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Why Does Archaeology Matter?

Archaeology Across Different Countries and Teaching Approaches

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Abstract

The aim of this article is to analyze how archaeology contributes to the history teaching and learning process. Research has shown the benefits of learning from and with archaeology: it is an effective resource for historical inquiry, helps improve the connections students make between past and present, and supports civic purposes and engagement. Despite archaeology's benefits, its implementation in educational settings is still scarce. This article provides reflections shared by an international working group (Spain, Portugal, Switzerland, and the United States) and outlines the problems of introducing archaeology and its methods into schools and the different trends and approaches that characterize its implementation. The joint discussion ends with the definition of both current challenges that need to be addressed and suggestions for the future if we aim for archaeology to be part of educational processes. The discussion also allows us to answer the main question posed in this article: why does archaeology matter?

Archaeological sites, such as ancient geometric earthworks and Neolithic farming settlements or the ruins of medieval castles and Iron Age town fortifications, make history tangible. This authenticity fascinates and motivates us to take a closer look at these places and the artifacts they hold.

Exploring a castle ruin site, for example, raises temporal, spatial, and material questions. How old are these walls? Who built this structure, how, and for whom? How many people worked on it and where did they come from? Who, if anyone, paid them for their labor and with what were they paid? Where did the construction materials come from? Did a previous building or settlement stand on this site? Why did the people choose this particular spot and not another? Where is the nearest castle of the same age?

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Archaeological and material sources have traditionally served as illustrations of historical content rather than as sources to be analyzed (Meseguer-Gil et al. 2017). As a result, student visits to an archaeological site or a museum are primarily a motivational tool, not a fundamental resource for student inquiry (Falk and Dierking 2013; Hooper-Greenhill 2006). In the last decade, scholars have noted that this practice fails to support students' agency in investigating the past. They have begun to challenge this approach, arguing that introducing archaeological methodology into formal educational settings is a more effective resource for historical inquiry (Arias-Ferrer and Egea-Vivancos 2017; Cobb and Croucher 2020; Mathis et al. 2017; Toftdal et al. 2018). Further, inquiry-based strategies appear to support civic purposes better by emphasizing the value of preserving material sources of knowledge (Henderson and Levstik 2017; Levstik 2018; Santacana-Mestre and Masriera-Esquerra 2012).

Our "position paper" outlines ideas and reflections we have shared in various contexts over the past few years as an international (Spain, Portugal, Switzerland, and the United States) working group. Our aim is to enrich the broader discussion of this question: *Why does archaeology matter?* We hope that the ideas we present here can guide further work on "learning from and with archaeology."

Shared problems, common challenges

Among all the countries, existing social studies/history curricula in each country rarely integrate archaeological content and methodologies (Corbishley 2011). Archaeological phenomena are, nonetheless, popular topics for teaching, especially at the primary level. In Europe, for example, the "Stone Age," the "Egyptians" and the "Romans" have become teaching classics.

This is the case in Spain and Portugal, where curricular references to art, culture, and the material legacy of these societies, are frequent (Pinto and Molina-Puche 2015; Cuenca-López 2002). However, these references do not imply a variety of educational experiences or connection to other sources, such as archaeology, to interpret and understand historical accounts (Bel-Martínez et al. 2019; Pinto 2013; Pinto and Molina-Puche 2015; Meseguer-Gil et al. 2017). Archaeology *as* archaeology has been given little attention. This reductionist view is also reflected in textbooks (Ferreras-Listán and Jiménez-Pérez 2013). Archaeology is presented more as *an array of relics from the past* than as *material evidence supporting inquiry into the past*. As a result, archaeological content may appear as a sidebar in a textbook or in instruction about ancient civilizations, but rarely appears as source material for in-depth historical inquiry (Bel-Martínez 2017; Meseguer-Gil et al. 2017).

This is also often the case in U.S. curricula, where archaeological content and methodologies may be consigned to "gifted" programs, experienced by students as extra-curricular opportunities or as fieldtrips only loosely connected to on-going instruction (Ducady et al. 2016). In Switzerland's primary schools, archaeology has been given its place in the curricula of all the linguistic groups (CIIP 2010; D-EDK 2016), but in the classroom, archaeology is more commonly understood to be the "knowledge of ancient things." The essence of archaeology – its questions and objects, its interdisciplinary character as well as its methods or its historical-cultural dimension – is not covered (Samida 2010). Although new teaching materials are

constantly being produced (Hein 2011; Sénécheau and Schuster 2020), they often present archaeology incorrectly or stereotypically, both in terms of content and methodology. Outdated archaeological knowledge is sometimes reproduced and presented as well (Sénécheau 2008).

Research findings in all four countries suggest that, despite positive results for more inquiry-based history instruction that stresses the importance of active, creative, and dialogic strategies, classroom practice largely remains textbook- and lecture-driven. For example, archaeological sources appear more often as images to illustrate content rather than as material objects that can be manipulated and analyzed in detail (Burguera-Gómez 2006; Levstik et al. 2014; Martínez et al. 2009; Sachse 2019).

Clearly, initiating change in classroom practice requires more than sharing research findings. Rather, advocates for change must also consider how society at-large regards the aims and processes of archaeology and how it values archaeological heritage. To varying extents, the myth of Indiana Jones and the image of archaeology as treasure hunting influences popular perceptions of the field in each of the four countries discussed here. In contrast, research in archaeology education quite often focuses on using ordinary-appearing material objects and archaeological methods in inquiry-based instruction to develop valuable insights into how humans have lived over time. The resulting disconnect between mainstream perceptions and educational aims and goals leads to misunderstandings. These misunderstandings, in turn, result in misrepresentations of archaeology's aims, methods, purposes and values within society in general (and for students in particular). Distorted images of archaeological work trivialize the methods and sources that lead to the insights that are fundamental to making sense of human experience over time (Kircher 2012).

