

Digital historical maps in classrooms. Challenges for history education¹

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INTRODUCTION

Historical maps are an essential tool in the field of history teaching. One of their main purposes is to show the transformations in the territory that have occurred as a result of human actions (Kamusella, 2010). In this sense, historical maps can be defined as a present-day representation of how space was configured in the past. However, despite their notable presence in classrooms, the characteristics of the historical maps that circulate in educational contexts and how students understand them have not been studied in depth (Carretero, 2018a). Previous research shows that most people tend to assume that the borders of national territories remain unchanged over the years. They even assume that borders are entities that were present even before the boundaries of the nation were established (Parellada, *et al.*, 2020). Our main hypothesis is that these erroneous representations regarding national territory are largely due to the type of cartographic representations that circulate in the school context, mainly through textbooks. In this sense, the objective of this chapter is to analyse how digital historical maps can become powerful tools to promote the development of historical thinking. **But, we consider necessary to analyse the features of historical maps include in textbook because in our opinion they are powerful tools that, together as the master narrative, tends to reproduce unhistorical representations of the national territory.**

In this sense, before considering the advantages of digital historical maps for the teaching of history, we consider it important to present how students represent itself the transformations of the national territory in the past and the relationships between their representations and the historical maps present in textbooks. We think that, as with any digital resource, the presence of digital historical maps in classrooms in itself does not

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mean that students will be able to understand the dynamic of the development of national borders. Also, they need consider the complexity of the historical processes involved in the territorial transformations. For example, we still have limited understanding of how students understand historical maps and how they must be teach.

With this purpose, firstly we will analyse the characteristics of historical maps of the national territory included in textbooks. Then, the relationship between national historical accounts and cartographic representations, which legitimize certain meanings about the territory, will be highlighted. For this purpose, some results obtained by our research team in previous studies that analysed how university students and textbooks from different countries represent the changes in the dimensions of the national territory as a product of different historical processes will be analysed. Third, the importance of historical maps as instruments for the teaching of history and their relationship with the development of historical thinking will be analysed. Finally, the possibilities that digital tools offer for producing cartographic representations that favour a dynamic understanding of the development of national borders will be considered. It is expected that digital tools can provide a dynamic and complex view of changes in national borders, but it is also necessary to consider how they can contribute to improving misconceptions about the national territory.

Historical maps in textbooks

When a current map of Europe is compared with maps from the late nineteenth century and the middle of the twentieth century, substantial changes can be observed in the boundaries that map represents. As an example, we can note the substantial increase in the number of states demarcated and referenced in the current map compared to the map from the early twentieth century. Such a comparison shows that the borders that separate current nation-states are not the result of natural forces or causes; rather, they are social constructions resulting from the actions of human beings and a way of conceiving the world that is typical of modern society (Hobsbawn, 1990). This statement, which is obvious to any historian or social scientist, is not at all obvious to many students and citizens, as we will see later.

Maps are substantial instruments for representing the historical and dynamic nature of borders. It is through them that students of history visualize how the territories of the different nation-states have been modified and configured. Thus, it could be assumed that one of the objectives of including historical maps in textbooks and school atlases is to show students territorial changes (Kamusella, 2010). In this regard, some authors have highlighted the importance of maps in the classroom for teaching and understanding historical events (Bednarz *et al.*, 2006; Bolick, 2006; Cinnamon, 2017). However, we believe that some aspects of the use of maps need to be studied in depth. It is necessary to investigate, on the one hand, the characteristics and didactic effectiveness of historical maps that are included in textbooks and, on the other hand, how students in particular, and citizens in general, understand the historical and geographical information that they transmit (Carretero, 2018a; Parellada, *et al.*, 2020).

