Routledge
Taylor & Francis Group

Journal of Community Archaeology & Heritage

ISSN: 2051-8196 (Print) 2051-820X (Online) Journal homepage: www.tandfonline.com/journals/ycah20

From the field to the museum: engaging young Armenians in the complete life-cycle of archaeological artifacts

Caitlin Curtis Whitaker, Ani Avagyan, Peter J. Cobb, Gohar Hovakimyan, Karissa Homar & Wuyan Yao

To cite this article: Caitlin Curtis Whitaker, Ani Avagyan, Peter J. Cobb, Gohar Hovakimyan, Karissa Homar & Wuyan Yao (12 Jul 2025): From the field to the museum: engaging young Armenians in the complete life-cycle of archaeological artifacts, Journal of Community Archaeology & Heritage, DOI: 10.1080/20518196.2025.2518616

To link to this article: https://doi.org/10.1080/20518196.2025.2518616

Published online: 12 Jul 2025.

JOURNAL OF COMMUNITY ARCHAEOLOGY & HERITAGE
https://doi.org/10.1080/20518196.2025.2518616

From the field to the museum: engaging young Armenians in the complete life-cycle of archaeological artifacts

Caitlin Curtis Whitaker [a], Ani Avagyan[b], Peter J. Cobb [c], Gohar Hovakimyan[b], Karissa Homar[a] and Wuyan Yao[c]

[a]Geography and Anthropology Department, University of Wisconsin-Parkside, Kenosha, WI, USA; [b]Armenian Heritage Development Foundation, Yerevan, Republic of Armenia; [c]School of Humanities, Faculty of Arts, University of Hong Kong, Hong Kong SAR, China

ABSTRACT

Through a partnership between a local heritage foundation, an active archaeological field project, and a museum, we developed a novel educational programme for schoolchildren to introduce the full life-cycle of archaeological artifacts. Our programme demystifies heritage knowledge construction and presentation at the same time. During the summers of 2022 and 2023, multiple groups of children aged 7–15 visited an excavation and a museum in Armenia. Over the course of four days, each group gained hands-on experience while excavating on-site, conducting lab work and analysis, restoring their finds, and creating an actual public museum exhibit. Formal and informal assessment preliminarily indicates the effectiveness of the programme in providing a baseline of knowledge to support the public's involvement in future heritage-based decision-making. Our project also serves as an example of collaboration among a variety of different types of archaeological and heritage organizations.

ARTICLE HISTORY
Received 3 December 2023
Accepted 28 November 2024

KEYWORDS
Cultural heritage; museums; public education; artifacts; public archaeology; community engagement; public outreach

Introduction

In today's world, archaeological artifacts are more than just material remains from the human past. We imbue meaning into these objects through our research, preservation decisions, and the presentation of select pieces to the public in museums or online. The artifacts take on a new life of their own within our contemporary society, but the process through which this happens is not obvious to the public. We thus undertook a collaborative educational programme for schoolchildren in Armenia to introduce the entire life-cycle of archaeological artifacts to the community. Our programme, entitled 'From the Field to the Museum', is a summer school aimed at children ages 7–15. This community outreach programme has been highly collaborative from its inception: it joins together a local cultural heritage preservation organization, a national museum, and an active archaeological field excavation to provide a full range of heritage experiences. These three international groups are the Armenian Heritage Development Foundation (AHDF), the National Gallery of Armenia (NGA), and the Ararat Plain Southeast Archaeological Project (APSAP). Our summer school stands out for its engaging, hands-on activities that expose kids to the latest scientific and technological methods

CONTACT Peter J. Cobb pcobb@hku.hk School of Humanities, Faculty of Arts, University of Hong Kong, Floor 9 Run Run Shaw Tower, Hong Kong SAR, China

of archaeology and museology. This programme was first piloted with one four-day session in 2022, was expanded and further developed with three four-day sessions in summer 2023, and has continued into future seasons. Kids participated from the towns around our excavation site in Vedi, including from Vedi itself and the nearby village of Urtsadzor, from the wider Ararat province, from Armenia's capital Yerevan, and from across Armenia.

Our programme enables members of the community to experience and learn about all aspects of how we deal with archaeological artifacts. We believe this unique approach better supports children's understanding of archaeological fieldwork, museums, and heritage holistically. We hope that this increased heritage knowledge provides a crucial foundation for our planned future collaborations with the community on sustainable heritage tourism development and a new local museum In this paper, we will first frame our experiment within recent research into public education in archaeology. Next, we introduce the details and challenges of our programme to offer a model for others. Then, we present the preliminary results from our evaluation and assessment of the programme that used both formal and informal qualitative methods. Finally, we synthesize our results and discuss suggestions for future research.

Themes in archaeological public education

The multitude of children's education programmes at archaeological projects reflects a recent push to share archaeology with the public (Ellick 2016; Kowalczyk 2016; Poole 2019; Smardz 2000). At its core, public archaeology recognizes archaeology's past mistakes of hoarding the archaeological process and its knowledge within the expert realm of the academic elite. Often, this involved engaging in 'scientific colonialism' with white, Western academic archaeologists travelling to a foreign land, extracting material culture and knowledge from a community, and not giving anything back to that community. Matsuda (2016) and others argue that when practicing archaeology with the public, it is crucial to acknowledge the situated identities of all actors involved. The biases of archaeologists, the power dynamics relative to the communities they work in, the diverse viewpoints, and the cultural, social, and economic contexts of the (un-monolithic) public are all key considerations. Archaeologists can additionally use assessment and evaluation of education programmes to capture feedback and data that can help avoid top-down modes of knowledge exchange (Apaydin 2016; Greaves et al. 2023).

In addition to ethical concerns, there are many practical considerations as to how to best implement and assess archaeological education programmes regarding both the quality of learning and the safety and preservation of archaeological sites and artifacts. While some programmes offer educational opportunities solely within the classroom (Chiarulli, Bedell, and Sturdevant 2000), most argue that the quality of archaeological education is improved with hands-on work at archaeological sites or museums (Fabjan and Stipančić 2019; Khatchadourian 2020; Kowalczyk 2016; Moe 2016; Poole 2019; Sgouros and Stirn 2016; Smardz 2000; Zarmati and Frappell 2019). Such a tactile, sensory, team-based learning experience has been demonstrated to be particularly enriching and memorable many years down the road, perhaps even improving community cohesion and cooperation (Brizi, Rabinovich, and Lewis 2023). This is in line with recent emphases on approaches in the educational sphere writ large like experiential education, active learning, and high-impact practices (Cobb, Cobb, and Azizbekyan 2022). These approaches all focus on the importance of the student being 'an active participant in their own learning, rather than a passive recipient of knowledge' (Greaves et al. 2023, 146).

Allowing students to interact directly with archaeological landscapes and finds affords them the embodied opportunity to creatively form their own hypotheses based on the evidence, in line with the constructivist model of education (Cobb and Nieminen 2023; Copeland 2004, 2009). As described by Davis (2005, 117), hands-on experience with objects 'provides students with the greatest number of ways to examine and process the information. Through contact with objects in their appropriate setting, students can touch, see, smell, hear, and, in some cases, taste the data'. Objects of the past

have thus been identified as a key educational tool (Henderson and Levstik 2016). At the same time, of course, students are guided in their hypothesis formation by the backbone of scientific methods that archaeologists use to make informed interpretations, or what Merriman (2004, 102) might refer to as using their 'informed imagination'. This presents an alternative to the archaeological expert presenting their view of the past in a top-down manner (Apaydin 2016, 838) as in the more traditional 'didactic model of learning in which [students] are simply told historical facts and figures and what to do (or not do) to protect heritage' (Greaves et al. 2023, 146). That being said, there are still crucial theoretical tensions at play with archaeologists, who clearly have a stake in protecting archaeologist resources, educating kids who may not initially share their views. Kohn-Tavor (2023) responds to this tension somewhat radically with an entirely community-led 'educational archaeology' excavation at Klude, Israel, with no archaeological expert or scientific research agenda present. This removes these potential top-down biases completely. We instead aim to find the balance of sharing archaeological knowledge from an expert perspective while avoiding trying to 'convert' learners to our values.

