familial environments
	3. Historical fiction works (novels, series, movies, comics, etc.) or documentaries	Fiction and documentaries
	4. Technological media (Internet, social media, etc.)	Social media and Internet
	5. Museums, exhibitions, sightseeing tours, etc.	Museums, visits or expositions

Table 2 Categories and subcategories used in the analysis.	
Categories	Subcategories
Main theme	Large architectural constructions: cathedrals and large buildings of worship, palaces, defensive complexes (fortresses, castles and walls) and other monuments or architectural complexes. Artistic works, authors and cultural institutions: painters and their artistic works, picture galleries, other pictorial representations and art galleries, sculptures, literary works, etc. Traditions, festivities, shows and spaces for socialisation: festivities, traditional dances, major international events (cultural and sporting), performing arts, traditions and social customs, engineering works and other installations, specific place, etc. Gastronomy: typical foods and recipes. Figures and/or political processes and their legacy: political characters/processes, their legacy (political, architectural, monumental, etc.) and festivities linked to them.
Function of the iconic element at its creation	Political: originally created as a manifestation of political power, such as the residence of a monarch in a city or a political institution. Religious: expression of religious power or a religious feeling, message or idea. Cultural or artistic-sports leisure: sports, cultural activities or other types of activities connected with leisure. Economic/collective needs: connected with the collective economic organisation of society from the point of view of the provision of goods and services. Social interaction and relationships: offering citizens spaces for socialisation and inter-personal relationships. Basic individual or private needs: aimed at satisfying the basic and everyday personal needs, like eating or dressing.

each corresponding to different sources of information: school lessons; social and familial environments; fiction and documentaries; social media and Internet; museums, visits or expositions. In addition, participants were able to freely exemplify and talk about said sources of information and provide qualitative responses. A two-round validation process with experts allowed the examination of the relevance, clarity and suitability of the different items included in the instrument, as well as the detection of any potential changes to improve the questionnaire.

The questionnaire was applied in the different groups and regions described above using an online platform provided by the University of Murcia (Spain). The implementation took place during two semesters (between February 2022 and October 2022). Anonymous data were collected (information was provided regarding university of origin, age, gender, etc.), informed consent was provided, and the project was given green light by the ethics committee of the University of Murcia.

Data were compiled and transferred to the SPSS software, which, in conjunction with Jamovi (an open-source R-based software) was used to quantitatively process the responses. The database was constructed by isolating specific responses: a total of 2498 obtained from the 668 participants (each of the responses referencing a specific cultural iconic element), a figure that was reached after filtering the 174 blank answers. Each individual response was labelled with the aim of identifying groups and particular characteristics. For this reason, a series of specific categories were used: nature of the iconic element, function during its creation, and historical era. In addition, elements were grouped *a posteriori* attending to five specific main themes (Table 2).

Information was inferentially analysed by making use of Kruskal–Wallis one-way analysis of variance tests, a non-parametric test capable of determining potential differences between groups (Cohen et al., 2018). A series of Dwass-Steel-Critchlow-Fligner post-hoc tests were also performed with the aim of determining individual differences in those cases where more than two groups were being compared.

Data obtained in this quantitative analysis was supplemented by an analysis of open responses spontaneously provided by participants. In this case, information was processed using the ATLAS.ti software, which allowed to classify and codify the responses using constant comparison, one of the principles guiding grounded theory (Corbin and Strauss, 2015). A series of emerging categories were identified when analysing pre-defined categories related to the sources of information, allowing for a more comprehensive and detailed vision. When processing qualitative data, reliability and qualitative validity was taken into account, and different procedures were put into practice (Gibbs, 2007), including the addition of quotations from the participants, the selection of discrepancies, and the constant discussion of the interpretation of the different responses and categories among the researchers.

Results

Attending to the research questions that were previously presented, results were grouped in three specific subsections. The first one focuses on examining those iconic cultural elements that pre-service educators considered the most relevant, their typology

Table 3 Iconic elements mentioned by trainee teachers categorised according to main themes.

Main theme	Iconic element	N	%
Large architectonical constructions (845 elements, 33.8% of total)	Alhambra of Granada	193	7.7%
	Aqueduct of Segovia	130	5.2%
	Giralda-Cathedral of Seville	118	4.7%
	Sagrada Familia of Barcelona	89	3.6%
	Mosque of Cordoba	70	2.8%
	Other iconic elements	245	9.8%
Traditions, festivities, shows and spaces for socialisation (578 elements, 23.1% of total)	Holy Week in Spain (Semana Santa)	127	5.1%
	Bullfighting	87	3.5%
	Festival of San Fermín (Pamplona)	63	2.5%
	Seville Fair	56	2.2%
	Flamenco	40	1.6%
	Other iconic elements	205	8.2%
Artistic works, authors and cultural institutions (414 elements, 16.6% of total)	The <i>Guernica</i> by Pablo Picasso	113	4.5%
	<i>Las Meninas</i> and other works by Velázquez	109	4.4%
	Paintings at the Cave Complex of Altamira	38	1.5%
	Paintings of Francisco de Goya	37	1.5%
	The Prado Museum, the Reina Sofía Museum and the Guggenheim	31	1.2%
	Other iconic elements	86	3.4%
Figures and/or political processes and their legacy (325 elements, 13.0% of total)	National Day of Spain (October 12)	64	2.6%
	1978 Constitution and democratic institutions	45	1.8%
	Valley of the Fallen in Madrid	33	1.3%
	Franco and his era	29	1.2%
	The Spanish Civil War	26	1.0%
	Colonisation of America and Columbus	26	1.0%
Gastronomy (265 elements, 10.6% of total)	Other iconic elements	102	4.1%
	Spanish tortilla	94	3.8%
	Paella	58	2.3%
	Jamón Ibérico (Iberian ham)	35	1.4%
	Other iconic elements	78	3.1%
	Specific cities in Spain (Madrid, Barcelona, Sevilla, Cádiz), natural environment, archaeological sites, etc.	71	2.8%

and specific features. The second one explores potential regional differences. After that, the last section is focused on analysing the sources of information about said elements, inquiring about the role of formal and non-formal learning.

