Digital tools in the classroom

Re-coding Collaborative Archaeology: Digital Teaching and Learning for a Decolonised Future

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Abstract

What does it mean to decolonise archaeology in teaching and learning today? What role can (or should) digital technology and approaches play in transforming training and practice? This chapter will use case studies developing hybrid interventions in museum exhibits through collaborations between the University of Victoria, the Royal BC Museum (RBCM), descendant communities and diverse publics in Victoria, BC, to examine how digital media and platforms can be used to extend and reshape existing archaeology and decolonisation measures and spark relevant and much needed dialogues about heritage, education and practice in an increasingly digital era.

Keywords

Digital Archaeology, Public Archaeology, Collaborative Research, Decolonisation, Inclusivity

Teaching collaborative archaeology is a bit like writing knitting or weaving manuals. In the effort to distil complex processes and networks of people, knowledge and narratives, one ends up either with a curated and overly stylised Pinterest-style explanation, or assembly instructions for flat-pack furniture, complex to the point of confusion. In either case, the multidimensional ethical, political, economic and social implications and realities always seem reduced down to a one-dimensional message that community-engaged scholarship is valuable, even essential today but difficult to achieve.

This is certainly true for the contexts in which the case study presented here developed. With sincere respect for the Lkwungen-speaking peoples on whose traditional territory this research and teaching was conducted, and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day, understanding the position of collaborative archaeology in Canada entails recognising the complexity of heritage practice on land that is unceded but where colonisation and related institutions, policies and attitudes continue to exclude and to isolate. When I first arrived in British Columbia, Canada, as a settler and an archaeologist recently returned from a doctoral programme in Europe, the conflict, tension and momentum of change was palpable; although the colonial history of Canada and even the discipline of archaeology was a familiar one, the urgency and intensity had shifted recently and archaeologists in universities, museums and private companies were at last beginning to respond.

And, while there seemed to be something unique happening at that time and place, ultimately this is the challenge for *all* archaeological and heritage practice today. Geographic isolation from the ongoing legacies of colonialism has perhaps insulated certain places, particularly Europe, from addressing the colonial barriers and limitations that remain deeply rooted in archaeology. However, it does not in fact matter where in the world you are working: archaeology and heritage practice bring systems of oppression, in the structures of research and of collections, and in dissemination (Figure 1). It is therefore the responsibility of *all of us* to find ways to decolonise the discipline.

Teaching and learning play a huge role in transforming archaeology; part of the problem is that most archaeologists (or perhaps all archaeologists) still do not know wholly how to achieve a globally ethical, inclusive, equitable and decolonised discipline. This is in part because it is a multifaceted and extremely messy problem, intersecting diverse and contextual histories and cultures. However, it is also because we were taught to see, to approach, to understand archaeology in a certain way. Unseeing it and unlearning it is a long process. Despite a sea change of attitudes and recognition of these interconnected issues, higher education has not been substantially changed in much of the world, and therefore it will continue to reinforce the problematic systems of archaeology and heritage and reproduce structures of oppression in the minds and works of new generations of archaeologists.
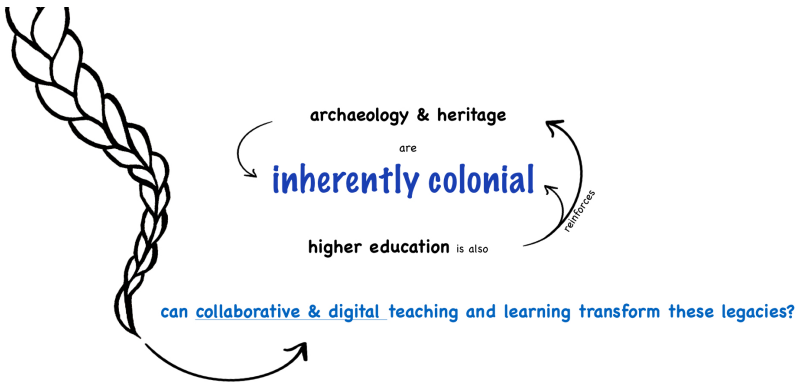
archaeology & heritage

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Figure 1: The relationship between archaeology, colonialism and training is complicated and still highly problematic.

What does it mean to *decolonise* archaeology in teaching and learning today (see also Battiste 2016; Battiste, Bell & Findlay 2002; Cote-Meek 2014)? What role can (or should) digital technology and approaches play in transforming training? This chapter will use case studies developing hybrid interventions in museum exhibits through collaborations between the University of Victoria, the Royal BC Museum (RBCM), descendant communities and diverse publics in Victoria, BC, utilising digital media and platforms to extend and reshape existing public archaeology and decolonisation measures in Canadian heritage settings (see also Cook & Hill 2019). The experiences, ongoing challenges and future directions, however, offer thoughtful avenues for considering the future of teaching and learning in archaeology more globally.