Excavation is a crucial part of the hands-on experience of archaeology. Educational programmes including excavation typically follow one of two main schools of thought. One side advocates for excavation at real sites and for including children and volunteers in aspects of the actual scientific processes of archaeological work to gain a more realistic experience (Khatchadourian 2020; Kowalczyk 2016; Poole 2019; Sgouros and Stirn 2016; Smardz 2000; Zarmati and Frappell 2019). Some argue that the authenticity of participating in a working excavation affords a greater sense of contribution and excitement, especially for older students, compared to simulated experiences (Dhanjal 2009; Poole 2019). But, this approach suffers challenges of safety and the potential damage to cultural materials. Also, important pedagogically, students may excavate no artifacts, as is often the case in real archaeology. They could become discouraged or bored by the archaeological process rather than experiencing the thrill of discovery (Riley 2019, 89). Accordingly, allowing students to take part in the actual excavation can reduce control over the educational experience.

The other side of the debate thus favours simulated excavations with replica artifacts (Chiarulli, Bedell, and Sturdevant 2000; Corbishley and Dhanjal 2019; Ducady et al. 2016; Fabjan and Stipančić 2019; Riley 2019; Sgouros and Stirn 2016). This approach is sometimes referred to as a 'sandbox style', in which the instructors create a context intentionally for students to excavate. In this way, they can control the artifacts and materials found, which will consequently be readily interpretable. This approach has downsides, such as children being aware of the fiction and potentially being less invested, as well as the inability to easily replicate stratigraphic concepts. It can also take significant time to set up. But, with a simulated excavation, instructors can ensure that all students are provided a similarly enriching pedagogical experience.

To further expand archaeological education programmes and bring participants to the end of the process beyond the dig, several programmes focus on museum approaches and dedicate time to analysis and exhibition (Ducady et al. 2016; Henderson and Levstik 2016; Sgouros and Stirn 2016). However, few programmes overall directly combine fieldwork and museum work in the same learning experience. As Henderson and Levstik (2016, 510) indicate, there is an opportunity to better connect the 'direct outgrowths of the processes [students] observed and activities in which they participated' during an archaeological experience to the 'well-developed interpretations' of museum displays.

We know that values and meanings of past cultures were and are engendered in the objects that archaeologists study (Tilley 1989). These objects' 'web of meaning' continues to be made and remade in contemporary society (Davis 2005, 115). This includes the knowledge we gain from them as archaeologists when we document their exact contexts, as well as the values we imbue in them by preserving and displaying them in museums. Museum presentation is key in the role objects are afforded in construction of contemporary identity by influencing, for example, nationalistic narratives or pride in one's (perceived or actual) ancestors (Acabado and Martin 2020). Museums serve as 'contact zones' between the diverse public, experts, and narratives of the past

(Clifford 1997). It is thus an important educational function to demystify how objects are interpreted and then presented at this key access point.

Since archaeology is a multidisciplinary field, educational programmes that demonstrate a scientific perspective can help introduce broader skillsets in science, technology, and other career-relevant areas (Brizi, Rabinovich, and Lewis 2023; Ellick 2016; Khatchadourian 2020). Such skillset development can be crucial for capacity-building in communities both within and beyond the realm of heritage.

Public archaeology sits at an early stage in Armenia, compared to long-developed practices in places like the UK, US, and Australia, where educational outreach and community engagement have generally become part of an ethical standard. In the literature we could find only one other archaeological educational outreach programme in Armenia, published by Khatchadourian (2020). This programme, Camp Aragats, focused on increasing access to scientific archaeologyfor girls in the north central area of Armenia where the archaeological work of Project ArAGATS sites itself. A stated goal was to minimize the extant gender gap in STEM opportunities, and we take inspiration from their well-developed theoretical goals and assessment scheme. Beyond this project, but within Armenia, we know anecdotally of several other excavations that incorporate educational outreach, so there is some disconnect between the work being done and its representation in the literature. For example, the Erebuni archaeological site and museum, located near the capital of Yerevan, has provided a simulated archaeology trench for children for years, and the famous Areni Cave offers two-hour tours for school groups. Project ArAGATS, is an Armenian-American collaboration. Indeed, Bobokhyan indicates that Euro-American collaboration has become much more prevalent in Armenian archaeology since Armenian independence from the USSR in 1991 (2014, 131). Published community archaeology, and heritage work in Armenia overall, seems to follow the same pattern, such as Earley-Spadoni's work with the Infinite Armenias digital storytelling platform (Earley-Spadoni and Harrower 2020, 189) and Project Aragats' other work monitoring and documenting heritage destruction with satellite technology (Khatchadourian et al. 2023). We hope that our project can contribute to the local development of this growing field. Building on these existing themes, we designed our own unique educational programme for Armenian children. First, considering the complications in archaeology's past dynamics among stakeholders, our project has, from the start, combined local and foreign organizations as true partners in planning and implementation. Second, we agree with the critical importance of embodied hands-on experiential learning for children, so excavation and artifact-based work forms the foundation of our programme. Third, similar to the techniques employed at Çatalhöyük, Türkiye (Farid 2014), Aktopraklık, Türkiye (Curtis 2017; Karul 2017) and elsewhere, we chose a simulated excavation within the spoil heap area on our site. This approach allowed better control of the learning experience (Riley 2019) and also slightly bridges the real-simulation divide by placing the students close to archaeologists working in the real trench. Fourth, the most unique aspect of our programme is the direct connection between the fieldwork and the museum work. Using our own innovative replica pottery, which is broken and buried in the simulated excavation, the students discover, analyse, restore, and design the pottery's exhibit in the museum – literally shepherding a single artifact through its whole lifecycle. Fifth, we focus on teaching archaeology with new technologies, like virtual reality (VR) and 3D scanning, which support the development of important skills that transcend archaeology. Finally, we are experimenting with ways to assess and evaluate the effectiveness of our educational programme.

Creating a new programme

The 'From the Field to the Museum' programme was first offered as a pilot in 2022, with a second season in 2023. We plan to offer the programme indefinitely into the future. The excavation component of the programme takes place at the Ararat Plain Southeast Archaeological Project (APSAP), a collaboration between the University of Hong Kong and the Institute of Archaeology

and Ethnography of the National Academy of Sciences of the Republic of Armenia. APSAP investigates ancient life and mobility in the Vedi River valley of Armenia and excavates the Vedi Fortress, a site protecting the valley with its Late Bronze age (ca fifteenth century BCE) monumental walls (Cobb et al. 2024). Vedi is about a 45-minute drive south from Armenia's capital city of Yerevan. The museum component of the programme takes place at the National Gallery of Armenia (NGA), a museum located in Yerevan, where the children work with the artifacts they excavated. Together with the Armenian Heritage Development Foundation (AHDF), the NGA contributes deep experience with museum education for children and connects local communities to their heritage. For instance, the NGA education department had previously conducted a study of curricular gaps within formal education programmes, from elementary to high school levels, to examine the extent to which subjects such as museums, heritage, and preservation were being covered in schools. This work helped us to develop target-oriented educational programmes to better fit existing needs. By developing this programme in partnership with local Armenian heritage institutions and organizations, we strove for it to be as sensitive and responsive to the local context and audience as possible.

Our cross-cultural partnership has been quite successful thus far. Because we each have not only our own areas of cultural expertise, but also content expertise (museums and archaeology, respectively), we respect and respond to each other's relevant experience in these areas. In particular, AHDF serves as a key cultural consultant in order to make sure that the programme is appropriate for an audience of Armenian youth, and helps to navigate the day-to-day logistics. The NGA, a national museum famous throughout Armenia, provides a crucial level of local authority and respect, a key site for the programme's execution, and museum specialists who directly engage the children in their work. Meanwhile, the APSAP team brings grant funding, an active, and highly technical digital, archaeological excavation and lab programme, as well as academic expertise into the mix. There were some challenges in navigating the different schedules of our three organizations, with our archaeological project's 5am start time and Monday through Friday schedule sometimes difficult to coordinate with the museum's opening hours (not open until 11am and closed on Mondays) and the needs of parents and kids, as assessed by AHDF. But, we have managed to work together to find a schedule that seems to work for all parties. Financial resources are of course crucial to the programme's success. This programme was partially funded in 2022 and 2023 with grant money from our home universities. At the same time, participants paid a fee on a sliding scale of up to $20 per day. The parents who could afford this fee paid it, but we decreased or waived the fee for anyone who wanted to participate but had less economic resources, particularly those coming from rural villages. Grant money is, of course, not guaranteed, and in certain seasons we have worked with a more limited budget. We plan to establish a US-based nonprofit in order to raise charitable funds, as well as to find the right balance with our sliding scale fee model, to enable us to sustain the programme over the long term.