In what follows, we will show some of the characteristics present in historical maps in textbooks that, in our opinion, may be inadequate for promoting an understanding of the

formation of the national territory. Most of the historical cartographic representations included in school textbooks are based on maps of the current national territory. Figure 1 is a historical map published in a Mexican textbook (Sanchez Michel & Moreno Chávez, 2019) that represents the territory inhabited by the *Purhépecha* and *Aztec* communities between the fifteenth and sixteenth centuries. However, although this map represents a territorial configuration of the past, the current Mexican states of Jalisco, Guanajuato, Guerrero, Michoacán and Colima, among others, can be observed. That is, in the representation, past and present overlap (Pérez-Manjarrez & Carretero, 2021; Parellada *et al.*, 2020). Even the current place names of Honduras and Guatemala can be read.

Figure 1. Map of the Purhépecha and Azteca Kingdoms. Available at <https://libros.conaliteg.gob.mx/20/S26051.htm?#page/165>



Images similar to that presented in Figure 1 are typical of the maps found in textbooks and in historical atlases of different parts of the world that aim to represent historical territories. Many times, this is because the production and circulation of maps in the educational field is regulated by current legislation and, in part, by certain national, social and political biases that are present in the school curriculum. For example, in Argentina, Law 22963 of the Charter establishes that the state can prohibit the commercialization and reproduction of representations of the continental, insular and

Antarctic territory of the Argentine Republic that do not comply with the regulations established by the National Executive Power through the National Geographic Institute. That is, the state determines which maps can be published in textbooks and which maps cannot. The cartographic images that can be published are those that adapt to the official cartography and are based on the official map.² This is a clear example of state intervention in the production and circulation of cartographic images in the educational context; however, these regulations often occur implicitly.

Furthermore, it can be assumed that the historical maps presented in textbooks are not unrelated to one of the main objectives of history education: to forge citizens of the nation-state. This objective, which was promoted at the end of the nineteenth century and during the first decades of the twentieth century, is typical of a romantic conception of school history that continues today (Carretero, 2011). However, in many countries, this objective is combined with enlightened objectives that are typical of a more disciplinary approach to teaching history. The enlightened objectives, unlike the romantic objectives, have the purpose of constructing critical citizens through a disciplinary and documented understanding of history as a social science. In this sense, it is intended for students to relate the historical process to the present but understand it in its own context. Currently, in different curricula, these objectives are translated into such purposes as understanding the past in a complex way, distinguishing among different historical periods, analysing continuity and change, adopting a historical perspective when studying the past and understanding historical multicausality, among others (Seixas, 2018).

However, as we mentioned, in historical maps in textbooks, the past and the present are confused. In these images, a kind of temporal loop seems to operate in which the territorial configuration of the present is transferred to the past, which often justifies the subsequent existence of the nation-state in that space. This temporal loop is related to the romantic objective of the teaching of history that predominated in the nineteenth-century, since it helped to maintain and reinforce the idea of the nation-state as an immutable entity. Each historical map in a textbook is related to a narrative and to a set of historical, political and social meanings that a group constructs for a space (Pérez-Manjarrez & Carretero, 2021). In turn, these meanings and cartographic representations affect the way in which subjects perceive, imagine and represent the national territory in the past, present and future. This could be one of the reasons why most students conceive of current territories as political units that do not change over the years (Carretero, 2018a; Parellada *et al.*, 2020).

² In 1941, Argentina passed Law 12969 of Geodetic Works and Topographic Surveys. It required that maps that were published in the national territory and that totally or partially reproduced a sector of the Argentine territory had to incorporate part of the Antarctic Sector and the Falkland Islands as territories belonging to the nation-state. Then, in 1983, Law 22963 of the Charter was enacted, which modified the afore mentioned Law 12969 and had the objectives of consolidating a national awareness of the territory and avoiding differences in geographic information about the Argentine Republic. The regulations specify that the only valid cartographic representation is the version made by the national government. At present, this law, with some minor modifications, continues to applied in Argentina.