Governmental neglect of archaeological sites and a lack of robust preservation and stewardship infrastructure in some settings further exacerbates this problem, contributing to general inattention to archaeology's historical value. Especially troubling, too, is that this neglect and resulting destruction of archaeological sites and material remains deprives societies of valuable information about and insights into their antecedents. Too often, governments preserve monumental sites – those linked to traditionally notable figures in history or those that advance a nation's master narrative. This further marginalizes the experiences of groups and individuals already ignored or underrepresented in that narrative. A significant part of public archaeology education, then, involves educating society in general and governments in particular about the civic value of experiencing history in place and through material culture.

Public archaeology education further requires deep and substantive change if our aim is to improve the current situation (Corbishley 2011). In some countries, this change is underway in the design of museums and exhibitions. In each of the four countries considered here, history museums in the past tended to introduce an array of displays captioned with technical names and terms, with scarce visitor and student interaction (Fines and Nichol 1997; Santacana-Mestre and Masriera-Esquerra 2012), although creative educators found ways to help their students make connections to heritage.

As the public came to expect more interaction in museum spaces (and with the rise of interactive "infotainment" at destinations like EPCOT – Experimental Prototype Community of

Tomorrow – and science centers), history museums struggled to make a link between heritage and society that sustained public attention (Crooke 2000; Santacana-Mestre and Martínez-Gil 2018; Thun and Troche 2016). Rethinking their designs, history museums more often included archaeology, its methods, and the material culture record in interactive and more culturally complex and nuanced ways (Stoddard et al. 2015).

One example of this new approach is the Legacy Museum: From Slavery to Mass Incarceration, in Montgomery, Alabama (U.S.), a city central to the domestic slave trade, the post-Civil War Reconstruction era, and the modern civil rights movement (https://museumandmemorial.eji.org/museum). Interactive exhibits, original short films and hologram presentations invite visitors to reckon with difficult history and to participate, through various media – by collecting and donating soil from lynching sites, submitting archival data about related history, and making personal links between the museum and nearby sites of historical and archaeological significance. In other U.S. settings traditionally associated with the nation's founders, archaeological work informs more interactive attention to enslaved people's lives, women's experience, and international connections (Stoddard et al. 2018; https://www.facebook.com/MonticelloArchaeology). A number of museums also have worked with history educators to develop inquiry-based curricula for use in schools (Stoddard et al. 2018). In these instances, interdisciplinary cooperation and education is key. And although educational curricula influence teaching practices, textbook content, and student learning, the importance of working with policy makers cannot be overlooked.

With respect to curricula in the four countries under consideration here, the U.S. and Switzerland have taken steps toward implementing curricular changes. In the U.S., the National Council for the Social Studies' (NCSS) *National Curriculum Standards for Social Studies: A Framework for Teaching, Learning, and Assessment* (National Council for the Social Studies 2011) and *College, Career, and Civic Life (C3) Framework for Social Studies Standards* (National Council for the Social Studies 2013, 2021) focus on the promotion of civic competence through active learning. These standards are not, however, mandatory. Instead, inquiry-based instruction is strongly promoted through professional development and in cooperation with state curriculum developers. In Switzerland, the current curricula for all language groups and for teacher education at universities (CIIP 2010; D-EDK 2016) have goals and objectives similar to those advocated by NCSS in the U.S.

The same cannot be said for Portugal and Spain. Traditional, concept-driven instruction – where teaching focuses on characters, events, and facts – is still the main approach (Miralles-Martínez et al. 2014). National heritage and historical narratives are presented to students as information to be accepted and memorized, and there is no mandate to provide inquiry or active learning opportunities. In both Portuguese and Spanish history curricula, the phrases "to know" and "to characterize" are common activity descriptors (Arias-Ferrer et al. 2021; Pinto and Molina-Puche 2015). For example, in Portugal, a "to know" activity asks students to "[l]ist aspects of the material and intangible heritage bequeathed by the Romans in the current national territory" (Pinto and Molina-Puche 2015:119). The Spanish equivalent is: "Locate on a map the main examples of Roman public buildings that are part of Spanish heritage, identifying their style and approximate chronology" (MECD 2015:355).[7]

[7] Unless otherwise stated, all translations are those of the authors.

Further, in Portugal and Spain, emphasis in history education is placed on descriptive political and economic history rather than on the analysis of social and cultural contexts related to these or any other aspects of the past (Arias-Ferrer and Egea-Vivancos 2022). This places constraints on developing inference-based learning strategies that engage students in such analyses. The exceptions are the occasional use of historical sources (archaeological sources among them) inside and outside of the classroom. But even in these cases, the sources are used to illustrate specific content to be learned/memorized, and not as sources for historical inquiry (Morales-Rodríguez et al. 2017). Introducing open and active teaching and learning approaches linked to archaeological sources and methods (among other primary sources) is still a major challenge in both countries.

Archaeology and education: research trends and approaches

Research in history education – worldwide and in a variety of contexts – strongly supports the effectiveness of using archaeology in educational settings. Beginning at the turn of the 21st century, these studies have documented the power of archaeological inquiry to motivate students' interest in learning about the past (Arias-Ferrer and Egea-Vivancos 2017; Santacana-Mestre et al. 2017; Wearing et al. 2011), as well as inquiry's power to improve the connections students make between the past and the present (Pinto 2016) and their understanding of history's link to civic engagement (Henderson and Levstik 2017; Levstik 2018; Levstik and Henderson 2015; Moe et al. 2002; Stottman and Henderson 2015).

These studies have shown that archaeology provides an open, inquiry-based approach to teaching and learning in a variety of ways, by: relying on the scientific method (Santacana-Mestre et al. 2017); enhancing collaborative student work (Arias-Ferrer and Egea-Vivancos 2017); improving students' understanding of archaeology (Sachse 2019); and helping students develop critical thinking skills (Arias-Ferrer and Egea-Vivancos 2017; Levstik 2018; Levstik et al. 2005). Professional development suggests that engaging teachers in their own archaeological inquiry prior to instruction helps build their confidence in working with approaches that are outside their normal instructional patterns (Henderson and Levstik 2017; Mathis et al. 2017).