Our programme's learning goals mainly centre around expanding perspectives on the archaeological artifact. According to our Armenian partners and our own experience with the children, the public conception of archaeology in Armenia is often connected to digging for treasure. The Vedi Fortress has indeed faced some periodic looting issues, mainly in the years prior to our work at the site. On the surface you can see some old illegal excavation trenches that follow exposed architecture or large pottery finds in various places. A series of caves along the edges of the top of the site are highly disturbed as well, with dirt moved about and graffiti on the walls. The extent of these activities is not especially large in scale relative to other sites in this part of the world. Since we began excavating, people do occasionally undertake small excavations within our trenches during the off seasons, including one that led to some collapse of the southeast baulk of our largest trench between the summers of 2023 and 2024. Given its elevation, the site is also a spot for occasional recreational activities, so we sometimes find smashed bottles and other trash. We are working closely with the local authorities on site protection, including the recent addition of signage. Although not the primary reason that we implemented our educational programme, we are cognisant of the role education can play when it comes to preventing site looting. Our main

goal for the educational programme is to increase community collaboration with all aspects of archaeology. We thus ensured we emphasized the potential to gain scientific knowledge from well-preserved archaeological contexts in order to present an alternative mode of interacting with objects of the past.

We similarly wanted to give the children a snapshot of the different professional roles that go into the archaeological and museological processes while clarifying that it is not something that non-professionals should take on without oversight from those trained in appropriate methods. Our aim was to provide the thrill of discovery that children expect from their pre-existing knowledge about archaeology, while also emphasizing archaeology as a science of the past, not a treasure hunt. On the museum side, we hoped they could begin to see artifacts in the display case not as disembodied objects, but instead recognize the interpreters and presenters behind the exhibits. We hoped the museum context would thus extend to the broader landscape, history, and communities of Armenia, and that students could potentially see themselves as the interpreters and presenters of their own heritage in the future.

Materials and methods

Recruitment

Children learned about our programme and joined through multiple different channels. A primary means was through the AHDF's and the NGA's existing networks, primarily in the Yerevan area, as AHDF has a history of running children's programmes at the NGA and was quickly in touch with previous participants. In addition, a digital poster and social media advertising campaign were utilized by AHDF to recruit more children. Meanwhile, in Urtsadzor and Vedi, our Armenian colleagues on the APSAP project have already developed crucial local connections that have enabled us to invite children from closer to the site through word of mouth. We utilize a homestay model of housing for the field team and we employ local workers in our field lab and at the site, thus we have day-to-day connections with the community. Many of our participants were children of these connections or heard about our programme from these connections.

The four-day experience

A few days before the children even joined the summer school, we held a parent's orientation at the museum. This provided an opportunity to explain the goals of our educational programme and allowed the parents to meet who would be responsible for their children in the coming days. We also made suggestions on how to prepare the children, such as bug spray, sunscreen, etc. This orientation provided a chance for parents to sign consent forms for our educational study as well as permission forms to use photographs and videos in later presentations, publications, and advertisements.

Each session of the summer school takes place over four days. In 2022, we spent the first two days at the Vedi Fortress and in our nearby field lab, with the final two days at the NGA in Yerevan. Based on our 2022 experiences and feedback from participants, detailed further below, we made some tweaks and improvements when we re-ran the programme in 2023. For example, we swapped the first field day for an instruction day at the NGA. Other educators have highlighted the importance of preparatory sessions prior to site visits (Sgouros and Stirn 2016). On this new instruction day, we began with a brief programme pre-assessment of their existing knowledge of archaeology and museology. We also introduced the children to key concepts and methods via hands-on activities to prepare them to put these ideas into practice. They worked together in pairs to engender a sense of camaraderie and teamwork. We created a mini-dig (AIA 2019) to instil proper excavation and recording techniques, and to encourage the children to creatively develop interpretations of uncovered artifacts (Figure 1). One child had the role of 'excavator' and the other 'recorder',

Figure 1. (L) During the instruction day, students practice excavating and recording on a miniature scale; (R) on the field day, students excavate and record at full scale on-site in the simulation trench with the actual trench visible right behind them in the background.

which rotated after 15 min. Each team filled in a unit sheet to record their findings, preparing them to record their simulated field excavation the next day. We consequently provided them with the backbone of scientific archaeology (the context of what you find) to uplift their 'informed imaginations' (Merriman 2004), which they each had an opportunity to present to the class.

After digging in the mini-excavation on the first day, the children undertook a brief artifact analysis activity (heavily inspired by Pruitt 2020; Wiewel 2020). The children wrote descriptions of real artifacts (mostly obsidian, pottery, and some modern animal skulls) based on their observations (colour, size, material, etc). We afforded the students a chance to build and share their interpretations of those objects freely based on those observations. Of course, we would gently correct misconceptions as they arose. For instance, we had a cow skull available for our analysis activity, and one student described it by saying 'it looks like a dinosaur skull'. We responded: 'It does kind of look like a dinosaur! I can see why you said that. But, actually, it is a cow. Archaeologists do not study dinosaurs'. Even so, when some children still tried to guess which item matched the description of 'a dinosaur skull' in our guessing game portion, the description worked well and everyone could easily identify which skull looked 'large and scary'. Thus, even though not technically correct, they still utilized this description well in a way that others would understand considering their pre-existing frame of reference and we encouraged their success in that arena.

Finally, the children practiced restoring the pots from the mini-dig and developed a simple exhibit as practice for future museum work with the artifacts from the field excavation. To elicit camaraderie and team spirit, as well as to market our programme for future attendees, we distributed branded t-shirts, hats, and backpacks to children and staff. Most of the children wore these during the following days of the programme.

The second day was led by the APSAP team and began early with a tour of APSAP's excavation site, the Vedi Fortress. The tour ended at our simulated trench, located next to a real trench on the site, where the children spent the rest of the morning (Figure 1). Based on our 2022 experience, we moved the simulated trench location in 2023 to make it more accessible by an easy hike, as well as to reduce exposure to wind, sun, and dust. This had the added advantage of letting them experience the approach to the site through the impressive monumental lower fortification wall. In addition, we provided tents to shade the children working in their trenches. Between 2022 and 2023, we also doubled the size of each simulated excavation unit to 1×1 m, to give plenty of working space, counter to Brown (n.d.) who suggested that spaces over 50 centimetres on a side can lead to boredom from documenting comprehensively in a limited timeframe.

The goal of the simulated excavation was to provide hands-on experience, so the children could both feel the joy of discovery and gain an appreciation for the careful process of scientific

documentation. It is important to note that we did not conceal that our excavation area was simulated: we made it clear we had created it for the kids. Our simplified recording system involved providing tape measures for them to map the locations of objects and features on a paper form (Figure 1). They received instructions in proper plan-labelling and about how to place objects in appropriate find-type bags (ceramic, bone, lithic tools, plants, etc.). The purpose of this basic recording was to shift their conception of excavating artifacts beyond just 'digging for treasure' to scientific thinking. We also assigned roles in the field among teams of children, with excavators, mappers, and sifters rotating, emphasizing the importance of teamwork in archaeology.