Analysis of the iconic cultural elements selected by pre-service teachers. After the analysis of the 2498 responses provided by participants, a total of 109 individual or grouped iconic cultural elements were detected. Attending to the number of citations received, most of the iconic elements that were mentioned by the participants were identified as having enough relevance to merit an individual category, for instance, specific monuments, festivities or works of art. Some of the less frequently-mentioned iconic elements, on the other hand, were grouped attending to their close relation to a particular subject, for example, the legacy of a particular artist or historical figure.

Very specific iconic elements concentrated a very elevated number of responses: only 12 iconic elements of very distinct typologies grouped 50.3% of the selections. According to the data collected (Table 3), the most frequently-cited iconic elements were the Alhambra palace in Granada (193 mentions, a 7.7% of the total responses), the Aqueduct of Segovia (130 mentions, 5.2%) and the Holy Week in Spain (127 mentions, 5.1%), followed by the Giralda bell tower and the cathedral in Sevilla (118 mentions, 4.7%), as well as Picasso's *Guernica* (113 mentions, 4.5%).

Of the five main themes that were used to group said iconic elements, the category that concentrated the majority of the responses was that of *architectonic constructions* (33.8% of them). *Traditions, festivities, and socialising spaces* grouped 23.1% of the responses, while 16.6% gathered answers connected to *artistic works, authors and cultural institutions*. Finally, other icons were

linked to the *legacy of historical figures or historical events* (13%) or *gastronomy* (10.6%). These themes were able to successfully incorporate 97.2% of the responses, although the remaining 2.8% were unique or idiosyncratic, making it not possible to group them in said categories. This ranking, however, changes when analysing each region, something that will be covered later.

Attending to the nature of the iconic elements that were selected, 54.8% of the selections were connected to tangible heritage (that is, physical manifestations of culture), while 40.5% were part of intangible heritage (usually conceived as a non-tangible expression of a particular culture). The remaining responses (4.7%) could not be categorised according to this typology due to their specificity (for instance, some particular references connected to the legacy of events and historical agents).

In addition, 762 of the 2498 responses (30.5%) were found to be references to elements inscribed as *World Heritage Sites* by UNESCO, such as the Alhambra, but also the cave of Altamira, the Aqueduct of Segovia, the Cathedral in Burgos, Gaudí's artistic works, Atapuerca, the Way of Saint James, Doñana, etc. Focusing, instead, on the elements included in UNESCO's *Intangible Cultural Heritage* list, the vast majority of the elements that were referenced by participants went beyond those contained in the list, showing a broad conception of cultural heritage, which include multiple festivities, typical gastronomic dishes, dances, etc. (Fig. 1).

A balanced presence of tangible and intangible heritage was also visible when the iconic elements were analysed on the basis of the historical period in which they were first created, which could be contrasted with results obtained when examining the function of said elements at their creation (Fig. 2). Results indicated that 959 (40.6%) of the iconic elements mentioned had their origin in the Middle Ages (most of them related to

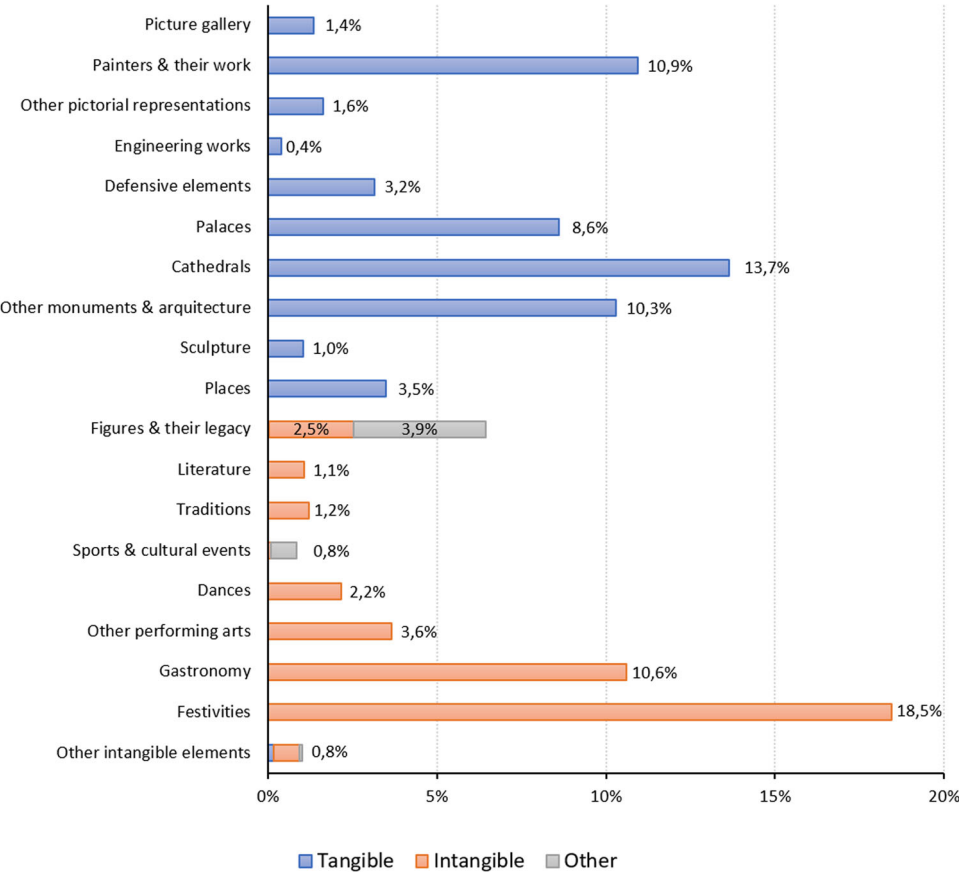


Fig. 1 Typology of iconic elements according to their nature. The figure shows the percentage of responses that selected each type of iconic element, as well as their nature (tangible or intangible).