Researchers argue that tightening connections between archaeology and history requires: expanding the concept of "primary source" beyond documents to include material culture and cultural landscapes (Henderson and Levstik 2016; Levstik and Henderson 2016; Levstik et al. 2014; Pinto and Ibañez-Etxeberria 2018); expanding traditional approaches to historical inquiry to include archaeological methodologies (Martínez-Gil and Martín-Piñol 2019; Mathis et al. 2017; Pinto et al. 2019); expanding the sources used during instruction (Egea-Vivancos and Arias-Ferrer 2020; Pinto 2013; Pinto and Ibañez-Etxeberria 2018); and connecting inquiries to the civic aims of democratic schooling (Henderson and Levstik 2017; Levstik 2018; Levstik and Henderson 2015; Moe et al. 2002; Pinto 2016; Stottman and Henderson 2015; Schaer 2022).

The overall agreement on the educational benefits of archaeological inquiry is accompanied by on-going discussions that reflect different perspectives on just how archaeological intervention in educational settings might best be accomplished. For example, Spanish and Portuguese scholars emphasize the role that archaeology can play in developing

critical and historical thinking skills and in introducing preservation issues. The current educational research emphasis in their countries – on the introduction of historical thinking skills in teaching practice (Chaparro-Sainz et al. 2020), on the scarcity of active teaching, and on the general disconnection that Spanish and Portuguese students have with history (Fuentes-Moreno 2004) – accounts for the special focus Spanish and Portuguese scholars place on archaeology's motivational role, the benefits of active instruction, and the contributions heritage education can offer (Santacana-Mestre 2018).

In contrast, working with primary sources and representations (i.e., objects) has long been required for problem-oriented historical learning in Switzerland. The focus is on building historical competencies (Bürgler et al. 2016; Gautschi 2015; Körber 2015). For the primary level, the tradition of discovery-based learning has existed for a long time. For the secondary level, the main emphasis is on the historical-cultural aspect of archaeology – that is, society's way of dealing with the past and history as a subject of instruction (Mathis et al. 2017), which connects to the civic dimension of learning about archaeology, history, and cultural heritage. Moreover, at the primary level in German-speaking Switzerland, history is taught as an integrated subject (social sciences and natural sciences). Archaeology can be integrated and taught in this context relatively easily as an interdisciplinary science or as interdisciplinary learning (Mathis 2020).[8]

Because the U.S. does not have a national curriculum, establishing prevailing practices can be challenging. As in Switzerland, discovery-based learning in an integrated social studies framework with civic purposes has a long history in early childhood and primary settings. Although it might seem that archaeology could be integrated and taught in this context with relative ease, there is little evidence that primary schools have taken advantage of this opportunity. Instead, social studies loses ground to more heavily assessed subjects such as mathematics and reading (Levstik and Thornton 2018; Rodríguez and Swalwell 2021). As a result, social studies content often appears in the context of reading in content areas rather than as historical or archaeological inquiry into substantive questions about the past (Levstik and Thornton 2018). At the secondary level, working with sources and engaging in historical inquiry has increased over the last half century, but remains more common in advanced classes in wealthier and less racially and ethnically diverse school districts (NAEP 2018).

Finally, although school curricula in the U.S. exhibit a variety of aims for history education, over most of the country's history, civic aims have predominated. The idea that democracy rested on the foundation of an educated populace went hand-in-hand with the creation of a national history intended to socialize former "subjects" of a monarch into citizens in a democracy (Barton and Levstik 2004, 2008; Hahn 2008; Parker 2008). By the second half of the twentieth century, criticism of the resulting propagandized and uncritical school narrative led to calls for a broader, more inclusive school history intended to better represent the nation's diversity. Civic aims, recase, emphasized critically engaged, informed, diverse participants in civic life. While this stance continues to predominate among history education scholars and curriculum developers, it has met with varying degrees of resistance from critics who prefer adulatory nationalist narratives to evidence-based historical inquiry (Journell 2021).

[8] In the history curriculum in germanaphone Switzerland, this hypothetico-deductive method of inquiry – described as *reconstructive competence,* in which students reconstruct a narration by means of questions, hypotheses, and sources – is a core competence (Körber 2015; Schreiber 2008; Trautwein et al. 2017).

Archaeology Matters in Education: Four Critical Issues

In this section, we turn to four complementary, and critical, components of archaeology in education – ones that we have returned to again and again over the course of our conversations: interdisciplinarity; procedural learning; preservation; and citizenship.

Archaeology and Interdisciplinarity

Archaeology deals with past human activities in space and time, which are interpreted and reconstructed by archaeologists (Figure 1). In their research activities, archaeologists rely primarily on material remains. If written (or even pictorial) sources from the period under investigation are available, these also are included in the process of knowledge creation (Eggert 2006, 2011; Eggert and Samida 2013; Renfrew and Bahn 2012). The primary interests of the two central dimensions of archaeology – space and time – lie in the interpretation and reconstruction of past social and cultural practices (Rüsen 2013). A third dimension in archaeology – materiality – addresses questions about age, origin and, especially, the nature of material remains.

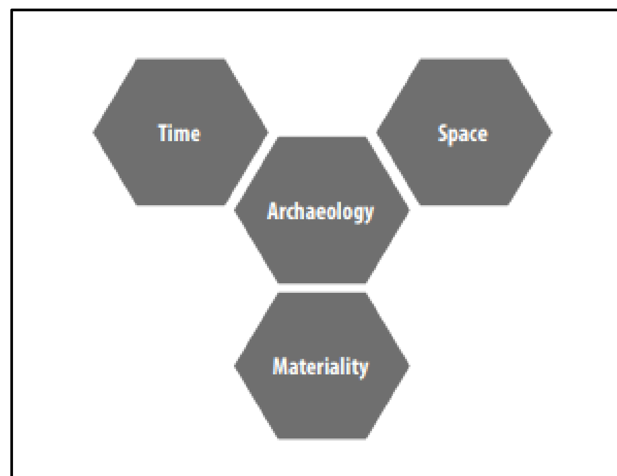

Figure 1. Basic dimensions of archaeology (Mathis et al. 2017).