Let us look at a specific case based on our previous research. In 1816, when Argentina became independent from Spain, the territory over which the incipient State—which, in those years, was called the United Provinces of the South—exercised sovereign rights differed substantially from the current territory. Due to various civil wars, which lasted for more than 40 years, the boundaries of the different jurisdictions that make up present-day Argentina were not clearly defined (Figure 2). It was not until the end of the 19th century that Argentina acquired its current territorial configuration. In the years after the internal conflicts ended and the country was unified, the state undertook a set of military campaigns of territorial expansion known as the Conquest of the Desert (1878–1885). These campaigns were undertaken to conquer the lands of Patagonia, located south of the 42° parallel, which were under the domain of their original inhabitants (Lois, 2018).

Figure 2. Political Map of South America territories by 1816. Map Exhibited at the Cabildo and May Revolution Museum of National History in 2016.



However, despite these considerations the maps in Argentine textbooks that represent the national territory of the early nineteenth century differ considerably from those shown in Figure 2. For example, Figure 3 aims to represent the liberation campaigns of South America. It shows the current external boundaries of Argentina as if they existed

at the time of independence. In other words, while historically, Argentina did not acquire its current configuration until 1885, the year in which the Conquest of the Desert ended, the map in the textbook shows the current boundaries projected onto a representation that illustrates historical processes, including those that predated the existence of Argentina.

Figure 3. Map showing South America's liberation campaigns in the early 19th century. Available at <https://www.educ.ar/recursos/125203/mapas-de-america-de-temas-historicos>



Thus, this superposition exceeds mere graphic representation. In it, the legend (Arg.) can be observed above the Falkland Islands (*Malvinas Islands*). However, the state did not take possession of these islands until 1820; thus, this legend is incorrect for the represented period. However, the legend is included because it refers to the territorial claim that Argentina has made for decades in the international arena (Ministry of Foreign Affairs, International Trade and Worship of Argentina, 2020). Thus, although Argentina did not exercise sovereign rights over the islands during the represented period and does not exercise it at present, the map shows that the Falklands belong to Argentina. The aforementioned state regulation of the cartographic images that circulate in the school context and their effective enforcement in the field of history education provide an opportunity to reflect on the relationship between the construction of a territorial image, the teaching of history and the construction of the nation.

The territory as a central element of master narratives

Disciplines as diverse as political science, history and social psychology have shown how, in the process of nation-building, it is necessary to forge not only an imagined community but a territorial image that will give shape to the nation (Anderson, 1983; Billig, 1995; Herzog, 2017; Kosonen, 2008). Along these lines, Anderson (1983) considered that, in the context of the formation of modern nationalisms, territorial silhouettes were transformed into logotype maps, or simple ways of representing the body of the nation. Through these logo maps, an infinitely reproducible series of cartographic representations of the nation was created and placed on different objects of daily life, such as posters, stamps, banknotes, regional products and textbooks, among others. These logo maps, instantly recognized and visible everywhere, were internalized by the subjects as a symbol of the nation, creating a powerful emblem of incipient nationalism.

Craib (2017) considers that postcolonial administrations produced maps and atlases - national, cultural and political - as part of the process of connecting a place with a remote past that gave rise to the nation. The author states that “Cartographers in such diverse places as Mexico, Thailand, Turkey, and Iran inscribed— and reinscribed— a distant past onto modern maps of the nation in an effort to stress the nation's temporal longevity and cultural coherence, or to visualize and legitimize irredentist aims” (Craib, 2017, p. 21). Specifically, historical maps, as contemporary pedagogical devices, contribute to the visualization of the arguments transmitted in school content. In our opinion, historical accounts give meaning to maps, which, in turn, serve as symbolic and visual support for the representations transmitted in the historical narrative, as shown by our empirical research with high school and university students (Carretero, *et al.*, 2018; López, *et al.*, 2015; Parellada, *et al.*, 2020). In this regard, when there are contradictory narratives characterized by antagonistic positions on the origin and possession of the same territory, the maps that accompany these stories illustrate different borders. In these cases, textbooks tend to silence the arguments and maps prepared by the rival state and to make only their own visible (Cantabrana, *et al.*, this book). This suggests that historical maps not only represent the territory but also recreate the master narrative, an official historical account of the nation's evolution that is widely rooted in society and is transmitted from generation to generation (Abdou, 2017). Such accounts have been conceptualized by some authors as dominant discourses through which different groups impose their representations onto national

history and becoming (Barreiro, *et al.*, 2017) and are considered myths of origin by historians (Hobsbawm & Ranger, 1983).