Since our programme highlights the complete archaeological process, we next turned our focus to the field lab, where we moved in the afternoon of the second day to avoid the heat. After a brief lab tour, the children then washed their pottery. Artifact analysis was done during the lab time in 2022 but was moved to the third day at the museum in 2023. For the remainder of the second day in 2023, children learned about digital methods in archaeology, given the highly digital nature of our field project (Cobb et al. 2019). We took them on 20-minute immersive tours in virtual reality (VR) headsets (Cobb and Nieminen 2023) and allowed them to experiment with our augmented reality (AR) app that enables visitors to place virtual walls in the real world (Figure 2). Children also practiced 3D scanning pottery and learned how to create photogrammetry models with a camera and a global navigation satellite system (GNSS) device. This simulates how we record our archaeological contexts in 3D at our real excavation. We rotated these sessions, in parallel with small groups, which entailed a lot of coordination and team supervision.

During both 2022 and 2023, we spent the final two days in the museum, where AHDF and NGA museum educators led the instruction. On the third day, the children began with a guided observation of the permanent and temporary exhibitions at the NGA, learning how the displays are structured and texts are developed to inform their own exhibition. We reviewed the process of how excavated artifacts end up in museums. Next, following training from a conservator, they were able to puzzle back together the pieces of their broken excavated pottery and affix it with glue (Figure 3). The children were then asked to personify the finds they had discovered to make labels for their exhibit display, which was a great way to support their creative interpretations. For example, one child wrote: 'I am a piece of pottery, I was left behind in the Bronze Age and I was

Figure 2. Digital methods rotation for kids included documenting a mock archaeological context with high resolution GNSS (L) and a virtual reality tour of the ancient site (R).

Figure 3. Museum activities, including students separating out pottery by design to aid in reconstructing the vessel (L) and students setting up a museum exhibit (R).

sad, sitting around in the dirt until Vardan found me'. Thus, the third day was focused on interpretation and restoration of the artifacts, core activities carried out by real archaeologists and museologists.

Finally, on the fourth day, we introduced them to the creation of exhibit displays. The children and museum educators collaborated in the development of a curatorial plan for a thematic exhibit with the replica artifacts they discovered and restored. They discussed what information should be included in the display, from the site visit, their analysis of their artifacts, and their understanding of the contexts. They decided on their exhibition concept together, including what story they wanted to present to their audience and the title of the exhibit, also delineating curatorial tasks, such as exhibition poster design and text development, among themselves. The children also worked with a museum curator to construct the display cases with their pottery restorations and other artifacts. In all cases, the children rather than the instructors led these decisions. Before the final exhibit opening, we administered our exit questionnaire, which included evaluation and assessment of the programme. Then, the children presented their exhibit to their parents, and we showed a slideshow of action photographs. Finally, each child received a certificate of completion, proudly celebrating their accomplishments over the four days.

Preparing the simulated artifacts and excavation

We provide details here about our design decisions in setting up our field simulation to inform those considering similar initiatives. To emphasize the connection between the field and museum, we specifically focused on allowing the children to uncover complete but broken pottery vessels. Working within time and budget constraints, we bought premade pottery that looked somewhat reminiscent of local ancient artifacts.

Some pottery was already decorated in a manner consistent with the ancient past, but the rest required decoration by us, inspired by ancient motifs. The purpose of painting the pottery is threefold. First, although we are not providing the authentic excavation experience in a real trench, we can still connect the children to the Bronze Age past. Second, it is easier for the children to match and fit together pieces during the restoration session, since different vessels can be separated by pattern and shape (Figure 3). Finally, it is more exciting for the children to find beautifully decorated finds, and makes for a more aesthetically varied exhibit. Given that our museum partner is an art gallery, a focus on aesthetics meaningfully fits their mission.

Figure 4. Drone image of 2023 simulated excavation area before burial.

When decorating the pottery, we examined pottery currently being excavated for inspiration of authentic designs. After some experimentation, we settled on using durable acrylic paint. With one painter working, we were able to complete about six vessels in a day. We found that the ideal number of pots was about 2/3 the number of kids to allow for enough variety for subsequent restoration and display. After allowing the painted pots to dry, we carefully broke them. Striking each vessel with a hammer within a paper bag allowed for a more controlled break with fewer pieces and less errant shatters and chips (which are not ideal for either excavation or restoration). A cushion underneath also softened the blow to afford less shattering. We had sharp edges on the resulting pieces, which the team helped to file down, to avoid any injury to the children. All of this pottery prep took about 2–3 workdays per session.

For setting up the simulation trench, we first measured out the appropriate dimensions (1 × 3 m in 2022 with six 50 cm square units, and 2 × 4 m in 2023 with eight 1 m units). Then we cleared the area of vegetation or errant stones and began populating the trench with finds (with the ground surface as our base). The usefulness of a simulated excavation is that you can create an intentional context that is readily interpretable according to what the children might experience in their everyday lives, such as a kitchen (Zarmati and Frappell 2019). We also tried to mimic some features from the real excavation. We created a hearth context with burned food items roughly authentic to the site's ancient period and gathered obsidian in another area to demonstrate tool making and use. To improve authenticity, we burned some pottery, cherry seeds, lentils, and animal bones we had collected from the team and our local neighbours (Figure 4).

We created a low stone wall to replicate the walls that are a central feature of the ancient site, including pottery concentrated upslope from the wall to reflect the erosion patterns of the site. In 2023, we added a break in the wall to represent the erosion observable in the real-life Bronze Age walls, complete with a piece of pottery in a different style to mimic context mixing. In our simulated trench, we aimed to provide distinct areas that could lead to diverse interpretations of human behaviour as well as demonstrate the intricacies of post-depositional processes in a simplified form. We also specifically avoided preconceived notions of gold, coins, and 'treasure' and instead populated the trench with finds that were true not only to most of our real finds, but also common across most field projects.

Challenges and adjustment

We faced several challenges along the way, including for instance, some initial cultural differences among our team members that impacted the planning schedule of the programme. Non-Armenian team members were accustomed to planning and arranging key details for such a complex programme, with so many moving parts, well in advance. But, in our experience, it seems more common in Armenia to finalize certain arrangements as late as the day before they were needed. And indeed, somehow, it always seemed to come together in the end. Thus, the AHDF has helped non-Armenian team members adjust to this so called 'Armenian miracle' and be more flexible with local expectations.

As another example of adjusting to the local context, though we had intended to create different sessions for each age group to better adjust the programme to educational level (e.g. ages 7–10, 11–14), parents often requested that siblings of different ages participate together. This posed a challenge in that it necessitated that we find ways to cater each activity to different age groups at the same time. For instance, we developed an artifact analysis activity on Day 1 that can be simplified for younger kids and expanded upon in more depth for older children.

Much was also learned from issues in the 2022 pilot session that we have been able to adjust in subsequent seasons. We found that our first simulated excavation area was too small and cramped (50×50 cm unit squares per team). The real trench that we initially chose to locate the kids' trench next to was at the very top of our site, so it was too hot, windy, and dusty. In addition, due to overall time management issues in our first run, we ended up at the excavation site later than we had planned, with the kids hiking up a steep 500m path to the excavation in the heat of the day with temperatures above 90F. This led to the adjustment to a 2×4 m trench, placed at a lower position on the site, in 2023 as described above.

Moreover, the actual excavation experience in 2022, although well-received by the children according to their exit questionnaires (see below), was actually quite chaotic. Only one Armenian-speaking staff member was present who was well-versed in excavation techniques enough to aid the kids. Though there had been a brief lecture introducing proper excavation techniques, it did not seem to have been successful at preparing the kids for how to operationalize those concepts in practice. We hired translation assistance in subsequent seasons to address the difficulty in staffing and communication, and added the full 'instruction day' on Day 1, described above, to mitigate challenges caused by the lack of preparation for careful fieldwork. In addition, although the virtual reality experience was also well-received in 2022, we only had one VR headset for about 10 kids, meaning the rest were waiting around while one was experiencing VR. Some staff also thought there was not enough digital focus in general, considering the highly digital nature of the excavation project. We thus implemented the rotating digital methods session described above to address this challenge. Though requiring some trial and error to finetune the logistics, this has been a great solution to expose the kids to a wide array of highly advanced digital technologies.