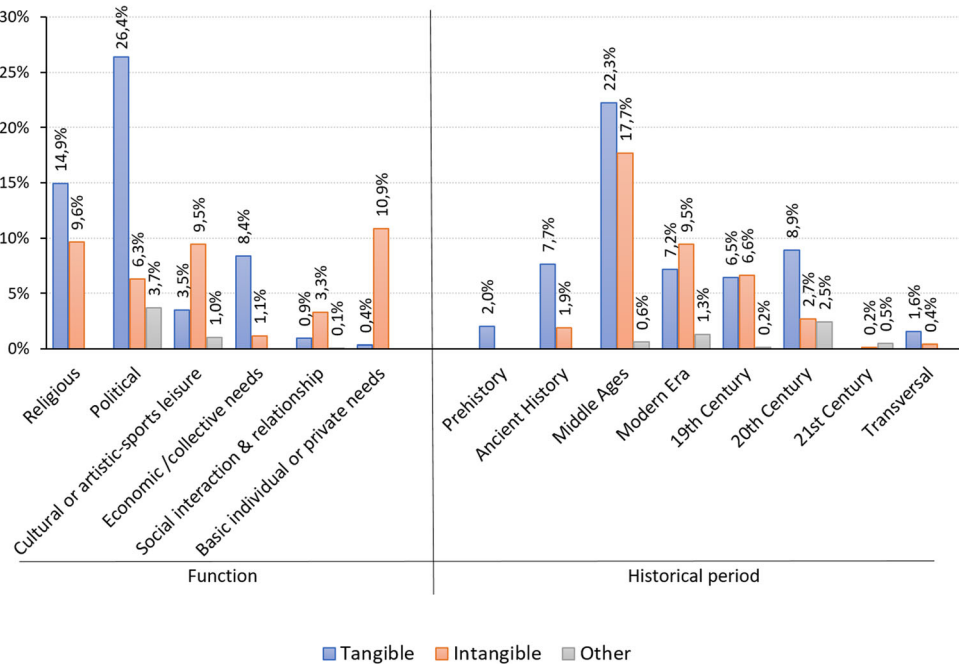


Fig. 2 Iconic elements according to the function and historical in which were created. The figure shows the distribution of the responses that were selected, differentiating between tangible or intangible elements.

architectural elements or large constructions, but also to festivities and traditions), and were similarly split between tangible and intangible elements. Conversely, those periods in which intangible heritage were less represented –both Prehistory and Ancient History– were also those in which the overall number of elements was lower: only 48 (2%) and 225 (9.5%), respectively. Items related to the Modern Era represented 17.9%, with 424 iconic elements, while those connected to history since the 19th century accounted for 662 elements, representing 28% of total mentions.

After an examination of the iconic elements that were selected, in this occasion regarding their particular function at the moment they were created, it was possible to identify, on the one hand, a predominance of the political (36.4% of the total responses) and religious (24.6%) functions. Both functions, and in particular the former, were mostly represented by tangible heritage (Fig. 2), such as architectural constructions (including palaces, cathedrals or defensive walls) throughout the Spanish geography, as well as sculptures and paintings. On the other hand, intangible heritage was more representative in elements related to the cultural or artistic/sports sphere, as well as basic needs, usually connected to gastronomy. For these last categories, intangible heritage represented a much more predominant weight (amounting up to 10.9% of the total responses just in the *basic needs* category), in contrast with other functions. Economic functions were found to be less frequently mentioned (representing just 9.5% of the iconic elements that were selected, most of them linked to tangible heritage), while those iconic elements connected to social interaction and socialisation (most related to intangible heritage, such as some festivities) were the least represented: 4.2% of the responses.

Examining differences between regions in Spain. Due to the cultural diversity traditionally associated with Spain and its different regions, as well as the intrinsic connection between cultural heritage and political, social and national identities, a comparison was made between those participants in different regions with the aim of pinpointing similarities and potential contrasts. Different categories were considered, including the main themes that were selected, the historical periods connected to the iconic elements, as well as the specificities and most noticeable absences in each of the regions in connection to the rest.

Focusing on the main themes, some important differences were found. Although those iconic elements linked to *traditions, festivities, and spaces for socialisation* and to *artistic works, authors and cultural institutions* remained in second and third position in each region, contrasts were found in other themes (Fig. 3). While *architectonical constructions* were prominently selected by Andalusian participants (41.6%), as well as in the Region of Murcia (33%) and in Castile and Leon (31.8%), it was not the case in Catalonia. There, only 14.2% of the responses corresponded to this them, lower than others such as *figures and/or political processes and their legacy*, which amounted for 25.7% of the responses. This last theme was less prominent in other regions, including Castile and Leon (11.9%), where the category was placed below *gastronomy* (12.9%). This last theme was found to be especially significant also for participants in Catalonia, with responses amount to 14.2% of the total, as much as the category *architectonical constructions*.

Regarding the historical period that was most prominent in each case, participants in Andalusia mentioned much more frequently iconic elements from the Middle Ages (59.3% of their responses) when compared with the average from the rest of the regions (31.8%). Iconic elements connected with the 19th and 20th centuries were, on the other hand, more prominent in Catalonia, with 49.7% of the total responses, in contrast to the rest of the regions, where the average was found to be 26.4%.

The presence and absences of specific iconic elements were also examined with the aim of determining whether noticeable differences could be detected. A greater dispersion of icons was identified in Castile and Leon and in Catalonia, and a greater concentration in Murcia and especially in Andalusia, where eight specific icons accounted for slightly more than 50% of the mentions. The analysis revealed that some of the icons that were found to be in the top ten in the general ranking position (GRP) moved to inferior position in the regional ranking of responses (RRP), sometimes with barely any mention (Table 4). That was the case for the Alhambra, the most-widely referenced iconic element in the GRP, which was barely mentioned in Catalonia (0.6% of the regional answers) despite the high presence of families of Andalusian origin in this region. On the other hand, results indicated that this element seemed more relevant for participants in Murcia over Andalusia, which placed the Alhambra at the top of their ranking of most cited icons (5.0% of the regional responses).