Archaeological questions can be better answered today by scientific methods and procedures than was once the case (e.g., isotope or DNA analyses) (Baeriswyl 2013; Nagy 2016). This means that archaeology is fundamentally interdisciplinary, explicitly integrating physics, chemistry, geology and biology with the social sciences. Archaeobotany, for instance, allows for detailed insights into the distribution of wild and cultivated plant remains in a Neolithic village site, making it possible to obtain information about the foods villagers ate, their agricultural practices, the ecological conditions of the surrounding area, and sometimes about settlement structures. Similarly, LiDAR, a technology for uncovering previously hidden signs of human activity, makes it possible to map previously unknown Inkan roadways linking

communities across the Andes mountains, and X-ray, CAT scanning, and MRI helps researchers "see" inside the remains of objects that would otherwise be inaccessible.

This interplay of cultural-historical, spatial, and scientific methods from different disciplines and related cognitive processes offers a more comprehensive analysis of multiple categories of information, thus supporting the creation of a broad empirical basis for interpretations of archaeological-cultural-historical questions. Lang (2009) notes the importance of interdisciplinarity in capturing the holistic interplay of political, socio-economic, natural, cultural, and mental factors operating over time. This suggests that, within the context of teaching with an archaeological focus, multi-perspective questions should be the standard. It means that knowledge from different disciplines and different perspectives is integral to archaeological education (Egea-Vivancos and Arias-Ferrer 2013; Henderson and Laracuente 2019; Martínez-Gil et al. 2018; Mathis et al. 2017). As "moderators," teachers must help students become familiar with new or unfamiliar perspectives. For instance, teachers might consider working across disciplines to engage students with multi-disciplinary research questions. Students could engage with primary historical documents, such as journals, maps, letters, and census data; archaeological sources, such as objects; laboratory analyses of related flora and fauna; and archaeological analyses of historical sites – all with the purpose of learning about heritage from different disciplinary vantage points.

Archaeology and procedural learning: thinking archaeologically, thinking historically

Whether it is because of the intrinsic value of archaeology's research methods, or because it is a different and intriguing way to approach the study of history and heritage, a growing number of teachers in each of the countries discussed here have introduced archaeology in their classrooms (Barca and Ribeiro 2020; Egea-Vivancos et al. 2018; Levstik and Henderson 2016; Levstik et al. 2005; Wearing 2011; Pinto 2020; Pinto et al. 2019). Although these approaches take many forms – classroom "museums," simulated excavations, experimental archaeology, object-based learning strategies, and so forth – they share the same leitmotif: they use archaeology, archaeological sources, and archaeological methodology to help students develop active learning and thinking skills. Current research supports the argument that introducing archaeology in the classroom benefits both teachers and students (Henderson and Levstik 2017; Stottman and Henderson 2015). As these studies suggest, engaging with archaeological sources and practices helps students recognize different features of the past through observed remains, strengthens their understanding of and interest in local history, and suggests connections between past and present.

Some of these studies have shown that when students work with archaeological evidence (no matter whether they were involved in excavation or whether they participated exclusively in laboratory-based interventions), the teaching-learning process improved, especially in relation to history (Henderson and Levstik 2016; Levstik et al. 2014; Mathis et al. 2017; Sachse 2019; Stottman 2014). The move from in-class learning to learning outside the classroom, where students search for, classify, analyze, reflect, and interpret information from found objects (that is, primary sources) supported the development of historical thinking skills. These studies found that hands-on learning experiences with archaeological objects were thought-provoking, engaged students' curiosity, and involved them personally in the process of knowledge construction (Levstik et al. 2014).

The *Arqueólogos en apuros* (*Archaeologists in Distress*) project in Spain (Egea-Vivancos and Arias-Ferrer 2020) reported similar findings. This project involved 10 to 12-year-old students in an activity that began by posing the following situation:

> *An archaeological exhibition is going to be mounted in our school and we have requested materials from some of the most important museums in the world for our exhibit. But now that the objects have arrived, we have discovered that the transport company lost the specific information about each group of objects. We know only this information: each group of objects belongs to the same "person," they are from a single space and, therefore, are from the same chronological context (or period).*

The students were asked to work together for a day as a team of archaeologist's assistants to provide information about the object groups. Six cardboard boxes containing replica artifacts were used in the activity, one box for each student team. The objects in each box were purposefully selected to enhance the potential interpretive links between them – function, social uses, contexts of use, chronology, etc. – and to encourage rich student discussion. To enhance intergroup comparison, each box represented a different chronological and cultural context – a Paleolithic hunter, a Bronze Age farmer, an elite Ancient Egyptian, a Roman patrician, and so forth.

Student teams were given a worksheet with a series of questions that progressed from the simplest tasks (e.g., asking them to make observations) to the most complex tasks (e.g., applying their knowledge and developing hypotheses). These questions were adapted from guidelines established by similar studies (Durbin et al. 1990; Egea-Vivancos et al. 2014; Santacana-Mestre and Llonch-Molina 2012). The activity required students to analyze, select, and organize information; use specific methodologies and terminologies; reach conclusions; work collaboratively; and communicate their results. But, above all, the activity challenged students to think historically by building hypotheses using sources as evidence, analyzing material changes over time, applying their historical knowledge, and collaborating in meaning construction.

Arqueólogos en apuros demonstrates archaeology's possibilities for use in studying a multitude of times and places related to local history and heritage. Historical thinking is not fostered by interpreting only objects: buildings and sites are also tangible pieces of evidence that can be used with students to help them make sense of the past (Chapman 2006; Cooper 2004; Pinto 2013; Seixas and Clark 2004).