Though we have been able to address many of the issues, we still seek solutions for other challenges. Despite the smoother experience with translation assistance in 2023, a primary challenge continues to be language. American and Asian co-authors currently speak little to no Armenian. We rely on translators to convert activities, documents, and presentations into Armenian ahead of time as necessary and to translate day-to-day questions from the participants during each session. But, not everything can be translated, particularly informal interactions of students between each other. Thus, mumbles of confusion or boredom that would lead to natural adjustments in the classroom in real time are harder to account for by non-native speakers. For now, we thus rely on our assessments and reports from Armenian speakers about changes that needed to be made between sessions. We hope to rectify this soon with Armenian lessons for non-native speakers.

Results: assessment, evaluation, and impact

Over the course of four four-day sessions during the 2022 and 2023 field seasons, we have welcomed 45 children. These included 19 girls and 26 boys. The four sessions ranged in class size from 9 to 15 children. We found that the ideal class size was 12 per 3–4 instructors to be able to give the best instructor-to-student ratio for one-on-one attention and to reduce overall chaos. The children's ages ranged from 7 to 15, with the largest proportion in the 9–11 age range.

We made an effort throughout to include children both from urban Yerevan and from locations closer to our excavation and lab, including the towns of Vedi, Ararat, and Urtsadzor. Urban residents in Armenia tend to be in higher socioeconomic classes and have better access to cultural and educational resources than those living in rural areas. Though, they have less access to archaeological sites than rural residents. We wanted each group to be exposed to heritage education that they might not have otherwise been able to access, as well as to the life experiences and friendships of rural or urban peers. Brizi, Rabinovich, and Lewis (2023) emphasize the psychological potential for community archaeology programmes to boost a sense of cooperation and community cohesion, and we hoped our programme would thus make a contribution to bridging this rural-urban divide. We also prioritized inviting children from the closest communities to the Vedi Fortress, and thus those most likely to be directly impacted by our archaeological work and potential future sustainable tourism developments. Just over half of the participants were from Yerevan, and just under half were from towns surrounding the archaeological site.

Though not always as prominent a part of archaeology education programmes as they should be (Moe 2016), assessments and evaluations are crucial tools. They help to adapt programmes to meet the needs of specific audiences and to determine the overall impact of programming (Beamon 1997; Bell 2007; Copeland 2009; Corbishley and Dhanjal 2019; Ducady et al. 2016; Khatchadourian 2020; Kowalczyk 2016; Moe 2016; Poole 2019; Renoe 2003; Riley 2019; Sgouros and Stirn 2016). Programme assessments and evaluations can potentially address pre-existing biases and misconceptions by planners and participants alike (Copeland 2009; Renoe 2003). By assessment, we refer to methods to determine the effectiveness in achieving specific educational learning goals, while by evaluation we refer to determining participants' satisfaction with and opinions of the programme. Formal instruments typically include surveys and questionnaires (Ducady et al. 2016; Khatchadourian 2020; Moe 2016; Poole 2019; Riley 2019), but informal methods like verbal feedback from children and parents, observations by staff, and anecdotal evidence can also be useful in programme improvements (Corbishley and Dhanjal 2019; Greaves et al. 2023).

Following Moe (2016) and others, our summer school included a pre-assessment and a post-assessment to evaluate childrens' understandings at the start of the programme and whether or not we had adequately achieved our learning goals by the end. These learning goals included conveying the importance of scientifically documenting contexts, extending perspectives beyond the artifact, and instilling an understanding of the full life-cycle of an artifact. The activities completed throughout the programme (drawing artifacts, mapping the site, etc) also served as formative assessments along the way to track whether children were understanding key concepts so the instructors could redirect them as necessary. For example, using approximately the same blank site plan for our mini-dig and our on-site excavation was particularly useful in allowing us to correct issues as they arose (Figure 1). In this case, if we saw that children were not labelling the finds they drew in the mini-dig, we could catch that in the instruction period, and demonstrate the correct labelling procedure, so that they were more likely to avoid that mistake in the simulated excavation on-site.

The number of participants does not yet enable us to undertake a robust quantitative assessment analysis. We are implementing a flexible approach to assessment and evaluation that can dynamically change as we continue to gain experience with our programme and its audience. Here, we provide our initial impressions and discuss various challenges, which we will continue to address in future seasons. A future publication will address our assessment procedure and results in greater depth.

During both 2022 and the first session of 2023, the pre- and post-assessment questionnaire contained repeated basic, open-ended questions about archaeology, museology, and heritage. The goal was to assess whether greater understanding was apparent in responses at the end of the programme. We did observe some growth in participants' understanding. For instance, in terms of our goals of expanding the perceptions of artifacts, one child (female, age 9) presented a useful example. When asked 'What do archaeologists do?' in the pre-assessment, she said simply 'They find objects' (children's answers usually translated from Armenian by us). In the post-assessment, she responded, 'Archaeologists do excavations, clean the finds and take them to the museums.' This and similar responses preliminarily demonstrate that the artifact life-cycle became clearer to our participants. However, there were also responses that became less complex (e.g. from 'Archaeologists discover ancient items and find out what kind of items those are' to 'They find ancient items'), seemingly indicative of survey fatigue and/or distraction.

Notably, we observed during the post-assessment questionnaire period in the first 2023 session that some children groaned and said, 'Oh no, we already answered these questions!' These observations, together with cultural norms in education explained by our Armenian partners, indicated that such a survey mode felt too much like a test for students. Questionnaires and assessments that are not graded tests are not common in the Armenian school system. Based on their prior experiences, the children generally felt pressure to perform well on our assessments as if they were tests. Thus, we pivoted to a more playful form of pre-assessment – inspired by Renoe's (2003) 'Draw An Archaeologist' test, and a more open-ended post-assessment in our two final 2023 sessions. The children had more freedom to answer questions however they wished about what they learned, which seemed to be more illustrative of their learning experience than the repeated pre-and post-assessment questions. This is a crucial example of catering to the local cultural experience of the participants, and we will continue to refine this assessment procedure.

Both in 2022 and 2023, the post-assessment and evaluation were administered together within one questionnaire, after all programme activities had been completed, aside from the final exhibit. Our evaluation examines overall satisfaction with our programme by the participants to help us improve future iterations. We have had 44 responses total, with 89% of children rating their overall experience at the summer school as 'Very Good' or 'Good' on a Likert scale with options *Very Good/Good/Fair/Poor,* with 7% not responding. In terms of whether they would recommend the programme to a friend, 89% would 'Definitely' or 'Probably' recommend the programme, with only one indicating 'Probably Not', none 'Definitely Not', and 9% not responding. The 'Probably Not' was a 14-year-old girl from the 2022 session in which all the rest of the participants were young boys, so she noted feeling out of place. We made sure to match participants with others of similar ages and have a more even gender distribution in all 2023 sessions based on this feedback.

Notable open-ended responses from the evaluation include replies to the question 'What do you think we should change next time?' (Figure 5). 61% of children responded 'Nothing' while 9% indicated the programme should be more than 4 days because they enjoyed it so much. Some suggestions for the future included doing all the activities in Vedi rather than going to Yerevan and expanding the excavation opportunities to other sites. Anecdotally, several children and their parents asked if they could participate in another session, and some children were crying at the end of the programme as they were sad it was over. Parents were also effusive at the concluding exhibit for each session, praising the programme and even asking if there would be one that the parents could take part in themselves. We hope to send a more formal survey to parents to collect detailed feedback from them as well in future years.