Some iconic elements were perceived as especially relevant in all territories: *Holy Week* in Spain (Semana Santa), the *Guernica* by Picasso, the *Sagrada Familia* in Barcelona and *Las Meninas* and other works by Velázquez were found to be part of the ten most-cited icons in all regions. While the Holy Week was one of the most frequently mentioned elements in Andalusia (in second place, with 8.1% of mentions) and in the Region of Murcia (in third place, with 6.3%), it was the in tenth position in Catalonia and Castile and Leon despite the artistic and cultural value in this last region.

However, for most territories, cultural elements that were considered to be characteristic of that very specific region were mentioned more frequently by participants studying there. This was detected in Andalusia, with elements such as the Giralda and Cathedral of Seville (in the first place in the RRP, with 13.3% of the regional mentions), the Seville Fair (fourth in the RRP, 5.9%) or the Mosque in Cordoba (fifth in the RRP, 5.6%). In Castile and Leon, that was the case for the Aqueduct of Segovia (first in the RRP, 9.1%); in Catalonia for the *Sagrada Familia* of Barcelona (first in the RRP, 7.7%) or for the *Diada* (fifth in the RRP, 4.9%), and for for the local festivities in the case of Murcia (in the seventh place in the RRP, 3.3%).

Icons which had no particular connection with any of the territories analysed, were found to be perceived as particularly relevant in some regions. Supporting the analysis of the main themes and historical periods, elements connected to the 20th century (the *Guernica*, the Valley of the Fallen, Franco and his era, etc.) were mentioned in Murcia and Catalonia in a higher degree, particularly in the latter region, where the Spanish Civil War was in the eight place in the RRP. Other contrasts include the 1978 Constitution and democratic institutions, highly mentioned in Catalonia too (seventh place in the RRP) or the National Day of Spain (October 12), specifically present in Castile and Leon (seventh place in the RRP). Regarding gastronomy and popular traditions, regional dishes or regional dances were not necessarily connected to their own geography, with paella, for example, being widely cited in the Region of Murcia (3.3%) and in Castile and Leon (2.8%). The Spanish tortilla was, however, recognised as an essential Spanish iconic dish in all regions, ranking in the top 20 in all regional lists, and even reaching the third position in Castile and Leon and the fourth in Catalonia.

Sources of information and the role of formal and non-formal settings. Once the main iconic cultural elements and their specific features were identified, characterising the main sources of information about said iconic elements became relevant in order to comprehend the influence of school and formal educational

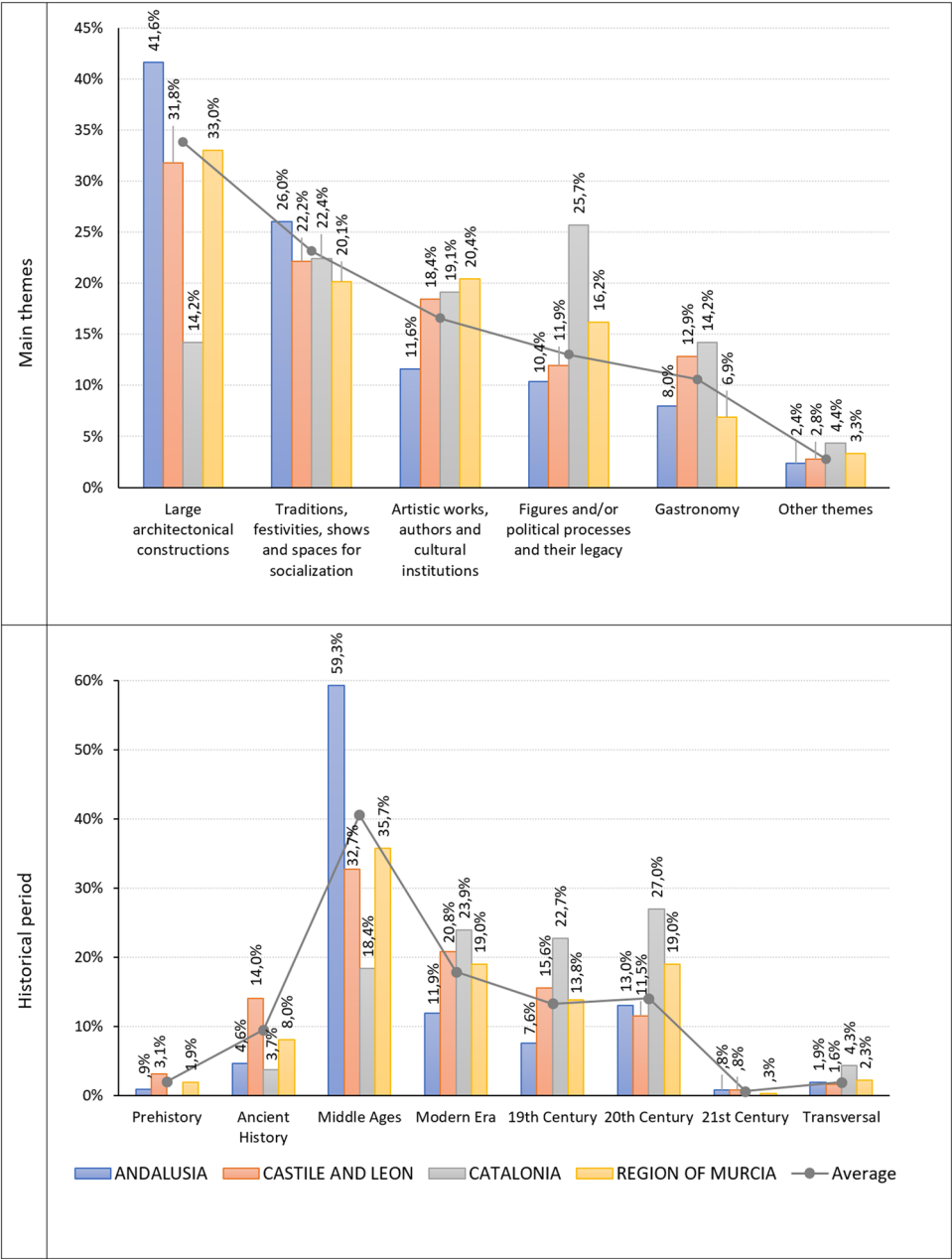


Fig. 3 Distribution of iconic elements selected in each region according to main themes and historical periods. The figure indicates which themes and periods associated with the iconic elements were prominent in each Spanish region.

settings, as well as non-formal settings, in educators' conceptions and ideas.