Archaeology and decolonisation: a digital perspective

Increasingly urgent calls to reform archaeology, recognising systems of colonialism, exclusivity and inequity bound within the structures of research and scholarship, but also heritage curation and exhibition (Kreps 2011; Wintle 2013), have triggered pioneering inclusion and diversity work. In particular, projects challenging traditional perceptions of authority and unidirectional dissemination or outreach to truly integrate and honour diverse knowledge systems through collaborative practice (Chalifoux & St-Pierre 2017; Lynch 2011) are transforming archaeology, particularly in former colonies, such as Canada, the United States and Australia. An incredibly powerful and ever-growing body of work, particularly developed by indigenous, black, queer and feminist scholars, has started to build a framework for re-envisioning archaeology *and* higher education.

Building on Susan Dion's (2009) use of the term 'braiding histories', one of the most profound contributions has come from Sonya Atalay and the concept of braiding knowledge, to reflect the potential for diverse sources and forms of knowledge to be valued, reworked and combined in community-based archaeology projects. Rather than thinking of archaeology as being fundamentally at odds with indigenous knowledge, Atalay and others have since discussed the ways in which analogue media (like graphic novels) and digital media (including animation and virtual reality) can be used to partner indigenous and archaeological ways of knowing to 'mobilise knowledge', weaving it together and moving it into places where it is accessible by multiple public audiences (Atalay 2012; Lyons et al. 2016).

Digital technologies offer obvious opportunities for transforming access to and authorship of the past but the complex ethical and political frameworks for digital applications in postcolonial archaeology and heritage practice with descendant communities has been increasingly a concern. However, many of the elements of knowledge braiding also overlap with concepts from maker, coder and hacker culture. Advocating for the value of pooled, reworked and recirculated code, resources, software, tools, skills and knowledge could teach us a lot about how to encourage sharing, modifying and recording/citing co-authorship or co-production, designing hives, communities and spaces for shared teaching and learning, and the true value of creative collective processes of production (see also Compton, Martin & Hunt 2017). It is often the integration of maker and coder cultures through cultural institutions like museums, galleries, libraries and universities that has created new barriers and structures of exclusion in these traditionally grass-roots movements, once again dominating the narratives with heterosexual, white, cis-male perspectives and voices (see also Martin 2017; Taylor, Hurley & Connolly 2016). New approaches to inclusion, interdisciplinarity and active participation must be mobilised to truly engage in cultural criticism, meaning making, and transformation of models of knowledge production in archaeology.

Nevertheless, the paradigmatic frameworks of knowledge braiding and maker models for sharing tools, skills and knowledge offer up collectivised approaches with the potential to transform archaeology and heritage. From a teaching and learning perspective, this is all rather fitting because pedagogical literature highlights the value and impact of learning through doing (experiential, problem-based and constructivist literature), and through teaching (i.e. public outreach). In particular, teaching digital literacy contributes to new tools for collaborating, layering voices and interpretations (Watrall 2017), engaging diverse audiences and increasing access and participation (Rothberg & Reich 2014; Roussou et al. 2015), while developing transferrable and professional skills, heightening and complicating ethical responsibilities and the sense of accountability to communities, and learning through hands-on practice. In theory, then, teaching archaeology students digital public archaeology by working in museum environments, with communities and the public, provides

opportunities to introduce and reinforce critical skills to collaborative research in the digital era. Beyond pedagogical relevance, there is also the opportunity to use these frameworks to change the perspective of the next generations of archaeologists so that collaboration, ethics and multi-vocality are not afterthoughts or PR stunts but the starting point for every research project, reshaping the skewed relationship between archaeologists and communities.

Bridging communities: two sequential case studies

Borne out of an interest in redeveloping collaborations between the University of Victoria and the RBCM and engaging communities in protecting and valorising local archaeology sites and collections, the first archaeology pop-up exhibit was organised with approximately 12 students from the Department of Anthropology and staff from the RBCM Human History and Learning departments in the winter/spring of 2017. The result was the Excavating Royal Jubilee pop-up, which explored a never-before-exhibited museum collection relating to a local hospital in a free public event complemented by long-term, open-access, web-based resources.