Overall, such lessons follow a schema similar to the following (see also Mathis 2020:306):

- <u>Perception and Observation</u>: this refers to the exploratory perception of archaeological materials by experiencing them sensually and physically, and by looking at them closely and describing them. So-called "contact" or "confrontation" tasks capture the children's interest, arouse their curiosity, possibly irritate them, raise questions, and stimulate initial thoughts or assumptions.
- <u>Active Exploration</u>: this involves drawing, measuring, and photographing, as well as asking questions, making assumptions, and formulating initial findings. In this step, the pupils' initial individual findings are combined with subject-specific knowledge elements.

- Interpretation of the Archaeological Traces: this step occurs after the initial findings are built up and includes supplementing and differentiating with further factual information. The personally acquired knowledge is then associated with abstract and technical scientific terms. Tasks help deepen and consolidate student knowledge and help them make a judgement built on facts.
- Final Formulation: students build or tell a story about the past based on the pieces of evidence they have collected, the questions they have answered, and the hypotheses they have formulated. The result is an informed, competent, and reflective evaluation of the selected source(s) and the people/society/culture involved. Furthermore, students connect their narration with present questions and make a "value judgement" (i.e., they establish an evaluative relationship with the present, clearly distinguished from their historical factual judgement) (Jeismann 2000:15; Mathis 2020:305).

In this schema, students get involved with history through hands-on experiences. Open discussions in class make it easier to introduce them to inferential processes using primary sources. Körber (2015) argues that this enhances student knowledge construction and transfer of knowledge and strengthens historical thinking and reasoning skills.

Archaeology and heritage education: raising awareness of preservation issues

Perceptions of heritage vary considerably. In some contexts, heritage refers to decorative or prestigious elements of a nation's past. Therefore, elements of the past devoid of monumental, aesthetic or sumptuous features are considered to hold little value as heritage. In other contexts, the term is political rhetoric about whose past is part of particular (and often limited) national (and nationalist) stories.

Our working definition of heritage is much broader. It encompasses evidence of cultural universals expressed through, for instance, shelters, foodways, arts, pottery, and tools used in daily life, as well as the physical contexts within which these universals developed. From this perspective, commonplace places and objects speak as much (or more) to an inclusive past as do traditionally "prestigious" places and objects. Indeed, the evidence provided by such places and objects permits archaeologists and historians to reconstruct fuller understandings of human experience. In this view, heritage is more than a mere "physical substance" (Holtorf 2011:8). Heritage is mutable and evolving, a process of holding all interpretations as tentative, pending new questions, new sources, and new analyses.

Given our working definition, then, heritage depredations are a problem that must be addressed by an informed public capable of acting in an open and global society (Kaeser 2022). This requires a more robust historical and heritage awareness, beginning with young people. They need to be aware of the fragility of historical evidence and of the processes by which heritage is created and re-created.

The core of how educators approach learning about heritage, then, would focus on helping young people make relevant connections between how people used to live, how they live today, and how they might live in the future (Koselleck 1989). By providing students opportunities to explore how behaviors may have changed over time, educators support students'

explorations of how many fundamental aspects of their everyday lives thread into the past (Pinto 2016).

This, in turn, requires a robust curriculum based, first, on the recognition that heritage is a multidimensional reality and that there are multiple ways of approaching it, and second, that, while local archaeological heritage makes an important contribution to students' understanding of preservation issues, this is not a matter of creating an identity or a love of one's homeland through archaeology. Rather, it is about offering young people opportunities to develop a sense of meaning regarding their immediate everyday world and environment (Mathis et al. 2017). After all, young people will one day decide what examples of our collective heritage will be preserved or destroyed, how, and to what extent. We therefore consider heritage preservation a critical component of civic education and not simply a matter of affirming national identity (Brown 2020; Cuenca-López 2013).

As already noted, introducing archaeological sources and methods in the classroom provides a number of positive benefits. One involves introducing into instruction artifacts that students can touch and hold. This is an easy way for them to connect with local history. Objects on display in local museums and family items that can be brought to class are perfect examples that students can observe, describe and analyze, and about which they can formulate their own hypotheses (Bardavio-Novi and González-Marcén 2003; Santacana-Mestre and Llonch-Molina 2012). Furthermore, as students work with artifacts that are representative of personal stories, they express interest in and show increased awareness of broader cultural heritage issues. Objects turn into small pieces of history that students perceive as worthy of preservation. They describe these objects as having intrinsic value, and their sense of the worth of such objects grows over the course of their study (Egea-Vivancos and Arias-Ferrer 2013; Henderson and Levstik 2016; Levstik et al. 2014).

Although classroom exploration of material objects has a positive impact on student interest in preservation, this impact is magnified when combined with experiences at local heritage and archaeological sites (Levstik and Henderson 2014; Mathis 2020; Pinto 2013). Using local sites as educational contexts enables students to connect with the history of the places in which they live (Cuenca-López 2014; Hunner and Westergren 2011:129; Sgouros and Stirn 2016). These places also offer learning opportunities that foster the development of historical temporality or how students order change and continuity which, under the guidance of teacher/educators, helps make history meaningful (Wansink et al. 2018).

If students are to relate to the society represented at heritage sites, however, school outings should be based in constructivist activities that allow for the contextualization of material sources. Sites with strong educational programming promote the use of heritage evidence as cultural tools that support students' learning experiences. They use tasks that challenge student preconceptions and introduce elements of heritage as time and place connectors (Levstik et al. 2014; Levstik et al. 2005; Mathis et al. 2017).