In terms of anecdotal observations of impact beyond the programme, three examples stand out from local participants from Urtsadzor. For instance, although we have not yet formally assessed understandings of looting vs. archaeology, one anecdotal example demonstrates expanding perspectives on objects beyond the idea of treasure-hunting. In 2022, one student brought an object he had found in his backyard to the museum. At first, we were disappointed: had our efforts to discourage 'treasure-hunting' had the opposite effect? Then, it occurred to us that he had brought it to

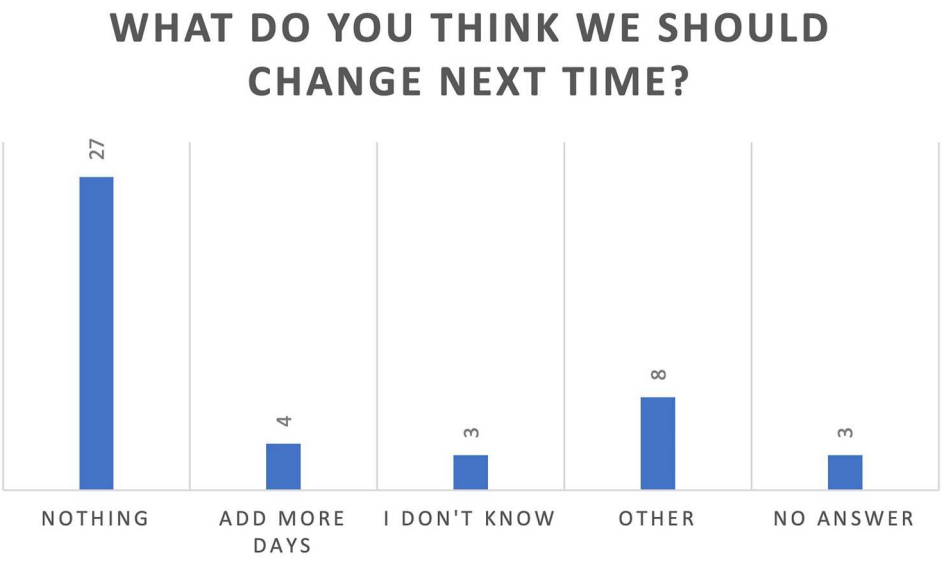

Figure 5. Chart displaying participant responses to what should be changed in future sessions.

the museum so that it could be further researched and documented. He pulled a book off the museum library shelf and excitedly searched for similar examples. We see this not as treasure-hunting, but rather as scientific curiosity about the importance of the object he found beyond just its concept as a 'treasure'. We asked him to come to our archaeological lab to further examine the object, where it was identified as a paleontological fossil. We encouraged him to let archaeologists know if he came across anything else in the future. In 2023, we also focused more on the importance of leaving artifacts in their context before contacting professionals to examine them.

Regarding increasing connections to our local community, in 2023, a 15-year-old Urtsadzor boy was extremely engaged in all programme activities. After the programme, he expressed interest in coming to work for our excavation team once he came of age in 2024. As of 2024, he is volunteering as a member of the excavation team and has even been excitedly helping to prepare the next season of the summer school. In addition, an 11-year-old Urtsadzor girl in 2023 was so enthralled in our programme that she began showing up to our project lab on her bike for several days afterward, looking for ways to help the team. She continues to volunteer at the project lab in 2024. These examples indicate that we should plan for structured access opportunities for interested children and adults with our project after the programme. This might include something like 'community Fridays'. In this way, we could openly share our excavation progress and receive community suggestions. Though the assessment procedure still needs refinement, the preliminary results of the evaluation and anecdotal observations indicate the positive impact of our programme with the local public.

Discussion

Among practitioners of cultural heritage, public archaeology, and community archaeology, there has been criticism of the so-called 'deficit model' of public engagement (Merriman 2004, 5). This model aims to impart expert knowledge of the past from archaeologists to the 'ignorant masses' and thus to convert them to 'our side' of working to preserve and protect the material heritage of archaeological sites (Grima 2016; Matsuda 2016). The alternative posed to the 'deficit model' is the 'multiple perspectives model' which acknowledges the diverse personal, socioeconomic, and cultural experiences that may colour a person's perspective and potentially diverge from the authoritative archaeological view of the past. While the neocolonial, didactic, top-down mode of education should of course be

avoided and diverse perspectives should be acknowledged and incorporated, we also cannot totally ignore the value of expertise and science, especially in this post-truth era (González-Ruibal, González, and Criado-Boado 2018). Our programme pursued a constructivist approach, which enables transparency with the children. We did not tell them their interpretations were 'wrong', even if they differed from that of scientific archaeology, but we did explain how an archaeologist would use context and observation to inform their interpretations. For instance, when asked to hypothesize how a certain vessel was used, several students speculated it was a wine cup. The authors then asked how they came to that conclusion, and they said it looked like what they have seen used that way in movies and TV. After encouraging them for using what they know to creatively interpret what they found, we asked 'how might you find out how it was used?' When the children were uncertain, this gave us an opportunity to explain how archaeologists might test for residues left inside, or interpret its use based on remains found alongside it. We thus presented the evidence and the intellectual tools of scientific archaeology but allowed them to make their own informed decisions about how to understand and value the past.

Public education also provides an opportunity to break from the 'ivory tower' model of archaeology (Grima 2016), where knowledge is hoarded by experts. In our model, we shared the knowledge as well as an understanding of how the knowledge was created. This supports the ideal of shared decision-making between archaeologists and the local community. For instance, in her research near Çatalhöyük, Atalay (2010, 423) documented an 'overwhelming concern that local residents had about their limited level of archaeological knowledge about the site. They felt they could not contribute to a research partnership without further archaeology-based knowledge'. In his research with five communities in London, Dawson (2019) similarly found that members of disadvantaged groups did not feel prepared with adequate knowledge or technical skills to participate in decision-making processes. Thus, rather than uncritically forcing our view of the past onto others, we can provide a base level of knowledge about archaeology and how we derive our interpretations. This allows the public to feel more informed, empowering them to potentially contribute to decision-making about the material heritage in their community. This will be especially crucial as APSAP hopes to collaboratively develop an on-site museum and sustainable local tourism plan in the Vedi River valley with the local community. We hope that these efforts to include the community in educational initiatives will encourage them to come to the table and feel confident to work together with us as we develop these plans. Our efforts thus aspire to not only afford locals a greater sense of archaeology and museums in connection with the ancient past that surrounds them, but also to sustain heritage investment and economic development.

Furthermore, by delving into not only the archaeological but also the museum experience, we pull back the curtain on how the narratives of the past are constructed. Cole (2015, 119–120) points out that 'by revealing the processes behind the interpretation of archaeology and engaging pupils in those processes … they are also permitted to make interpretations'. Museums have been known to sometimes exclude certain groups, especially marginalized ones, from their presented narratives of the past (Apaydin 2022). By allowing children to develop their own interpretations of archaeological finds and the presentation of those finds in museums, we disrupt the idea that the labels describing these objects are unquestionable fact. Instead, we reveal the interpretive process that archaeologists and museum curators undertake to create these presentations. Creating a narrative in their own exhibit empowers children to be critical thinkers about narratives of the past (Davis 2005, 110). For instance, Acabado and Martin (2020) describe their recent efforts to enliven heritage narratives in Ifugao, Philippines, with contemporary indigenous perspectives. They successfully pair educational approaches, via training for schoolteachers to integrate a more indigenous-focused vision of heritage into the formal school curriculum, with the establishment of a community-based museum by and for the community focused on their histories and traditions. Consequently, we similarly hope our participants can become more engaged museum goers and, potentially, have the means to contribute to their own community-based museum presentations in partnership with us in the future.

Future directions

Although our programme made great strides between our pilot in 2022 and our expansion into three sessions in 2023, we certainly have more to do. Apaydin (2022) has recently framed heritage education usefully within Nancy Fraser's social justice model (2009), considering recognition, redistribution, and representation elements as key to forming a holistically participatory heritage education programme. Recognition acknowledges sociocultural and economic diversity, while redistribution aims for an equal distribution of resources, and representation ensures diverse voices are present in decision-making. We can begin to evaluate our programme's effectiveness and room for improvement through this lens.

Our programme has pursued recognition by acknowledging differential access to economic, educational, and cultural resources between rural and urban children, and redistribution in our attempts to split the programme between these communities to equalize access. However, we could improve these elements by increasing rural-based programme options to make it easier for these parents and children. For instance, currently two to three days of our 4-day programme have taken place in Yerevan, which is an hour-long bus ride from Vedi and Urtsadzor. Though we do provide bussing, perhaps some future programmes can take place entirely locally to avoid the burden of travel. That might also allow for more community-based parents to attend the final exhibit. As described above, one child specifically requested this local focus in his exit questionnaire, and it would be great to gauge further interest in the local community for such Vedi/Urtsadzor-focused programme development.