Reflecting on these experiences, a second, expanded pop-up was undertaken the following autumn, involving roughly 30 students from two separate courses from the University of Victoria, one focused on public archaeology and the other focused on digital archaeology. The resulting Bridging Victoria pop-up explored three never-before-exhibited collections again through public events and a range of open-access digital media and resources. These two case studies provided the opportunity to examine the complex relationship between technology, classrooms, and communities in re-envisioning higher education, and archaeology more broadly.

Objectives and approaches

These projects were predominantly stimulated by both academic and museum efforts to decolonise archaeology on the west coast of Canada, reflecting the perspectives and demands of diverse First Nations communities as well as the recommendations of the Truth and Reconciliation Commission (Kapyrka & Migizi 2016; Supernant 2018). It was therefore important to find ways to share that process and the outcomes not only among students, professionals and descendant communities but also the general public.[1] It should also be noted that, while each of these projects was undertaken over a span of two to four

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[1] Recognising that these categories (student, professional, descendant community, public etc.) are not necessarily mutually exclusive but rather deeply entangled and individuals may identify with one, several or all of these groups.

months, they benefitted greatly from previous work, particularly undertaken by the RBCM and local descendant communities to redevelop relationships and establish better codes of practice. The projects were therefore directed by goals and policies that had already been established over the course of a much longer period of collaboration by the museum and their indigenous advisory board. These objectives included layering existing exhibits with more dynamic representations of the past and to address accessibility. Part of this related to the provincial museum's position on a small island in a much larger province and country; digital media were already being mobilised to answer this problem; however, policy and regulations on digitisation were still under development.

Fortuitously, these objectives fundamentally complemented the University of Victoria's emphasis on community-engaged scholarship and decolonisation of higher education. On another level, the discipline-specific coursework developed in these two cases also sought to address the lack of substantial change to education and training reflecting transformations in digital and public archaeological practice, with the interest of improving employability, ethical practice and global citizenship. In particular, the courses sought to:

- gain in-depth, multifaceted knowledge of particular peoples, processes, places and histories to appreciate the past and present diversity of human life;
- understand and employ ethical principles, relationships and practice and foster respectful, reciprocal and collaborative partnerships through work with local museums and heritage sites;
- build communication skills, including writing effectively for diverse audiences and genres and communicating digitally, through respectful and creative dialogue;
- build project management skills, including managing time and data, demonstrating accountability, and working collaboratively in teams.[2]

Although the learning objectives remained largely unchanged in their values and attitudes, the two sequential versions of this project represent substantial changes reflecting experiences, barriers and problems that emerged during the first project. During the first version, for instance, public and digital skills were separated into two courses that unfolded in isolation. However, with the exception of one student who had an immense background in heritage practice, most students in the digital course struggled to apply digital technology to real-world needs (it largely fitted the tech for tech's sake doctrine) without a strong commitment to ethical responsibilities and respectful practice. On the other hand, students in the parallel historical archaeology course proved to be exceptional narrators with a keen sense of ethics but often lacked the digital

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[2] Building on University of Victoria's semi-scripted learning outcomes (2016/2017).

Figure 2: Workflow and examples of projects that were produced throughout the process.

skills to support the projects they imagined. In the second year, the two courses were interconnected to allow students to focus on developing specialised sets of skills (reflecting the complexity of each branch of practice) but also to partner with other students that might have complementary knowledge and vision. All of these students were then integrated to varying degrees with the partnerships between the museum, descendant communities and the public(s).

Process and products

The initial workflow sought to reproduce organisational structures in museum or heritage environments, including liaisons between archaeologists/curators/ researchers, educators, digital professionals/freelancers and descendant communities (Figure 2). Approaches to collaborative/community archaeology were primarily defined by the abovementioned museum policies and advisory boards. Although experimentation and development created variations between the two projects, both started with a period of consultation and familiarisation bringing everyone together, designed largely to introduce students to the partnerships (as the partnerships themselves predated these projects). Following the drafting of objectives, policies, methods and schedules, a phase of individual and small group research mobilised knowledge, (re)interpreted collections and designed museum interventions and web-based components, which often organically brought satellite groups back together towards completion, weaving together divergent threads of objects, narratives and resources. The intensively collective launch of the in-person event and web-based initiatives was followed

by a range of debriefing sessions with different groups and individuals. This phase was extended during the second project because of the value that this reflection and feedback process brought to the finessing of resources.