Master narratives are one of the main instruments through which students construct their representations about the past of the cultural or national community to which they belong. For his part, Wertsch (2018) distinguishes between the processes of production and consumption to account not only for how cultural instruments are created within a society but also for how subjects appropriate and transform them in the course of mediated action. For this author, historical narratives constitute a cultural tool that mediates subjects' relationship with the past and contributes to the production, transmission and consumption of a common origin and destiny. This relationship is complex; it does not imply at all that the narrative that is produced is consumed as such but suggests that there are processes of appropriation and resistance that may explain its changes over time.

Studies on production have investigated the historical and social conditions in which the master narratives taught to students in schools were developed. Thus, analyses have considered how national narratives were forged from the second half of the 19th century with the objective of contributing to the development of a national identity (Hobsbawm, 1990) and creating imagined communities (Anderson, 1983) that would give symbolic support and social cohesion to the new nations under construction. It is necessary to remember that these identities did not exist at the time and were created to succeed very different identities, whether regional or local. Similarly, it has been shown that these stories continue to be present in both formal and informal education contexts (Carretero, 2017; Keirn, 2018). It is essential to remember that they were certainly foundational, but in the imagined sense, as has been indicated, and not necessarily in the real sense.

In this regard, Carretero and Bermúdez (2012) identified six dimensions inherent to the master historical narratives: (a) the establishment of a main historical subject; (b) a monocausal and teleological historical plot based on the conquest of freedom and the recovery of a territory that is usually considered previously invaded; (c) an essentialist notion of nation and national identity; (d) a heroic status of historical figures who, through their actions, contributed to forging the nation; (e) processes of collective identification with the protagonists of the story; and (f) a narrative moral anchor. These dimensions have been empirically verified through the study of master narratives produced by both Argentine students (Carretero & van Alphen, 2014) and Spanish students (López, *et al.*, 2015).

In these arguments, territorial conflicts often prevailed and were related to ideas of conquest, reconquest or the search for freedom. The stories about national history began with a territory occupied by foreigners and ended with the recovery of it by its original inhabitants, who coincided with the national group. Thus, conflicts over the national territory constituted one of the main themes of the narrative, and the subjects considered the nation's ownership of the territory timeless, existing even before the state existed. At this point, little investigation has examined how the subjects represent the changes that occurred in the national territory as a product of historical processes (Carretero, 2018a). In an investigation that our team carried out in Argentina, thirty university subjects were asked to produce a narrative about the independence of the country, which occurred on July 9, 1816 (Parellada, 2019). In the study, the subjects had to draw the limits of the independent

territory on a map of Latin America. As we previously mentioned, the Argentine territory that became independent in 1816 differs greatly from the current territory (see Figure 2). The results show that the majority of the participants (70%) used the current limits to depict the independent territory at the beginning of the nineteenth century (Figure 4).

Figure 4. Borders of the Argentine territory by 1816 drawn by a student on a political map of Latin America



The cartographic images produced by the students seem to show that they understand that the Argentine territory as remaining unchanged for more than 200 years, instead of as the result of a series of multicausal changes over time. In this regard, it is very interesting to observe that the students' essentialist representations are similar to that reproduced in the maps in textbooks (Figures 3 and 4). Additionally, it is necessary to point out that when the students were presented during the interview with nineteenth-century maps on which they could observe that the historical representation of the national territory differed from the current one, the majority of the students did not change their conceptions: "Some of them even stated that these lands were not represented on the map from the early nineteenth century because "[the cartographer] would have forgotten to include them" or that "[the territory that was not plotted] would have been seen later" "(Parellada, 2019, p. 283). This way of reading new information and the persistence of essentialist representations allow us to assume that the image of the current territory is deeply rooted in the minds of citizens.