Along these lines, in terms of recognition, in order to truly cater our programme to the finer levels of diversity in the public, we should pursue deeper community-level work. This should include ethnographic research, especially in the communities surrounding our site, to recognize their specific wants and needs for the future of the past. Humphris and Bradshaw (2017) demonstrate the utility of deeply understanding a community's diversity and characteristics to best plan community engagement initiatives to match them. Some preliminary work has begun in this regard by our team, focused on local perspectives of tourism development, and will contribute to refinements in our education programme as well. Moreover, our ongoing assessment and evaluation procedures will continue to inform and redirect our programme based on direct feedback from our community participants. We also hope to take inspiration from Apaydin (2016) and revisit former participants of the summer school via focus groups in the next several seasons to determine whether or not our programme has enduring impacts on heritage conceptualization.

In terms of representation, our inclusion of the museum exhibit process in our archaeology programme empowers our participants to potentially contribute their own narratives of the past to public presentations. However, our local partners, such as the NGA and AHDF staff, are largely Yerevan residents. Importantly, 'community' is a complex, nested, multifactorial concept (Humphris and Bradshaw 2017; Pyburn 2011). Though our project partners include Armenian citizens, they are not all from the communities in the Vedi River valley where our project takes place. We can improve our inclusivity in representation by providing more training for residents and looping in local teachers and parents in further programme development. We took some preliminary steps in this direction in 2023 by training Urtsadzor residents working in our lab in VR to help run the digital methods rotation. In addition, the aforementioned 2023 graduate of the programme assisted with the preparation and running of the 2024 summer school. The 'community Fridays' idea discussed above could also contribute here.

Our programme is a true collaboration between an international archaeological team, a national museum, and a local heritage organization, and thus strove to meet the needs and desires of the community from its inception. Integrating the archaeological and museological process in children's education presents an opportunity to reveal the whole archaeological lifecycle, from the field to the museum, and impart crucial scientific and technical skills. We hope that our programme will allow these young children to make strides toward taking ownership

of how they make sense of their past and empower them to have a voice in decision-making about the past in the future.

Ethics

We received ethics approval for our protocol both from the Institutional Review Board at the University of Wisconsin-Parkside (Exempt – Category 1) and the University of Hong Kong Human Research Ethics Committee (EA220243) prior to our 2022 season, which was renewed in 2023. We also secured signed consent from all attendees and their parents to complete questionnaires and use their photos in publications.

Acknowledgements

Narine Khtachdourian, Hayk Azizbekyan, Anahit Azizbekyan, Artur Petrosyan, Boris Gasparyan, Arsen Bobokhyan, Hasmik Badalyan, Gayane Babayan, Lili Ghazaryan, and the National Gallery of Armenia Education and Conservation Departments

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was primarily supported by the University of Hong Kong through an Interdisciplinary Knowledge Exchange Project Fund (KE-ID-2018/19-11) and a Strategic Impact Scheme Knowledge Exchange Fund (KE-SI-2022/23-28). The work was also supported by the University of Wisconsin-Parkside Committee on Research and Creative Activity (2022), by grants from the Research Grants Council (RGC) of the Hong Kong Special Administrative Region (HKSAR), China (project nos. HKU 27602920 and 17607022), and by a Teaching Development and Language Enhancement Grant (TDLEG), 2022–2025, from the HKSAR University Grants Committee (UGC). The 2024 season was supported by a Collaborative Heritage Management Grant from the American Research Institute of the South Caucasus (ARISC).

ORCID

Caitlin Curtis Whitaker http://orcid.org/0000-0001-8438-2349
Peter J. Cobb http://orcid.org/0000-0001-8770-2360

References

Acabado, Stephen, and Marlon Martin. 2020. "Decolonizing the Past, Empowering the Future: Community-Led Heritage Conservation in Ifugao, Philippines." *Journal of Community Archaeology and Heritage* 7 (3): 171–186. https://doi.org/10.1080/20518196.2020.1767383.

AIA (Archaeological Institute of America). 2019. *Your Own Mini-Dig*. Boston, MA: Archaeological Institute of America. https://www.archaeological.org/wp-content/uploads/2019/04/Mini-Dig.pdf.

Apaydin, Veysel. 2016. "Effective or Not? Success or Failure? Assessing Heritage and Archaeological Education Programmes – the Case of Çatalhöyük." *International Journal of Heritage Studies* 22 (10): 828–843. https://doi.org/10.1080/13527258.2016.1218912.

Apaydin, Veysel. 2022. *Heritage, Education and Social Justice*. Cambridge: Cambridge University Press.

Atalay, Sonya. 2010. "'We Don't Talk About Çatalhöyük, We Live It': Sustainable Archaeological Practice through Community-Based Participatory Research." *World Archaeology* 42 (3): 418–429. https://doi.org/10.1080/00438243.2010.497394.

Beamon, Glenda W. 1997. *Sparking the Thinking of Students, Ages 10–14: Strategies for Teachers*. Thousand Oaks, CA: Corwin Press, Inc.

Bell, Alice. 2007. "Designing and Testing Questionnaires for Children." *Journal of Research in Nursing* 12 (5): 461–469. https://doi.org/10.1177/1744987107079616.

Bobokhyan, Arsen. 2014. "Archaeological Management in the Republic of Armenia: From Past Experiences to New Approaches." In *The Protection of Archaeological Heritage in Times of Economic Crisis*, edited by Elena Korka, 129–137. Newcastle upon Tyne: Cambridge Scholars Publishing.

Brizi, Ambra, Anna Rabinovich, and Carenza Lewis. 2023. "Psychological Outcomes of Local Heritage Engagement: Participation in Community Archeological Excavations Increases Well-Being, Self-Efficacy, and Perceived Community Support." *Journal of Applied Social Psychology* 53 (9): 850–861. https://doi.org/10.1111/jasp.12972.

Brown, Shelby. n.d. *Schoolyard Dig*. Auburndale, MA: AIA Education Department, Archaeological Institute of America. https://www.archaeological.org/pdfs/education/digs/Digs_Schoolyard.pdf

Chiarulli, Beverly A., Ellen D. Bedell, and Ceil L. Sturdevant. 2000. "Simulated Excavations and Critical Thinking Skills." In *The Archaeology Education Handbook: Sharing the Past with Kids*, edited by Karolyn E. Smardz, and Shelley J. Smith, 217–233. Walnut Creek, CA: AltaMira Press.

Clifford, James. 1997. "Museums as Contact Zones." In *Routes: Travel and Translation in the Late Twentieth Century*, edited by James Clifford, 188–219. Cambridge, MA: Harvard UP.

Cobb, Peter J., Elvan Cobb, and Hayk Azizbekyan. 2022. "Interdisciplinary Learning in an Intercultural Setting During Archaeological Fieldwork." *Academic Praxis* 2:1–18. https://cerc.edu.hku.hk/academic-praxis/interdisciplinary-learning-in-an-intercultural-setting-during-archaeological-fieldwork/.

Cobb, Peter J., Elvan Cobb, Hayk Azizbekyan, Artur Petrosyan, and Boris Gasparyan. 2024. "Defending the Vedi River Valley of Armenia: The Fortification and Refortification of a Flatland-Mountain Interface." *Bulletin of the American Society of Overseas Research (BASOR)* 392: 151–177. https://doi.org/10.1086/732090.

Cobb, Peter J., and Juuso H. Nieminen. 2023. "Immersing in Mesopotamia: Virtual Reality Site Tours in the Remote Classroom." *Near Eastern Archaeology* 86 (3): 240–249. https://doi.org/10.1086/725775.

Cobb, Peter J., John H. Sigmier, Petra M. Creamer, and Emily R. French. 2019. "Collaborative Approaches to Archaeology Programming and the Increase of Digital Literacy among Archaeology Students." *Open Archaeology* 5 (1): 137–154. https://doi.org/10.1515/opar-2019-0010.

Cole, Trudie. 2015. "Understanding and Assessing the Theories behind Archaeological Education." *Public Archaeology* 14 (2): 115–136. https://doi.org/10.1080/14655187.2015.1112691.