After analysing the Likert-scale items that were provided to participants, which measured the level of agreement with a series of statements, results indicated that the sources of information about the iconic elements were diverse in nature (Table 5). History lessons at school (that is, formal education), was considered a prominent source of information by participants ($M = 6.53$, $SD = 3.30$), and the second one overall. Because quantitative information was supplemented by the analysis of the open responses provided by participants, they were able to freely indicate specific sources of information or to comment on particular ideas.

After an examination of the different responses, it was possible to highlight the way participants remembered and mentioned specific teachers in charge of the subject back when they were in

school. In a total of 338 instances (14.2% of the 2372 total responses connected to this category), the role of the teacher was mentioned, occasionally with the spontaneous introduction of the names of those educators that participant recalled. In most cases, trainee teachers merely mentioned whether the particular iconic element was covered in primary or secondary education or how it was mentioned, such as, in the words of one participant: 'my teacher talked about this specific monument' (An.1012). On 23 occasions, they recalled specific tasks or activities, such as when one participant mentioned how 'we prepared an art project in high school where we had to create a museum, and us students were the guides: I had to make a presentation about *Las Meninas* by Velázquez' (Mu.44).

Non-formal settings were found to also be very influential, although with some notable contrasts, as it will be described below. Participants' families and their social environment were

Table 4 Top ten most-mentioned iconic elements in each different region.

Iconic element	Position in the ranking and % of mentions					Top ten in all regions	Top ten only in its own region
	Total GRP (%)	Andalusia RRP (%)	Castile and Leon RRP (%)	Catalonia RRP (%)	Region of Murcia RRP (%)		
Alhambra of Granada	1 (7.7%)	3 (7.1%)	2 (7.2%)	35 (0.6%)	1 (15.0%)		
Aqueduct of Segovia	2 (5.2%)	30 (0.9%)	1 (9.1%)	34 (0.6%)	6 (4.2%)		
Holy Week in Spain (Semana Santa)	3 (5.1%)	2 (8.1%)	10 (3.0%)	10 (3.3%)	3 (6.3%)	x	
Giralda-Cathedral of Seville	4 (4.7%)	1 (13.3%)	29 (0.9%)	--- (0.0%)	37 (0.6%)		
The <i>Guernica</i> by Picasso	5 (4.5%)	8 (3.4%)	6 (4.3%)	3 (6.0%)	2 (7.2%)	x	
<i>Las Meninas</i> and other works by Velázquez	6 (4.4%)	7 (3.5%)	4 (5%)	9 (3.3%)	4 (4.8%)	x	
Spanish tortilla	7 (3.8%)	14 (1.9%)	3 (5.5%)	4 (4.9%)	19 (1.5%)		
Sagrada Familia of Barcelona	8 (3.6%)	9 (2.5%)	9 (3.4%)	1 (7.7%)	5 (4.5%)	x	
Bullfighting	9 (3.5%)	11 (2.1%)	5 (4.7%)	6 (3.8%)	12 (2.1%)		
Mosque of Cordoba	10 (2.8%)	5 (5.6%)	19 (1.7%)	--- (0.0%)	20 (1.5%)		x
National Day of Spain (October 12)	11 (2.6%)	21 (1.3%)	7 (3.6%)	14 (2.2%)	11 (2.4%)		
Festival of San Fermin (Pamplona)	12 (2.5%)	25 (1.0%)	8 (3.5%)	15 (2.2%)	9 (3.0%)		
Paella	13 (2.3%)	17 (1.4%)	11 (2.8%)	21 (1.6%)	8 (3.3%)		
Other festivities	14 (2.3%)	22 (1.1%)	16 (2.0%)	2 (7.7%)	7 (3.3%)		
Seville Fair	15 (2.2%)	4 (5.9%)	36 (0.7%)	39 (0.6%)	--- (0.0%)		x
Palaces, defensive complexes and others	16 (2.0%)	10 (2.3%)	14 (2.0%)	22 (1.6%)	22 (1.5%)		
1978 Constitution and democratic institutions	17 (1.8%)	15 (1.8%)	20 (1.6%)	7 (3.8%)	21 (1.5%)		
The Golden Tower of Seville	19 (1.5%)	6 (4.5%)	76 (0.1%)	--- (0.0%)	42 (0.3%)		x
Valley of the Fallen (Madrid)	23 (1.3%)	41 (0.5%)	22 (1.2%)	12 (2.7%)	10 (3.0%)		
The Spanish Civil War	29 (1.0%)	20 (1.4%)	54 (0.3%)	8 (3.8%)	27 (1.2%)		
Diada	53 (0.4%)	--- (0.0%)	--- (0.0%)	5 (4.9%)	--- (0.0%)		x

Dark green is used to indicate iconic elements in the top 5 in each of the regions; light green is used to indicate iconic elements in positions 5 to 10; orange is used to indicate iconic elements outside the top 40 in each region. Percentages do not amount to 100% in each column as only the top ten icons in each region have been presented.
GRP General Ranking Position, RRP Regional Ranking Position.

Table 5 Participants' sources of information of the iconic elements selected.

Source of information	M	SD	N
School lessons	6.53	3.30	2372
Social and familial environments	7.35	2.79	2372
Fiction and documentaries	4.69	3.17	2292
Social media and Internet	6.29	3.07	2330
Museums, visits or expositions	6.13	3.47	2337

A 10-point Likert scale was used to measure the level of agreement with each source of information.