Of course, not all sites are either constructivist or accurate in their programming for young people. In one U.S. study (Levstik et al. 2005), for instance, a docent-led interpretation at an historic house contrasted significantly with students' hands-on experience at an archaeological site on the same property. Careful instructional mediation was required to help

students reconcile the differences by using their own observations and previous in-class instruction. Teachers should select sites with care, discuss aims and desired outcomes with docents, where possible, check materials available to students, and be prepared to discuss conflicting or inaccurate information with students. That said, well-developed educational materials can structure exploration of historic sites and objects in a museum or an interpretation center and promote heritage preservation awareness. For these materials to be successful (in terms of heritage education), they need to treat places, buildings, objects, etc. as pieces of evidence that can challenge students' existing conceptions about the past and suggest civic action. Estepa-Giménez and Cuenca-López (2006) argue that the main goal of heritage education is to support the understanding of past and present societies by approaching heritage as sources to be analyzed. Through interpretation, students will come to know the past, to understand the present, and to envision their own responsibilities related to preservation issues.

In the German-speaking context, the cultural heritage issue is discussed and included under the concept of historical culture, or more precisely "learning in, at and by means of historical culture" (e.g., Hinz and Körber 2020). In Switzerland, this is integrated in curricula as a mandatory content and competence area (D-EDK 2016). Moreover, the understanding of this legacy heightens a more reflective consciousness in relation to different community beliefs and identities. As Labrador (2011:18), notes, heritage needs to "move beyond simply commemorating the past to actually contributing to the present and future welfare of community members."

Archaeology and civic education: citizenship and informed action

As mentioned previously, one of the aims of using archaeology in education is to foster civic engagement and reflection. Archaeological study is seen as advancing the humanistic and civic aims of historical study when it supports inquiry into pattern and variety in human experience and brings that context to bear in analyzing civic issues (Dierking 2002; Hodder 2012; Levstik and Henderson 2016; Moe et al. 2002). As an example, the development of *Investigating a Shotgun House*[9] (Henderson et al. 2016) in the U.S. was designed to provide research-based assistance to teachers interested in advancing these aims by making archaeological questions, processes, sources, concepts, and content part of their curriculum.[10]

Investigating a Shotgun House begins with this question: 'What can we learn about the lives of urban working-class people by investigating a shotgun house in Davis Bottom?'.[11] An

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[9] *Investigating A Shotgun House* is part of a larger set of investigations for elementary and middle level students developed as part of *Project Archaeology: Investigating Shelter* (www.projectarchaeology.org). Each investigation centers on the archaeology of a type of shelter representative of a time, culture, architectural style, or region in the U.S. Access all the *Investigating A Shotgun House* materials here: https://www.kentuckyarchaeologicalsurvey.org/project-archaeology/investigating-shelter/curriculum-guide/

[10] Full descriptions of the research conducted on the impact of *Investigating A Shotgun House* can be found in Henderson and Levstik (2017), Levstik (2016, 2018), Levstik and Henderson (2015), and Stottman and Henderson (2015).

[11] When attached to a place name (i.e., Davis Bottom), the term "bottom" generally refers to a community located on a low-lying, often flood-prone, and only marginally fertile landscape (MacDonald 2009). A "shotgun house" generally refers to a cheaply built rectangular structure: one story high, one-room wide, and two to five rooms deep. In theory, a person could fire a shotgun from the front porch through the front door straight through the house to the back door unimpeded – hence the name (Brother 2016: 6).

historic archaeological site – a shotgun house and its surrounding house lot – served as the center of student inquiry and as a link to a civic dilemma concerning how residents might preserve their history and mitigate damage from road construction and home demolition in the community. Supporting materials provided background information, primary and secondary sources, and teaching resources designed to scaffold student inquiry. Prior to releasing the unit for use with students, unit developers provided teacher training, followed four teachers as they piloted the unit in their classrooms, and used the results to strengthen the final materials.

Enthusiasm among teachers remained high throughout training and implementation, even though they had little prior experience with inquiry-based instruction. Although the teachers sometimes found inquiry challenging, they reported that their students experienced few serious problems with any aspects of inquiry.

Unfortunately, the civic component of the unit received little explicit instructional attention. Students were intended to role-play citizens deliberating about the best development plan for the community, but few had that opportunity in class. This instructional gap left students at a disadvantage in analyzing the civic agency available to the people they studied. Fortunately, this did not inhibit their willingness to address issues of social justice in class discussions or in follow-up interviews. Indeed, students focused heavily on race, class, and personal identities as they analyzed the sources available to them, and they ascribed historical and civic significance to how people faced/coped with these challenges. As the students explained, their inquiry presented a rare and important opportunity to study "just normal people like how we are." This identification sustained their interest in the community and in residents' attempts to resist redevelopment.

The initiating question and resources laid a foundation for students' powerful attachment to the perspectives of community members by framing race, class, and ethnicity as features of human experience with differing effects on community residents, rather than as dehumanized "controversial issues" to be debated. Investigating how a shelter revealed the life of a community raised questions about the human costs of public policies. What happens when a community is invisible to city planners? How can the lives in that community be seen, its people heard, and officials forced to take residents' wants and needs into account?

Crucial to students' interest in and understanding of humane responses to civic dilemmas, the content and initiating question positioned shelter as central to students' inquiry. The sources and related activities highlighted a civic dilemma that made shelter provisional – something that could be lost. As students worked with an array of primary sources that emphasized the material life of the community and gave voice to individual community members, they connected with the people in Davis Bottom on personal as well as intellectual levels. The content of the unit became significant to them because it touched on a very human need for shelter, an equally human fear when facing the loss of shelter, and a profound debate about a humane response to human need – to lives lived in the path of governmental decisions.

Students wanted to discuss these aspects of their study. Small group interviews conducted after students completed their work allowed them to have these discussions. Researchers framed the discussion as the creation of an imaginary documentary. What two images from the students' inquiry could serve as the beginning and end of such a documentary, and why? This task led to discussions of race, poverty and family configurations, not as social concerns or crises, but as integral parts of understanding the community.

