

Abstract

The articles in this issue represent collaborations based on papers presented in the session “The Other Grand Challenge: Archaeological Education & Pedagogy in the Next 50 Years” at the 2017 Chacmool Conference at the University of Calgary. A model for Archaeology Education emerged, which integrated accessibility, collaboration, and engagement by focusing on communication. It built on the foundations of Public Archaeology and Archaeology Education in the past, asked us to question our truths and practices in the present, and provided examples and direction for Archaeology Education in the future.

Grand Challenge Papers Presented in this Issue

- INTRODUCTION: The “Other Grand Challenge”: Learning and Sharing in Archaeological Education and Pedagogy
 - Meaghan M. Peuramaki-Brown
- Grand Challenge No. 1: Truth and Reconciliation
 - Guiding question: How should the recommendations of Truth and Reconciliation Commissions impact and transform archaeological education and pedagogy?
 - Kisha Supernant “Archaeological Pedagogy, Indigenous Histories, and Reconciliation in Canada.”
- Grand Challenge No. 2: Experiential Learning
 - Guiding question: How do we maintain and enhance the hands-on and learning-from-place elements within archaeological education and leverage such elements to bridge the divide between archaeology and the public?
 - Cynthia Zutter and Christie Grekul “Public Archaeology Internships and Partnerships: The Value of Experiential Education.”
- Grand Challenge No. 3: Digital Archaeology
 - Guiding question: How do we navigate the increasing pressure for technology-enabled distance/remote learning in archaeology?
 - Meaghan M. Peuramaki-Brown, Shawn G. Morton, Oula Seitsonen, Chris Sims, and Dave Blaine “Technology-Enabled Learning in Archaeology.”

- Grand Challenge No. 4: Curriculum Design
 - Guiding question: Where do undergraduate and graduate training currently stand when so little is available for academic careers in archaeology, and how do we adapt our curricula to train students who can help create solutions to many of our world's problems?
 - John R. Welch and Michael Corbishley "Curriculum Matters: Case Studies from Canada and the UK."
- Grand Challenge 5: Communication
 - Guiding question: What are the roles and responsibilities of academics, professional archaeologists, museum curators, and science journalists in archaeology communication?
 - Todd Kristensen, Meigan Henry, Kevin Brownlee, Adrian Praetzelis, and Myra Sitchon "Communicating Archaeology: Outreach and Narratives in Professional Practice."

Introduction

A firm footing on the foundational theory and method of Archaeology Education (such as Fagan 2000 - in which he lists action items to move the discipline forward - and also Jameson 1997; McGimsey 1972; Ucko 1995) provides perspective about directions that have been pursued. As well, the ongoing work of pioneers in the field (see for example Holtorf 2007; Layton, Shennan and Stone 2006; Little 2002; Merriman 2004; and Moe 2019) provides guidance for the future. Familiarity with both, the foundational and pioneering work in Archaeology Education helps practitioners avoid a perpetual reinvention of an Archaeology Education "wheel," while continuing to inspire new initiatives.

Therefore, a discussion of the work in this volume includes references to the foundational work and begins by looking back. In 1995, Brian Fagan spoke at the plenary session of the Chacmool Conference at the University of Calgary. He posed the following questions:

How does archaeology as an academic discipline, and an emerging program, need to change for the coming 21st century world?...
 Who is going to spearhead this change, develop the new training programs and academic curricula for the future?...Should we train archaeologists in communication skills, conservation, legal issues, heritage management...? (2003:3,5)

The 50th Chacmool Conference in 2017 provided a snapshot of how archaeologists have been addressing the questions raised by Fagan in 1995, and the

ongoing issues faced by archaeology in the present. The papers presented in the session “The Other Grand Challenge: Archaeological Education & Pedagogy in the Next 50 Years” provided models and examples, built upon the early foundations of Public Archaeology, which move forward an education for future archaeologists (see Peuramaki-Brown, Introduction).

An overarching model for Archaeology Education and practice moving into the next fifty years emerged through the papers presented—and in the article collaborations resulting in this issue. It was one that integrated accessibility, collaboration, and engagement, with communication as the intersection point and vehicle for all three facets (Figure 1).



Figure 1. An integrated model for archaeology education.

Accessibility

Accessibility itself has various facets. It can include physical access to archaeological sites, practices, and collections, as well as intellectual access and emotional access to the past.

Physical access can be limited by the remote locations of many archaeological sites, or by the—often legislated—security concerns around protection of archaeological resources. There can also be physical limitations that prevent site accessibility due to injury, illness, or impairment that can affect members of a wider public. The conflict between such limitations and the—also often legislated—increasing requirements to make accommodations for limitations to access due to disability will need to be addressed by archaeology as much as by other sectors of society (e.g., Accessibility for Ontarians with Disabilities Act 2005; Americans with Disabilities Act 1990; Equality Act 2010).

Solutions to physical accessibility that were proposed in the papers included outreach programming that goes out to audiences, public programming at sites with road access (as at Bodo, discussed by Zutter and Grekul, in Grand Challenge No. 2), and also technological access to remote sites such as via Augmented Reality (AR) and Virtual Reality (VR) (as discussed in Peuramaki-Brown et al., in Grand Challenge No. 3).