M mean, SD standard deviation, N number of responses.

found to be a noteworthy factor capable of influencing prospective teachers' ideas about the different iconic cultural elements. This category was, in fact, the participants' main source of information about the iconic elements that they had previously spontaneously selected ($M = 7.35$, $SD = 2.79$).

Attending, once more, to the specific spontaneous comments that were provided by participants, it was possible to identify the importance of the role of families, with a total of 486 explicit citations (20.5% of the 2372 total responses in this category), when recalling the origin of the information about each of the iconic element that was selected. On nearly every occasion, participants merely cited the relevance of family members in a generic way, indicating, for instance, that 'in my family, they usually talk a lot about [Franco's dictatorship]' (Mu.154), but in some cases, it was possible to find references to specific conversations. That was the case of a trainee teacher that admitted that 'because I was born in Andalusia, my family occasionally talks about some elements from over there' (Mu.201), and another that pointed out that 'the older members of my family have always told me personal stories that happened [during the Spanish civil war]' (An.1004).

Precisely, parents were specifically cited in 149 occasions (6.3%), and grandparents in an additional 65 instances (2.7%). In

these cases, participants recalled specific conversations, such as ‘my parents talked about [Picasso’s *Guernica*] once, when we were discussing about Spanish art’ (Mu.146), ‘my grandfather really likes talking about the history of Spain’ (An.1381), or ‘my grandmother tells me a lot of things about the post-war era, because she was born in 1939’ (Mu.189). Brothers were also mentioned a total of 16 times, and the role of friends appeared with 190 mentions (8.0%): ‘my friends study art history and have mentioned [*Las Meninas*] on many occasions’ (CL.1340).

Focusing this time on fiction and documentaries, including films, TV series, as well as comics and novels, results indicated that this category was considered the least prominent source of information for the iconic elements that were selected ($M = 4.69$, $SD = 3.17$), lagging behind formal education and any other option. Additionally, more than half of the open answers linked to this category were left blank, indicating that participants were not always able to find examples.

Films were the type of media that were mentioned more frequently in this category: in 200 occasions (8.7%), with an additional 101 mentions (4.4%) to documentaries. Here, it was possible to detect the prevalence of ‘multiples movies and documentaries connected to the Spanish civil war [1936–1939] and the post-war’ (Ca.2700). While most of the responses were generic, simply stating that information was obtained by watching TV series (129 mentions in total, 5.6% of the 2292 responses in this category), additional responses specified particular titles, such as the Spanish TV series *Isabel* (with 26 mentions) or *Ministerio del tiempo* (with an additional 12 mentions). Novels and books were mentioned in 46 occasions (generically in nearly all instances), while comics were referenced only two times.

On the other hand, Internet and social media was used by trainee teachers as a relevant source of information for the elements previously selected ($M = 6.29$, $SD = 3.07$). Participants mentioned using the Internet up to 242 times (10.4%), with some of them talking about how they ‘had the curiosity of looking information up on the Internet [about the *Guernica*’] (Mu.51) or recognising having ‘looked for information online due to personal interest’ about the Alhambra (CL.1056). The use of Google was specifically mentioned 39 times, and Wikipedia in 17 occasions.

A total of 73 participants admitted using traditional media as a source of information, mainly pointing to the use of television. For instance, one pre-service teacher mentioned how the *Valley of the Fallen* ‘was a topic of debate on TV recently’ (Mu.171). Conversely, mentions to social media were overwhelmingly higher, with 264 mentions. This figure includes 58 explicit mentions to Instagram, 38 to Twitter, 9 to TikTok and 8 to Facebook, usually in combination with each other: ‘[I follow] accounts about interesting facts in Instagram or Facebook’ (CL.477). In addition, 65 participants mentioned YouTube and its videos as a key source of information, mentioning from ‘educational videos’ (CL.1261) to specific songs.

Finally, museums, exhibitions and visits were also reported as a relevant source of information ($M = 6.13$, $SD = 3.47$), although this category was not as prevalent as others, it was significant to find 368 (14.5% of the 2337 responses in this category) mentions to specific visits to many of the iconic elements that were mentioned. This figure also included touristic visits, which were widely cited. Specifically, additional 212 (9.1%) mentions to museums were detected, including many generic answers (‘many exhibitions’, CL.559), but some variety was identified. Some participants mentioned particular places that they remembered being relevant (‘I have visited some museums with objects used in the Holy Week’, Mu.6) or even specific personal experiences when they were younger or when they were accompanied by their parents. While the Prado Museum was the most widely-cited iconic element (51 different responses), it was possible to find

Table 6 Iconic elements covered in school lessons according to their function.

Function	M	SD	N
Political	8.00	2.43	875
Religious	6.53	3.09	577
Cultural or artistic-sports leisure	5.25	3.48	322
Economic/collective needs	7.14	3.02	232
Social interaction and relationships	4.18	2.88	103
Basic individual or private needs	3.48	3.33	266

A 10-point Likert scale was used to measure the level of agreement.
M mean, SD standard deviation, N number of responses.

many examples mentioning the Reina Sofia Museum (‘I have visited the Reina Sofia at least in two occasions’, CL.1314), the Fine Arts Museum in Seville, or the National Museum of Sculpture in Valladolid, among others.

Focusing exclusively on *school lessons*, it was possible to analyse the degree in which the different iconic cultural elements connected with specific functions were covered during formal education. By isolating the iconic elements by their predominant function at their creation, it was possible to detect whether history education at schools usually highlight elements connected to one or other type of function to the detriment of the rest of them.

After analysing the results (Table 6), those iconic elements closely connected with political and economic functions were found to be the ones that participants recalled as having been covered during school lessons ($M = 8.00$, $SD = 2.43$ and $M = 7.14$, $SD = 3.02$, respectively). These were followed by those iconic elements connected to religious ($M = 6.53$, $SD = 3.09$) and cultural functions, or at least, connected with leisure time ($M = 5.25$ $SD = 3.48$). This was the case of elements such as museums, art galleries, or even festivities, among others.