The products crafted through these processes were as diverse as the individuals and communities involved, but also the target audiences, with the intention of engaging a range of ages, cultural backgrounds and abilities. This includes 'in-person' physical applications, such as interactive maps with 3D printed objects, MakeyMakey and electrical components (Heckadon et al. 2017) and augmented reality, but also analogue media (illustration etc.). These media were supplemented by web-based resources, including soundscapes and audio guides (Fletcher, McPherson & Ran 2017), timelines and more (Cook 2017; Kroeger 2017a), thoughtfully crafted to create similarly immersive experiences for in-person visitors and those using the web to access the museum from a distance. More general documentation and long-term content was also produced and curated on the RBCM's learning portal (Kroeger 2017b), motivated by the need to centralise web-based media created and housed on different platforms, and to share the pop-up 'experience', and for the long-term preservation of the research produced through these collaborations. Each component was designed to work on its own but also to contribute to a network of digital and analogue, public and private resources that complement each other, creating a collective but diverse vision of the local area's history. The combination of analogue and digital media was viewed as important to engaging the diverse audiences participating in the event, but also reflecting policies defined by descendant communities about digitisation and where it was appropriate. United in their commitment to immersive and meaningful storytelling and to encouraging interaction between visitors, students and professionals, every imaginative and innovative choice of digital or analogue formats was balanced with questions about logistics (access to electricity, appropriate lighting, available technology, accessibility for the public) and ethics (digitisation or reproduction of objects, impact or message).

Inputs and outcomes

The outcomes of these projects, beyond the projects, resources and events produced, most notably included the opportunities for learning and engagement between academic, professional, descendant and 'general public' communities (Figure 3). Students in particular identified with the sense of accountability and respect for communities and a resolute commitment to them as the primary outcome of these experiences, which drove them to develop digital and public archaeology skills and professionalism while also reinforcing project management, deadlines and ethical responsibilities (see also Cook and Hill (2019) for more discussion of students' feedback and debriefing). The experience of doing this work, feedback from course evaluations and additional evaluation/

Figure 3: Visualisation of the possible contributions or investments of partnered classrooms and communities, and potential benefits or advantages for each group.

debriefing formats, as well as comparing the level of student work, critical thinking and employment following this course and more 'traditional' courses demonstrate the ways in which these projects shaped not only student but professional and community experiences, understandings and future practices. However, this was largely achieved by transforming archaeological teaching and learning from classroom-focused to expanding who is included and where it takes place. The point at which these diverse communities converged created new opportunities to cultivate different understandings and narratives, but also to share skills, knowledge and vision. Blurring the boundaries between groups, between 'teachers' and 'learners', and between publicness and true openness, also recognises the complexities of decolonising archaeology by confronting authority and access and making contemporary heritage experiences cooperative, inclusive and sustainable.

On a more practical digital level, both the collaboration process and the resources and events produced created an opportunity for broader digital literacy training too, beyond just student skills development. Students ended up spending time at the in-person events and online, explaining how to use the digital technology, which often led to discussions about how it worked, why they had chosen to do use specific tools or applications, and any ethical or policy-based decisions that they made. This developed an unexpected level of transparency and critical engagement with the public that proved exceedingly valuable. Some visitors even ended up reflecting on other digital applications that they had seen at museums or heritage sites around the world, asking questions or extrapolating from discussions about whether or not they were

ethical, useful or even necessary. If we want to create a public that is critically engaged in the evaluation of 'good' or 'ethical' archaeology (and in turn challenging pseudoarchaeology, unethical approaches, looting etc.), which I would argue is critical as a step towards decolonising archaeology (and society more broadly), these discussions are invaluable and should continue to be fostered and supported.

Conclusion

Bringing together students, instructors, researchers, heritage professionals, descendant communities and the public is both a pedagogical and epistemological starting point to transforming a discipline that was built on inequity, exclusion and discriminatory practice. Collaborative applications of digital technology offer the opportunity in these contexts to produce accessible and meaningful heritage narratives but also to layer diverse perspectives and voices in powerful ways. More importantly, however, these collaborative archaeologies, when they emerge out of the open and deconstructed classrooms described above, can utilise digital practice to stimulate and respond to complex ethical, practical, political and epistemological questions, enhancing and expanding contexts of teaching and learning in archaeological training and public education. Future avenues for development should include experimentation with these same digital media, and other digital applications for interactivity, to extend and expand the opportunities and timelines for collaboration, learning, and the critical evaluation of digital heritage products and resources. It should also be recognised that these processes, valuable as they might be, are in desperate need of external support in the form of funding and modifications to career structures (to enhance job security etc.); training and research in public digital archaeology cannot transform long-standing traditions and legacies of exclusion, control and applications of technology for technology's sake without stable and reliable systems of support, clear expectations of ethical practice, and new structures of training and education. Digital practice, however, does offer new (and truly global) paths to taking responsibility for past traumas and conflicts and braiding digital and analogue narratives and dialogues that restructure and renew communities of practice.

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