Investigators had already observed students using historical sources to uncover the community's origins as housing for free and newly emancipated Blacks in the post-Civil War period (Davis 2013; Law 2014; McDonald 2009). Other sources exposed housing patterns, occupations, family structures, and the gradual integration of the community. Archaeological data provided information on exactly how big a shotgun house was likely to be – students laid one out in the school yard – and how material objects were distributed in the house and across the house lot. These data allowed students to consider how so many people managed to live in such small places and how families might have used inside and outside spaces. Census data led students to conclude that some households held multiple families and that families of different races and ethnicities lived side by side. Oral histories introduced them to residents who described their community as a good place, and safer in many ways, than the surrounding city with its daunting array of discriminatory practices.

Students drew on this information to support their photographic choices for the imagined documentaries, noting how poor the community would look to outsiders, but how important it was to the people who lived there. They addressed the civic issue – road construction at the expense of the community – as a form of official neglect and concluded that people deserved better treatment. They remained unsure how that might be accomplished, however.

Overall, their imagined documentaries revealed a striking degree of longing for an integrated world. They expressed envy for a community where it appeared that people "got along" across racial lines, and where racial lines seemed not to matter to the degree that they did elsewhere. Even when students thought it likely that power remained in the hands of white people, they reported this as a sad fact, rather than the natural order of things.

Further, as students emphasized the importance of understanding working class people and the significance of integration to this community and identified collective agency by residents as a powerful response to the racism that surrounded them, they called attention to the power of studying diversity as a normal rather than divisive feature of community. As one of the seventh graders described her documentary choices, she explained that people who were "willing to stand up for their rights, stand up against the racist people…change…how life would be for future generations." Even as students expressed their admiration for residents' responses to historical and current civic issues surrounding their community, they lacked experience in identifying and analyzing structural aspects of these issues and in making sense of what redresses residents might employ.

The primary reason teachers gave for omitting the civic deliberation feature of the unit was time, and that was a challenging issue in each school setting. Nonetheless, the persistent omission of the civic component suggests a more specific reason: particular discomfort with civic activism and its potential for controversy in the classroom. It was here that the researchers

reported that they had miscalculated by providing far less scaffolding to support teachers' use of the materials concerned with civic deliberation than for talking about race or class.

The researchers noted that, in developing the unit, they had missed two opportunities to reduce teachers' discomfort. First, they needed to have distinguished between *democratic deliberation* and *democratic debate*. Both are features of life in a democratic society, but the former requires keeping an instructional eye on the common good while the latter focuses on winning and losing (Parker 2002).

Deliberation requires weighing different courses of action and deciding which might be best for all, working together to gather evidence and ideas from different perspectives and generating alternatives to consider in community. Parker (2002) describes this process as "public building" when participants consider what should be done for the common good. In contrast, *debate* is an adversarial enterprise where competing interests vie to win the debate, rather than seek the common good. While there are certainly places for debate in democratic life, there is also a compelling argument for deliberation in achieving humanistic aims in a pluralist democracy. Indeed, teachers and students evaluating the unit might have found deliberation a more caring and productive way to evolve the common good even in their own classrooms. Instead, the students were sure that "ordinary people" had too little power or influence in relation to governmental structures to "win" in a debate.

Second, unit development needed to scaffold democratic deliberation in the civics component so that students could better imagine alternatives for the community members they so admired. That said, the students willingly employed the tools of archaeology and history in pursuit of civic understandings related to race, class, and power, even without such scaffolding. Other research suggests that these students might have refined such understandings with more experience in civic deliberation (James and McVey 2009; Parker 2002).

Teachers interested in exploring archaeology/civics connections might benefit from the other shelter units in Project Archaeology materials (Letts and Moe 2009) or from Davis and Connolly's (2000) *Windows on the Past* teachers' guide. The paucity of such materials, however, argues for further development if archaeology educators are fully to realize the civic potential of archaeological study. Assessment of *Investigating a Shotgun House* suggests two critical features for further exploration: first, the motivational power of a compelling [12] archaeological question and related civic concern; and second, opportunities to practice civic responsibility by engaging in informed deliberation about the common good.

Closing Remarks

In this final section, we offer suggestions for the future and identify shortcomings that need to be addressed before archaeology can take its place as a full-fledged component of heritage education.

Suggestions for the future

[12] By "compelling," we mean a question that motivates interest, is related to the humanistic and civic aims of education in a democratic society, and is significant enough to justify time spent in inquiry.

First, we need to define **what working with archaeology in classrooms really means**. It is important to approach archaeology as a legitimate class subject, not as an anecdote or enrichment. Misperceptions create a distorted view of the importance of the discipline by trivializing archaeological work, methods, and sources. A more intellectually substantive approach requires providing students with resources that promote and provoke historical questions, discussions, and arguments. In one Spanish study, for instance, an array of uncaptioned paintings elicited questions, hypotheses, and interpretations of the possible time sequence and meaning behind the paintings (Arias-Ferrer et al. 2019). Similarly, the *Project Archaeology: Investigating Shelter* curricular materials in the U.S. begin with activities that provoke questions about how cultural universals such as shelter speak to human experience in different times and places. The resultant student inquiries engage students in various levels of individual, small group, and whole class inquiry, ideally culminating in equally various discussions (and sometimes disagreement) relative to the civic implications of their inquiry.

In sum, educators and their students should take archaeology seriously, spending time on the kind of focused activities that are key to developing the full potential of this powerful educational tool. As noted previously, a critical feature of such instruction involves building an analytical and collaborative framework that helps students move beyond interpretation to civic implications.

Realizing the civic as well as humanistic potential of history education (and by extension, archaeology education) requires not just that students *inquire* into what it has meant to be human over time and place, but what it means to *collaborate* with others to construct evidence-based interpretations of the human past, and, to the extent possible, apply these interpretations to civic issues in and beyond the classroom.

Second, it is important to **understand the benefits of developing such approaches**. In this sense, theoretical and empirical research across different contexts, approaches, and geographies has unequivocally documented the benefits of archaeological learning. Archaeology allows students to learn about the past (content knowledge); explore and create knowledge about the past (thinking and methodological skills); connect with heritage and raise awareness about preservation issues (civic engagement); and introduce civic issues, dilemmas and problems (historical cultural questions).