In contrast, those iconic cultural elements that were, in their genesis, linked to social interaction (for instance, town squares and some festivities) or functions connected to basic needs (for example, those elements associated with gastronomy) were mainly absent from school lessons ($M = 4.18$, $SD = 2.88$ and $M = 3.48$, $SD = 3.33$, respectively).

In order to further examine the contrast in valuations, a Kruskal-Wallis test was performed. Results allowed to detect statistically significant differences between the different categories ($\chi^2(5) = 446$, $p < 0.01$), corroborating that some of the functions were much more prominent than others. Effect size was also found to be elevated ($\varepsilon^2 = 0.19$). In addition, Dwass-Steel-Critchlow-Fligner post-hoc tests were also conducted with the aim of determining potential contrasts between specific categories. The analysis of the results allowed the detection of statistically significant differences between political and all other functions: religious ($W = 13.39$, $p < 0.01$), cultural ($W = 17.39$, $p < 0.01$), economic ($W = 5.14$, $p < 0.01$), social interaction ($W = 16.21$, $p < 0.01$), and basic needs ($W = 23.79$, $p < 0.01$). This was also found to be true regarding the contrast between economic function and the rest of the categories (W between 4.10 and 15.44, $p < 0.01$).

The typology of the different iconic cultural elements covered at school was also examined, detecting that, in line with the most prominent functions, architectonical constructions, artistic productions and artist, and the legacy of historical figures and events were usually covered in schools, while elements connected to gastronomy, traditions, festivities, etc. were not as present in school lessons (Fig. 4).

In addition, and focusing this time on the nature of the iconic cultural elements, the degree in which the tangible and intangible

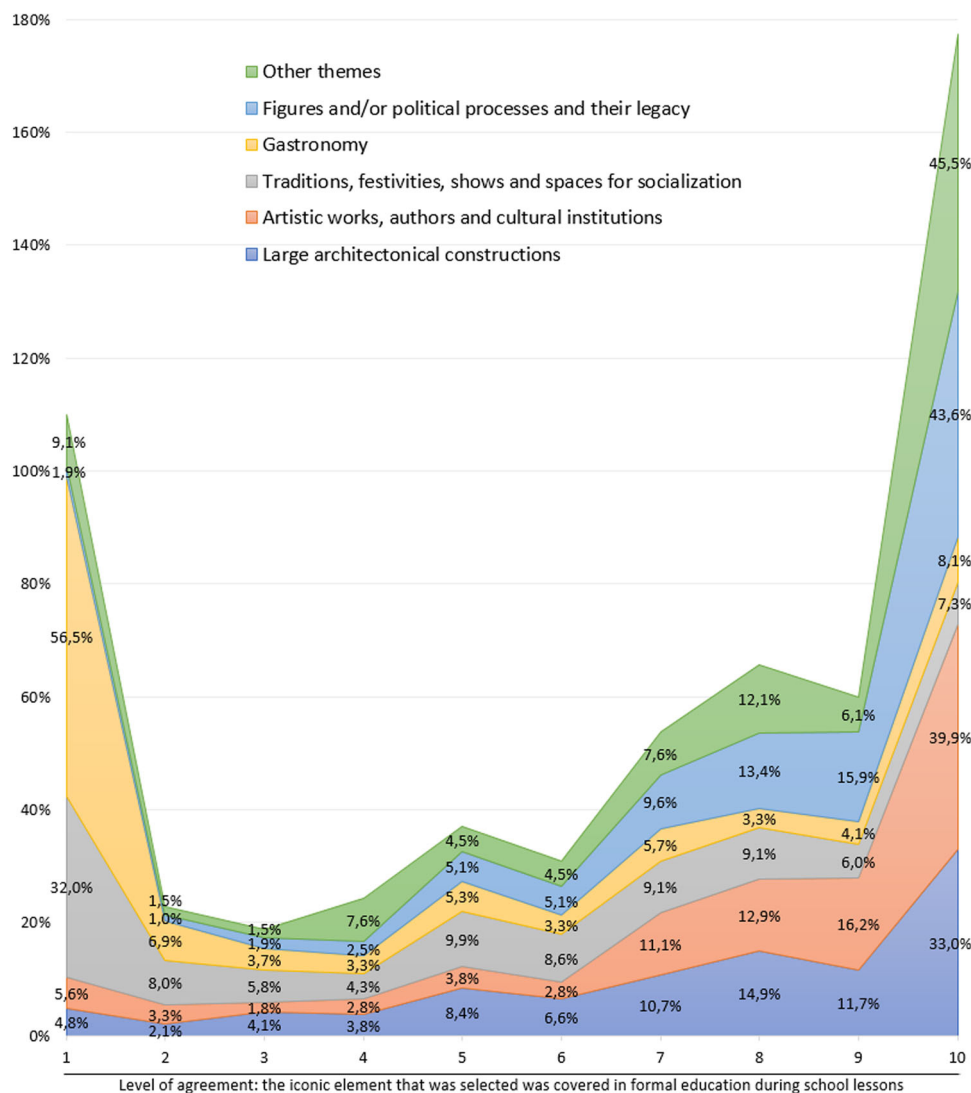


Fig. 4 School lessons as a source of information for those iconic elements that were selected. The figure shows participants' level of agreement with the statement that the different iconic elements selected were addressed during school lessons.

cultural iconic elements were covered during school lessons was also examined. In this regard, results indicated that, at least in formal settings, tangible elements were much more prone to be covered at school ($M = 7.56$, $SD = 2.69$) than intangible elements ($M = 4.95$, $SD = 3.48$).

This contrast was corroborated by a Kruskal-Wallis test, indicating statistically significant differences between categories ($\chi^2(2) = 325$, $p < 0.01$), and an elevated effect size ($\varepsilon^2 = 0.14$). Due to the fact that some iconic elements were not clearly delineated as material or immaterial, Dwass-Steel-Critchlow-Fligner post-hoc tests were conducted, also allowing the detection of statistically significant differences between the tangible and intangible categories ($W = 24.77$, $p < 0.01$).