Similar results were found in Spain when students were asked to produce a story and a map about the process of the Spanish Reconquest (López, *et al.*, 2015). This concept

traditionally comprises the period and historical process extending from the arrival of the Muslims to the Iberian Peninsula in 711 to the Muslim defeat at Granada in 1492 at the hands of the Catholic Monarchs. When Spanish university students were asked to draw a map of this historical process, the majority of those who were interviewed drew a map that included the current boundaries of Spain, France and Portugal, as if these countries existed in the eighth century. In our opinion, although more empirical work is needed in this direction, it seems clear that the subjects had clear difficulties understanding the changes that have occurred in the territorial dimensions of their own nation. Therefore, we consider it necessary to promote activities that allow students to critically reflect on the historical maps that circulate in the school context and understand them as social constructions. This could provide students with opportunities to question the master narratives and recognize the complexity of the historical processes related to the transformation of national territories.

The use of documents to develop historical thinking

Historical maps, like other documentary sources (photographs, tables, graphs and written texts), provide information about the place and historical context in which they were produced. Specifically, these documents allow us to understand how a society (or a sector of it) represented and signified the space. In this regard, in the field of the history of cartography, Harley (2001) proposed three keys to working with maps as historical documents: the context of the cartographer, the context of other maps and the context of society. In this sense, historical maps could be essential elements for allowing students to analyse the processes of continuity and change in the ways of mapping a territory. However, the presence of current geopolitical borders in historical maps reinforces the essentialist conception of the nation-state transmitted in the master narrative (Pérez-Manjarrez & Carretero, 2021).

In recent years, in the field of history education, different didactic proposals have been developed to promote the development of historical thinking in students (Seixas, 2018; Wineburg, 2001). We believe that in addition to reflecting on how to teach history, it is necessary to analyse the representations of where historical processes occurred because this “where” implies a specific territory that can be signified in various ways. Our studies show that essentialist representations of a territory tend to be accentuated when the interviewed subjects refer to a national historical process. However, this does not seem to occur when the historical content being considered does not involve the history of the country itself (Carretero, 2017; López, *et al.*, 2014).

In sum, a recognition of the importance of maps in history classrooms may be necessary to promote students’ ability to comprehend historical transformations of spaces and national territories. In this sense, it is necessary to reflect on the advantage that digital historical maps would provide for the teaching of history by de-essentializing the representations of the national territory that are transmitted in the master narrative and are legitimized by the historical maps in textbooks.

Promoting non-essentialist representations of the national territory: integrating digital cartographic resources into the teaching of history

In recent decades, digital advances have strongly impacted the field of education in general and history teaching in particular (Haydn, in this book; Haydn and Counsell, 2003; Wojdon, 2016). Regarding work with historical maps, there is a current set of projects that, although they were not developed from an educational agenda, offer a set of unique opportunities for work in the classroom. In the following, we will explore some of the advantages that digital historical maps offer in the field of history teaching for promoting the development of critical representations of essentialist national accounts.

First, a limitation of printed historical maps is that territorial transformations must all be plotted on the same image with different references or in different images. The printed maps are static images, and therefore, it is difficult for them to provide a dynamic image of territorial transformations. Unlike maps in textbooks, digital historical maps can be animated. Some digital maps allow the student to visualize how the borders of a territorial unit have been modified. Furthermore, these changes can be visualized at different scales: global, regional or local (by country). This allows students to compare, for example, how new societies, empires or countries expanded, fragmented or emerged over time.

Second, with respect to the possible interaction between cultural products and the user, digital tools offer an alternative to the type of interaction that occurs between the student and historical maps printed in textbooks. Crampton (2002) states that one characteristic of this alternative is the difference in the interface. Digital maps allow the user to not just visualize the information that they contain, but to interact with it. In digital maps, the student can define the scale of the map, zoom in or out of the area or move through the image to observe other areas that are not included in the image shown on the screen. On printed maps, this scope is predefined by the producer of the textbook, and the student cannot modify it. Although digital maps are also elaborated prior to their use, the user can intervene in this elaboration in some way; this is difficult to allow with printed maps. Thus, printed maps promote a low level of interaction between the user and the image, while digital maps provide many more possibilities for interaction (Asche and Herrmann, 1994; Koussoulakou, 1999).