Accomplishing these goals requires more than superficial group work. Students' well-documented enthusiasm for archaeological study in diverse settings and research contexts shows that their learning experience builds deeper, more evidence-based understanding of pattern and variety in human experience and helps them apply those understandings to civic issues. When students participate in communities of inquiry, based on respect for and willingness to work with diverse others who share public spaces with them, civic learning deepens (Aitken and Sinnema 2008). For archaeology to serve as an effective vehicle for engaging students in civic issues, we need to overcome the fear that controversy will arise in the classroom when examining the social implications and possible civic engagement raised through historical and archaeological inquiry. We need to address civic connections explicitly if our goal is to engage our students in their role as citizens who can take informed action.

Sadly, far too few students in the nations with which we are most familiar (Spain, Portugal, Switzerland and the U.S.) have such opportunities. This is due, in part, to the fact that teachers often lack the experience to draw on archaeological content or methods as part of historical study (Fitchett et al. 2017; Levinson 2012).

Factors requiring attention

The final topic we consider is this: *how can archaeology be fully integrated into educational practices in order to maximize its positive value?* Integration of archaeology into educational practices would benefit from attention to these factors:

Teach *through or with* archaeology as a significant feature of historical culture, **rather than teach *about archaeology*** (Bartoy 2012). As Santacana-Mestre and Masriera-Esquerra (2012:9) note, archaeological sites are almost always shown to the public "naked, fossilized," often accompanied by cryptic texts, plans and technical explanations. Even textbooks and teaching materials follow this trend: the aesthetic analysis of artifacts predominates, with little attention given to their archaeological context or power as historical sources (Meseguer-Gill et al. 2017).

Initial and lifelong professional development for teachers must introduce archaeological sources and methods as means to promote active and reflective student learning with civic aims. Teachers need powerful strategies that can guide them as they introduce and refine archaeology-infused inquiry in classroom instruction.

Develop archaeology as integral content and method in teaching history. Many curricula do not explicitly include archaeological elements, nor is cultural heritage addressed. Because neither archaeology nor cultural heritage are limited by temporal or geographic boundaries, these subjects should be relatively easy to integrate into history teacher education as well as into continuing education programs. Indeed, as we noted earlier, there are elements of both in evidence from Portugal, Switzerland, Spain, and the U.S.

Archaeologically evidenced historical inquiry requires an archaeology-infused curriculum and time for inquiry-oriented instruction. Too-brief time allocated to inquiry in classroom instruction limits the opportunity for the kind of interdisciplinary insights that lead to more complex and environmentally aware understandings of humans' historical condition. This, in turn, frustrates teachers and students alike and can lead to resistance to attempt inquiry-based instruction. More time needs to be carved out of the curriculum for this kind of teaching.

All historical content is not interchangeable for civic purposes nor are the intellectual tools associated with studying the past sufficient in themselves to achieve civic goals. With all human history and every place in the world as possible subject matter, and too little available instructional time, educators have an ethical responsibility to select content, themes, questions, and methodologies carefully, with civic aims in mind. To the extent that archaeology helps students understand the human experience (in time, space, and materiality) and focuses on humans as active historical agents, it challenges students to consider their own historical agency. Furthermore, challenging students to become active agents of historical discourse (in public historical culture) not only allows us to introduce the method by which

history is constructed, but to raise awareness of the importance of preserving cultural heritage as an invaluable source of knowledge. And, finally, archaeological study that pushes against students' misconceptions about the past supports the humanistic and civic aims of historical inquiry.

For all these reasons, this is why archaeology *really* matters.

Table 1. Recommended archaeological activities/curricula/sites to explore.

Experience/Program Name	**Country**	**Link**
Arqueopinto	Spain	https://arqueopinto.com/
Archaeology Program at The Dalton School	U.S.A.	https://www.dalton.org/programs/first-program/curriculum/notable-programs/archaeology/archaeotype---grade-6-archaeology
Augusta Raurica - Experience A Roman Town	Switzerland	https://www.augustaraurica.ch/en/experience
Building Blocks of History – Riverside, The Farnsley-Moremen Landing	U.S.A.	https://riverside-landing.org/educational-programs/
Centro de Arqueologia de Almada	Portugal	https://carqueoalm.wixsite.com/website/projetos
IES Arqueológico	Spain	http://arqueobohio.blogspot.com/
Investigating a Shotgun House	U.S.A.	https://www.kentuckyarchaeologicalsurvey.org/project-archaeology/investigating-shelter/curriculum-guide/
Laténium Archaeology Park and Museum	Switzerland	https://www.museuddiogodesousa.gov.pt/servico-educativo/recursos-educativos/
Living Archaeology Weekend	U.S.A.	https://www.livingarchaeologyweekend.org/
Museu de Arqueologia D. Diogo de Sousa	Portugal	https://www.museuddiogodesousa.gov.pt/servico-educativo/recursos-educativos/
Museum für Urgeschichte(n) / Museum for Prehistories	Switzerland	https://www.urgeschichte-zug.ch/english/exposition
National Museum of Switzerland, Offers for	Switzerland	https://www.landesmuseum.ch/de/ihr-besuch/schulen/dauerausstellungen/archaeologie-

Schools		schweiz/02-archaeologie-schweiz
Outeiro do Circo	Portugal	https://outeirodocirco.blogspot.com/p/educacao-patrimonial.html
Project Archaeology	U.S.A.	https://projectarchaeology.org/services/teachers/
Society for American Archaeology	U.S.A.	https://www.saa.org/education-outreach/teaching-archaeology/k-12-activities-resources
Tongobriga – Área Arqueológica do Freixo	Portugal	https://www.tongobriga.gov.pt/
Vindonissa Museum and Legionary Trail	Switzerland	https://www.museumaargau.ch/en/legionary-trail
Young Archaeologists' Club	UK	https://www.yac-uk.org/

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