Discussion and conclusions

After the analysis of the results presented above, it is now possible to address some of the initial research questions that were presented, as well as to provide an overview of the information that is worth highlighting. First of all, data obtained in this study has allowed to clearly identify that the perception of cultural heritage displayed by prospective teachers corresponds to a broad or holistic vision, that includes not only tangible, but also intangible

elements, something promoted by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2003; 2014). The iconic elements that were spontaneously referenced by participants in this research were of an intangible nature in at least 40 per cent of the occasions, which indicates that prospective teachers attributed notable value to aspects such as traditions, culture, festivities, etc. In addition, historical periods such as Prehistory or Ancient history, where intangible heritage is not always visible, were not as prevalent in the responses.

Of those iconic elements connected to cultural heritage of a tangible nature, those that were created with a political or religious function were more prominent in the responses, as these were also the ones most closely related to education received in school lessons. This was found to be in contrast with intangible iconic elements, usually in connection with categories such as festivities, gastronomy, or performing arts, among others. As previous studies have pointed out (Barton and McCully, 2005; Coudannes Aguirre and Ruiz, 2018), history that is learned in schools has a very strong influence how students think about their cultural and national heritage and is in connection to the notion of identity-building. This research corroborates the way formal learning is still influential, especially in particular topics, as well as how non-formal and informal learning do play an important role

when modelling trainee teachers' ideas and preconceptions. As indicated by other studies (Kim, 2018; Burkholder and Schaffer, 2021; Martínez-Rodríguez et al., 2024), master narratives and identities, shaped by factors such as popular media and the political and social environment of each particular context, are also influential.

In second place, among those iconic elements of a tangible nature, those that were connected with a political or religious function were highlighted the most, and these were precisely those that participants which were informed by school lessons and formal education. On the other hand, those elements of an immaterial nature were the ones which were revealed to be scarcely linked to knowledge acquired at history lessons during formal learning. In this regard, school history may be perceived to be detached from a key fragment of cultural heritage, one that plays an important role in shaping collective memories and that also helps foster a sense of collective or national identity (Carretero, 2017). This gap is usually filled, as corroborated by the results found in this study, by the influence of families and the social environment.

From the point of view of historical culture as a whole (Grever and Adriaansen, 2017), these results signal how some specific historical narratives are reinforced in formal education, but also how other sources of information sometimes compensate or even outweigh specific shortcomings. From this perspective, 'historical culture also includes the networks through which these references are distributed, such as schools, cultural institutions, and the media' (Nordgren, 2016, p. 481), and aspects such as the digitalisation of information and social media should also be taken into account when exploring prospective teachers' ideas and influences, as seen in this study.

Finally, the contrasts observed between the selection of iconic elements in each of the participating regions suggest that, similarly to what Gibson et al. (2022) identified in Canada after analysing the responses of in-service teachers, regional identities are influential. In particular, the selection of the cultural and historical iconic elements in each region in this study seemed to be mediated, or at least influenced, by a regional factor. In this case, specific themes and historical periods were preferred over others in particular territories, something that was not identical between regions, despite the multiple similarities. For instance, elements related to political aspects, and especially those concerning the twentieth century, were more prominently selected by participants from Catalonia and the Region of Murcia than from the other regions.

Implications, limitations and future directions. The results of this research present new opportunities and inform practices in initial teacher training. They can encourage pre-service teachers to identify, and then question established narratives, promote alternative approaches, and comprehend the features of cultural heritage. The ideas and preconceptions of prospective history educators that have been identified and analysed in this study can, in fact, help consolidate further research into new teaching practices, leading to discussions about values, identity, change over time, etc.

Focusing now on some of the limitations of the research, it should be noted that the study was conducted in four Spanish regions, and with unequal participant representation, which may limit the generalisability of the results in each territory. The distribution of participants between the different regions may have influenced which heritage elements were mentioned more frequently. In this regard, future directions might include a further corroboration of these results. In addition, it would also be beneficial to consider the age of the participants, or at least the years in which they completed their basic education studies, in

order to detect further similarities or contrasts. This might help identify specific differences in the use of different typologies of sources of information. It could be informative to understand potential correlations between the sources that were referenced and the age of the trainee teachers, as well as the connection between the importance they assign to the history they have learned and their experience.

This study might introduce new lines of research on the analysis of how to foster historical thinking and historical significance by reflecting on those cultural and historical iconic elements embedded in collective memory. Similar studies could be conducted in other Spanish regions and other nations to compare ideas and preconceptions about cultural heritage in pre-service teachers. This could help establish similarities and differences in terms of the importance provided to tangible and intangible heritage, visions about national histories, the relationship between participants' identities and the relevance given to specific iconic elements, as well as the role played by history taught at schools and other sources of information. To further advance in some of these lines of research, other variables such as the age of participants could be included, something that might allow a more comprehensive understanding of how sources of information and preconceptions change over time.

Ultimately, reinforcing initial teacher training requires making prospective teachers understand and become aware of both the disciplinary and social aspects of history education, and how the construction of identities are closely connected with influences outside school as well as their own practice, always with the intention of making further improvements.

Data availability

The datasets generated during and analysed during the current study are available from the corresponding author on reasonable request.

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Author contributions

Authors were working as a team in writing a literature review, collection of data, analysing of data, and in writing the report. Literature review was developed by DM, EL, JO and SM, instrument design was developed by DM, EL, JO and SM, data collection was led by JO and SM, data processing was led by DM and EL, data analysis and results were led by DM and EL, and discussion was led by DM and EL.

Ethical approval

This research received ethical approval (ID 3106/2020) from the ethical review committee of the University of Murcia (*Comisión de Ética de la Investigación*). All procedures performed in this study have been in accordance with the ethical standards of the institution and with the Declaration of Helsinki and its later amendments.

Informed consent

Informed consent was obtained for all research participants. All participants were informed about the purpose of the study. Their participation was completely consensual, anonymous, and voluntary.

Competing interests

The authors declare no competing interests. Three of the authors (DM, JO and SM) are members of the editorial board of the journal.

Additional information

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