Intellectual access to archaeological research includes both availability of academic research and the dissemination of research for a wider public. Again,

technology is seen to address these aspects of accessibility. Online, post-secondary courses that employ technology-enhanced/enabled learning (TEL) such as those outlined by Welch (in Welch and Corbishley, in Grand Challenge No. 4) and Peuramaki-Brown et al. (in Grand Challenge No. 3) make archaeological information available beyond bricks-and-mortar contexts. Open Access publications and conference participation online are serving to democratize the diffusion of research, a point increasingly pertinent in a world impacted by requirements to communicate from a distance. Other media such as podcasts, video, and social media platforms reach still broader audiences. To make full use of such media, archaeologists are exhorted (particularly by Kristensen et al. and Peuramaki-Brown et al., in Grand Challenge No. 5 and No. 3, respectively) to know the audiences they intend to reach. This would not only include becoming familiar with disabilities and the means to accommodate them through technology, but also becoming familiar with audiences of various ages, education, cultural perspectives, and needs.

Communication as the vehicle for meeting audience needs and providing accessibility becomes crucial; Praetzelis' (in Kristensen et al. in Grand Challenge No. 5) appeal for the use of "digestible...plain language" even when addressing students at a university level underscores the point. The reading and vocabulary levels of target audiences should be gauged with the use of local information. In Canada, for instance, the average adult reading level is below grade 10 (Bailey et al. 2013). Canadian adults are also increasingly unlikely to have post-secondary education, are aging, and are seeking education in informal settings like museums (Statistics Canada 2016). Archaeologists can make use of a variety of tools to become familiar with audiences. These include readability graphs and tables such as those of Fry or Dale-Chall (Readability Formulas.com 2017a, 2017b). Demographic information can also be researched in national data bases such as those of Statistics Canada.

Even when audiences understand the language used by archaeologists, they may feel distanced from them and the information they may wish to share both socially and emotionally. Peuramaki-Brown et al. (in Grand Challenge No. 3) discuss this under the headings of "Social and Emotional Presence" and "Cognitive Presence" for providing non-archaeologists with platforms in which to interact with archaeologists and each other, particularly in a TEL context.

Underpinning the above versions of 'accessibility,' however, is a model of archaeology which sees the archaeologist in a systemic "top/down" (see Shanks and Tilley 1992:8) position of power and control in relation to many other, multiple publics (see McManamon 1991) to whom access may be granted. These other publics are seen as part of a 'deficit model' (as in Merriman 2004:5), in that they require education by and from the archaeologist to address their deficit in understanding. Alone, this model for archaeology education keeps archaeologists separate from the communities whose past is researched and who can support or undermine the research. Therefore, the links

between accessibility, collaboration, and engagement are necessary to break through the “top/down” approach and communication flow.

Collaboration

Collaboration, as a second facet of a model for Archaeology Education, requires archaeology to identify and actively work with collaborators in a sharing of power for mutual benefit.

In academe, this can imply establishing partnerships within and outside of the discipline to develop skills training. The TEL courses developed/discussed by Welch and by Peuramaki-Brown (in Peuramaki-Brown et al., in Grand Challenge No. 4 and No. 3, respectively) provide models of collaborative learning strategies being incorporated into instructional design, and so becoming part of the repertoire for the next generation of professional and academic archaeologists. Welch also illustrated working with professional archaeologists in Heritage Resource Management (HRM), which Kristensen et al. (in Grand Challenge No. 5) refer to alternatively as Cultural Resource Management (CRM), within academe to develop course content and evaluation mechanisms for Master’s-degree students at Simon Fraser University (SFU) in Canada. With CRM/HRM as an increasingly dominant form of archaeological research internationally (see Kador 2014), compared with academic research, the partnership at SFU works to prepare archaeologists both as academics and for employment. Likewise, Corbishley’s (in Welch and Corbishley, in Grand Challenge No. 4) collaboration with the education system in the United Kingdom (UK), and the resultant Master’s-level training for archaeologists in education, has led to continued collaboration that includes archaeology among the different levels of formal education.

Collaboration beyond formal academic circles alone, and with other publics in informal and community settings, is also illustrated. Zutter and Grekul’s (in Grand Challenge No. 2) outline of the work at the Bodo archaeological site in Alberta presented the model of a partnership between MacEwan University and a community heritage group—the Bodo Archaeological Society. The partnership developed programming for both the university students and school groups as well as a wider public audience.

Supernant’s (in Grand Challenge No. 1) work is especially pertinent for the profession in Canada in which 80% of archaeological work is undertaken on sites related to First Nations’ heritage (Kelley and Williamson 1996). She outlines the ‘why’ of working collaboratively with First Nations communities. This would involve not only sharing power but incorporating First Nations voices into archaeological understanding, or “two-eyed seeing.” Archaeologists may also work **for** [emphasis mine] First Nations to meet their needs. A decolonized and more Indigenous archaeology would help implement the United Nations Declaration of the Rights of Indigenous Peoples (UN General Assembly 2007) and the Calls to Action of the Truth and Reconciliation

Commission of Canada (2015), and the spirit of other Truth and Reconciliation Commissions internationally in giving voice to excluded groups and their heritage. This would lead to what Franklin (2019:32)—building on the work of Education researcher, Piaget—refers to as a “disruptive” approach needed to bring about conceptual change and new understandings. Supernant as well as Brownlee (in Kristensen et al., in Grand Challenge No. 5) then provided models around the use of storywork/storytelling narratives and community programming as structures for collaborating with First Nations.