A third difference between historical maps printed in textbooks and digital maps is that the former are often produced in limited colour or with a few spot colours. To a large extent, this may be a matter of production costs, because the use of more colours increases the cost. Differences in colour make the current territory of Argentina contrast chromatically with those of other nation-states and can silence the sovereignty that different indigenous populations had over that space (Lois, 2018; Parellada, *et al.*, In press). In contrast, digital maps allow students to re-establish or change the colour palette used to represent the space, which implies the ability to modify references and other visual variables.

Fourth, digital environments allow students to georeference old maps. Georeferencing allows different maps to be superimposed on one another based on the identification of certain cartographic points. In this way, the user can observe the superimposition of an old map on a current map based on the corresponding geographical coordinates without necessarily using national boundaries as a reference. For example, the National Library of Scotland has developed a project in which the user can superimpose old maps onto a physical satellite map of the world without political divisions (<https://maps.nls.uk/>). It can even convert the cartographic image into a 3D format and

create a spherical version of the old map. This strategy of map overlay using georeferencing has some substantial differences from the map overlay used in textbooks. On the one hand, digital georeferencing tools allow the student to choose the map that will act as the basis for the old cartographic document, which can avoid the need to reference the current limits of the nation-state. On the other hand, the old georeferenced map allows the user to visualize how that society thought of the mapped physical space and how it was represented.

Finally, one of the main advantages of digital environments is that they allow users to access a large number of old maps in a faster and more direct way. Accessing old paper maps is often difficult, if not impossible, for students; it requires going to a library, which often houses only one copy of the map, if any. Furthermore, the reproduction of old maps in textbooks is rather expensive since publishers must have the material and the corresponding reproduction permits to include them. Furthermore, even when publishers have the appropriate materials and permits, they may not be able to reproduce the maps; for example, in Argentina, they may face the paradoxical situation of not being able to publish historical maps that do not comply with Law 22963 of the Charter. If they did, the textbooks would not be approved by the government and could not be sold. Currently, there are some digital projects, such as the *David Rumsey Collection of Ancient Maps* (<https://www.davidrumsey.com/>), that house almost 100,000 maps from all over the world that were produced between the sixteenth and twenty-first centuries. Some of these maps are even hosted on *Google Earth* and can be georeferenced.

Furthermore, in the case of digital maps, students can use old maps as sources for discussing and corroborating the information transmitted in the narrative and compare them with other maps and documents that include geographical and geopolitical references. By comparing information from different maps, students can recognize the political and social objectives of the cartographer and the social groups that supported the production and circulation of these representations, thus raising questions such as who is the author of the map? In what year was it created? Where was it created? What type of map is it? All of these are questions related to the development of historical thinking, but they are not often asked in textbooks, either because historical documents are not reproduced or because the contents continue to be centred on the master narrative and tend to silence anything that contradicts the official narrative (Barreiro & Castorina, 2016; Carretero, *et al.*, 2016; Stoskopf & Bermúdez, 2017).

Currently, some of the characteristics discussed are present in a varied set of projects that allow students to work with historical maps in educational contexts and on different topics. Some of them are the *Chronas* project (<https://chronas.org>) developed by Dietmar Aumann and Joachim Auman, the *TimeMaps* project developed by Peter Briton and Alexander Kent (<https://www.timemaps.com/>) and the aforementioned *David Rumsey Collection of Ancient Maps* (<https://www.davidrumsey.com>) developed by the cartographer David Rumsey.