Copeland, Tim. 2004. "Presenting Archaeology to the Public: Constructing Insights on-Site." In *Public Archaeology*, edited by Nick Merriman, 132–144. London: Routledge.

Copeland, Tim. 2009. "Archaeological Heritage Education: Citizenship from the Ground Up." *Treballs d'Arqueologia* 15:9–20.

Corbishley, Mike, and Sarah Dhanjal. 2019. "Formal Learning about the Past in Schools in England." *Archaeologies* 15 (1): 64–81. https://doi.org/10.1007/s11759-019-09365-8.

Curtis, Caitlin L. 2017. "Contextualizing Sustainability in Heritage Practice: A Multiscalar Approach to Community Engagement at Çatalhöyük and Aktopraklık, Turkey." PhD diss., University at Buffalo. https://www.proquest.com/openview/ab6b0c726a8e96584fc10c79087803db/1

Davis, M. Elaine. 2005. *How Students Understand the Past: From Theory to Practice*. Walnut Creek, CA: Altamira Press.

Dawson, E. 2019. *Equity, Exclusion and Everyday Science Learning: The Experiences of Minoritized Groups*. London: Routledge.

Dhanjal, Sarah. 2009. "Archaeological Sites and Informal Education: Appreciating the Archaeological Process." *Conservation and Management of Archaeological Sites* 10 (1): 52–63. https://doi.org/10.1179/175355208X404349.

Ducady, Geralyn, Mariani Lefas-Tetenes, Sarah Sharpe, and Miriam A. W. Rothenberg. 2016. "Archaeology and the Common Core." *Advances in Archaeological Practice* 4 (4): 517–536. https://doi.org/10.7183/2326-3768.4.4.517.

Earley-Spadoni, Tiffany, and Michael J. Harrower. 2020. "Spatial Archaeology: Mapping the Ancient Past with the Humanities and the Sciences." *International Journal of Humanities and Arts Computing* 14 (1-2): 176–196. https://doi.org/10.3366/ijhac.2020.0251.

Ellick, Carol J. 2016. "A Cultural History of Archaeological Education." *Advances in Archaeological Practice* 4 (4): 425–440. https://doi.org/10.7183/2326-3768.4.4.425.

Fabjan, Lavra, and Petra Stipančić. 2019. "Small Steps into the Past: Archaeology for Young Children at Dolenjska Museum, Novo Mesto, Slovenia." *Archaeologies* 15 (1): 24–41. https://doi.org/10.1007/s11759-019-09360-z.

Farid, Shahina. 2014. "From Excavation to Dissemination—Breaking Down the Barriers between Archaeology and the Public." In *Sharing Archaeology: Academe, Practice and the Public*, edited by Peter Stone, and Zhao Hui, 117–131. New York: Routledge.

Fraser, Nancy. 2009. *Scales of Justice: Reimagining Political Space in a Globalizing World*. New York: Columbia University Press.

González-Ruibal, Alfredo, Pablo Alonso González, and Felipe Criado-Boado. 2018. "Against Reactionary Populism: Towards a New Public Archaeology." *Antiquity* 92 (362): 507–515. https://doi.org/10.15184/aqy.2017.227.

Greaves, Alan M., Aslı Öz, Gülşen Yegen, Veysel Apaydın, and Caroline Gilby. 2023. "Heritage Education and Active Learning: Developing Community and Promoting Diversity in Turkey." *Journal of Community Archaeology & Heritage* 10 (2): 144–161. https://doi.org/10.1080/20518196.2023.2176087.

Grima, Reuben. 2016. "But Isn't All Archaeology 'Public' Archaeology?" *Public Archaeology* 15 (1): 50–58. https://doi.org/10.1080/14655187.2016.1200350.

Henderson, A. Gwynn, and Linda S. Levstik. 2016. "Reading Objects." *Advances in Archaeological Practice* 4 (4): 503–516. https://doi.org/10.7183/2326-3768.4.4.503.

Humphris, Jane, and Rebecca Bradshaw. 2017. "Understanding 'the Community' before Community Archaeology: A Case Study from Sudan." *Journal of Community Archaeology and Heritage* 4 (3): 203–217. https://doi.org/10.1080/20518196.2017.1345364.

Karul, Necmi. 2017. "Aktopraklık Höyük." *Aktüel Arkeoloji* 57 (May–June): 58–65.
Khatchadourian, Lori. 2020. "Education beyond Preservation: An Archaeological Camp for Girls in Armenia." *Near Eastern Archaeology* 83 (4): 248–255. https://doi.org/10.1086/708509.
Khatchadourian, Lori, Ian Lindsay, Adam T. Smith, and Husik Ghulyan. 2023. *Caucasus Heritage Watch: Monitoring Report #6*. Ithaca, NY: Cornell Institute of Archaeology and Material Studies.
Kohn-Tavor, Achia. 2023. "The Finder, Not the Find: Presenting Educational Archaeology." *Near Eastern Archaeology* 86 (1): 64–73. https://doi.org/10.1086/723460.
Kowalczyk, Stefanie. 2016. "Excavating the 'Who' and 'Why' of Participation in a Public Archaeology Project." *Advances in Archaeological Practice* 4 (4): 454–464. https://doi.org/10.7183/2326-3768.4.4.454.
Matsuda, Akira. 2016. "A Consideration of Public Archaeology Theories." *Public Archaeology* 15 (1): 40–49. https://doi.org/10.1080/14655187.2016.1209377.
Merriman, Nick. 2004. "Introduction: Diversity and Dissonance in Public Archaeology." In *Public Archaeology*, edited by Nick Merriman, 1–17. London: Routledge.
Moe, Jeanne M. 2016. "Archaeology Education for Children." *Advances in Archaeological Practice* 4 (4): 441–453. https://doi.org/10.7183/2326-3768.4.4.441.
Poole, Meredith. 2019. "From the Ground Up: Showcasing the Archaeological Process at Colonial Williamsburg." *Archaeologies* 15 (1): 105–125. https://doi.org/10.1007/s11759-019-09361-y.
Pruitt, Beth. 2020. *What Do You See?* Washington, DC: Society for American Archaeology. https://www.saa.org/education-outreach/teaching-archaeology/k-12-activities-resources.
Pyburn, K. A. 2011. "Engaged Archaeology: Whose Community? Which Public?" In *New Perspectives in Global Public Archaeology*, edited by K. Okamura, and A. Matsuda, 29–41. New York: Springer.
Renoe, Puran. 2003. "The Draw-an-Archaeologist Test: A Good Way to Get the Ball Rolling." *Science Activities* 40 (3): 31–36. https://doi.org/10.1080/00368120309601128.
Riley, Melissa. 2019. "Simulating Archaeology: Designing an Effective Simulated Excavation for School-Aged Children." *Archaeologies* 15 (1): 82–104. https://doi.org/10.1007/s11759-019-09358-7.
Sgouros, Rebecca A., and Matthew A. Stirn. 2016. "Community Heritage and Place-Based Learning at the Linn Site, Idaho." *Advances in Archaeological Practice* 4 (4): 479–491. https://doi.org/10.7183/2326-3768.4.4.479.
Smardz, Karolyn E. 2000. "Digging with Kids: Teaching Students to Touch the Past." In *The Archaeology Education Handbook: Sharing the Past with Kids*, edited by Karolyn E. Smardz, and Shelley J. Smith, 234–248. Walnut Creek, CA: AltaMira Press.
Tilley, Christopher. 1989. "Interpreting Material Culture." In *The Meaning of Things*, edited by Ian Hodder, 183–194. London: Unwin Hyman.
Wiewel, Rebecca. 2020. *Tell an Artifact's Story*. Washington, DC: Society for American Archaeology. https://www.saa.org/education-outreach/teaching-archaeology/k-12-activities-resources.
Zarmati, Louise, and Alison Frappell. 2019. "Engaging Students in Inquiry Learning at the Big Dig, Sydney." *Archaeologies* 15 (1): 126–143. https://doi.org/10.1007/s11759-019-09363-w.