Although each of these projects has different characteristics, they also have some commonalities. First, the maps that can be visualized in these projects, unlike those published in many textbooks, are not constructed according to the conception of the nation-state. Rather, they represent the nation-state and its formation as another moment in world history. Second, unlike the historical maps in textbooks, the aforementioned digital projects are based on cartographic images that offer users a broader historical context in which they can understand the social, historical and political characteristics related to the

representation of the territory and can consider its dynamic nature. Finally, the three digital projects mentioned above emphasize the importance of the map as an indispensable tool for the teaching of history and allow users to investigate and analyse the information contained in these maps with reference to other sources, which is in line with proposals aimed at developing historical thinking. However, the resources and educational possibilities provided by digital environments do not by themselves guarantee that students will develop historical thinking. We believe that these digital resources need to be analysed in relation to how effectively teachers and students use them in the course of school activities aimed at thinking about history in a reflective and critical way.

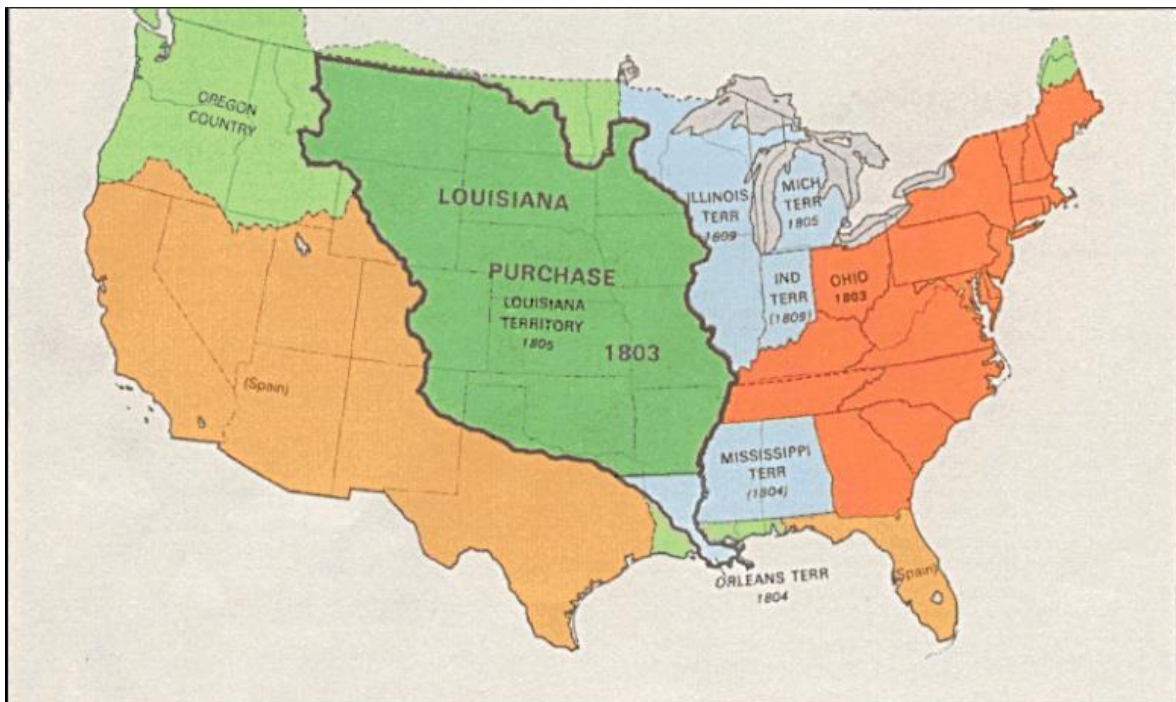
Teaching with digital maps to deconstruct the master narratives

The previous sections explained how the territory is a central element in the production of master narratives and showed how textbooks, using a set of techniques and, in some cases, legal regulations, produce and reproduce an essentialist and timeless representation of the national territory. Students, when interacting with these representations, consume them and, for the most part, tend to consider that not only the territory but the nation has remained unchanged over time. In this sense, it is necessary to reflect not only on how to teach history in the classroom in a way that promotes students' development of historical thinking but also on the topics that are taught.

Digital developments allow access to different types of historical and ancient cartographic images that provide a set of potentialities for the teaching of history and can overcome the limitations of the maps printed in textbooks. However, as Haydn (2016) warns, the potentialities offered by digital environments will not be developed without the promotion of teaching strategies that allow students to analyse, compare, interpret, select and reflect on the information that they access. In other words, it is not the use of digital tools themselves, nor their specific characteristics, but the activities carried out by teachers that have the greatest impact on teaching and learning.

Regarding this point, it is important that students investigate the content of maps. Images with characteristics similar to those of textbooks can be found in digital sources of information, such as Wikipedia. In this collaborative portal, a search for "*History of the United States*" accesses a file entitled *USA territorial growth* that contains different maps, including the one in Figure 5. This map represents the territory of the United States in 1810; however, as the figure shows, it shows the territory of that country without the presence of native populations. The only references to territories that are not controlled by the U.S. government are to territories of other nations (e.g., Spain). These maps seem to present the view that these territories belonged to the United States and were occupied by other countries, hiding the process of territorial expansion at the expense of native populations (Carretero, 2018b).

Figure 5. Map of USA in 1810. Available at https://en.wikipedia.org/wiki/History_of_the_United_States



Unfortunately, the potential offered by technology is far from being applied in most classrooms and educational institutions around the world. In some countries, most schools have a high level of technological equipment and internet access, while in others, there are enormous deficiencies in this regard (UNICEF, 2020). However, as Friedman (2006) warns, the simple fact of access to the internet is not a sufficient reason to stop teaching historical content in an uncritical way. It is important to recognize and reflect on the pedagogical approach that teachers use and on what is taught at training institutes.

Teachers tend to use digital tools according to their pedagogical thoughts (Tally and Goldenberg, 2005, van Hover and Hicks, 2018). Thus, teachers with a more expository and traditional view of teaching tend to use digital tools as sources of knowledge that reinforce their position, while teachers who do not agree with this view promote activities involving the critical inquiry of sources. This does not mean that the use of digital tools is reduced to

the pedagogical position of the teacher, but it does show the complexity of the problem. We do not believe that the mere incorporation of digital maps into the teaching of history will transform educational practices. Rather, we believe that digital maps undoubtedly have specific characteristics that distinguish them from historical maps printed in textbooks and that allow new horizons for the development of a more critical teaching of history with less focus on the master narrative. In this sense, the presence of digital maps in the classroom could promote new teaching approaches and innovations that would be very difficult to achieve in their absence. Finally, we assume that it is necessary to review the persistence in the classroom of the romantic teaching of national history that was typical of the nineteenth century. As long as the contents of the master narrative are not reviewed, it will be difficult to take full advantage of the potential and teaching possibilities offered by maps in the digital age. Furthermore, we believe that digital maps can provide a vision of a nation's past that promotes a more complex understanding of the relationship between national histories and global history.

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Abstract

The aim of this work is to reflect on the use of ICT (Information and Communication Technologies) to develop historical thinking. I'm going to reflect specifically on the way in which multimedia and internet technologies can provide new resources and broaden teaching possibilities through the use of dynamic historical maps. Maps are cultural tools that reflect and offer particular socio-political and cultural understandings of the territory. In this sense, maps ought to be recognized as primary source texts and used as such in history education classrooms. As primary sources, they can be critically analyzed for both their construction and their interpretation and it is possible to consider that it is necessary to recognize the importance maps have in history classroom to encourage a better understanding among students of historical transformations in spaces and national territories. However, maps included in textbooks typically don't represent the past territory, but the current one. In a research conducted in Argentina we analyzed how subjects represent the national territory of the past and the changes that took place on it as a result of historical processes. The results show that the majority of students draw the current borders of Argentina as if it was the territory that got independent in 1816. It is to say that these results show an essentialist representation of the territory since the participants tend to represent the current borders as if they had always existed. I will consider the importance of including the use of digital tools in the classroom for students to see the dynamics of borders with the aim of developing historical thinking.

Keywords

Digital Historical Map – History Education – Textbooks – Master Narrative – National Territory

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