These models are recognized as suitable for including other descendant—and often marginalized—communities in the telling of their own stories (as in Stone and MacKenzie 1990). As such, they follow in the tradition and theory of the reflexive practices advocated by interpretive archaeology that have been so well-illustrated at Çatal Höyük in Turkey (Hodder 1991, 2000). Like Supernant’s work, reflexive practices call for archaeologists to examine their own cultural biases or ‘truths,’ and to work collaboratively with local communities to include their perspectives in archaeological interpretation and decision-making. This practice would see a shift of power away from the archaeologist solely, who then becomes one voice among many in the interpretation of meaning about the past (Matthews 2004). It is a shift that archaeologists in the future must be prepared for in the present.

Engagement

Engagement implies not only that archaeologists engage collaboratively with public audiences other than themselves, but that those interactions and communications themselves be engaging; i.e., maintain interest, attention, and relationships, which have long been seen as the necessary basis for education in general (Rogers 1969).

The papers from the session, and the collaborative articles in this issue, focused in particular on the powerful vehicle of narrative storytelling for engaging audiences. This does not need to mean a “dumbing down” or fictionalizing of information that goes beyond fact-based research. Praetzelis illustrated that narratives can not only be engaging but are also educational and useful for teaching theory at a university level. Kristensen et al. and Supernant promoted narratives as a way to engage the imagination while providing a framework to impart the understandings of different voices. To truly engage, the stories must follow “formats that are meaningful and significant to local communities,” according to Zutter and Grekul. In so doing, Supernant asserted that communities are empowered by having their own voices incorporated and reflected in the narratives.

Story does not only imply text. As Peuramaki-Brown et al. and Kristensen (in Kristensen et al., in Grand Challenges No. 3 and No. 5, respectively) illustrated, various

media such as games and art exhibits also engage communities to share in the telling of their stories and to meet needs defined by them.

To gain and maintain the attention and collaboration of communities, to engage audiences effectively outreach projects must be considered to be accessible, a point that illustrates again the interconnectedness of accessibility, collaboration, and engagement.

Communication

Key to all three aspects of the model for Archaeology Education, based on the conference presentations and the issue articles, is communication. Its importance for Archaeology and Science Education was underscored long ago by Clark (1943), who felt there was an obligation for archaeology to work towards peace through education. Sagan (1995) put the onus on scientists to communicate their work accessibly, engagingly, truthfully, and widely to a general public and to leaders who are responsible for funding research and developing policy. The alternative, as he presciently saw it, was for policy makers and the public to view science as elitist and invalid, and to withdraw their support for it. Smith and Smardz (2000:35) saw the messages communicated through Archaeology Education as vitally important for archaeology itself to protect against apathy and attack. Smardz (1995:5) put the need for archaeologists to communicate outside their own community very bluntly: "...archaeologists have done a really lousy job of explaining to the ordinary people on the street what archaeology has to do with them."

Communication, therefore, is critical; it must meet the needs of its intended audience and be inclusive of that audience with respect to power-sharing, as in "two-eyed seeing." A difficulty for the archaeologist will be in finding and implementing a balance in outreach, communication, and interaction. The need for inclusion, open access, and multivocality for archaeology must be tempered by the legislated and ethical responsibilities archaeologists face, such as those governing privacy, site/resource security, and respect for traditional knowledge; in particular, there are real concerns, noted by Peuramaki-Brown et al. (in Grand Challenge No. 3), about providing platforms for pseudo-science, for online trolls, or for those who would use archaeological information malevolently (such as to support ethnic superiority). These must be balanced with providing accessibility for the debate, discussion, and sharing of actual research.

Under the three-faceted model presented here, archaeologists will face the 'grand challenge' of the next 50 years of practice through an education that includes:

- Content knowledge and skills (both academic study and professional training applicable to HRM/CRM).
- Pedagogical knowledge (for academic instruction and partnerships with institutions of formal and informal education).
- Public communication (how to speak with and write for different audiences accessibly and engagingly).
- Digital literacy (and the ability to adapt to its rapidly changing nature).
- Reflexive/collaborative practices (that will require archaeologists to look both inward at their own truths, and outward to other communities and descendants whose heritage is the focus of research).

Corbishley's work of decades stands as a testament to the lifelong commitment needed and the ongoing nature of this work. It will take time to implement and to realize, but the articles in this issue attest to the change that has been occurring.

Smith and Smardz (2000:33) noted that, often, Archaeology Education embraces its tenets "on faith," without evidence other than anecdotal exchanges with colleagues to support its assertions. As well, Kintigh et al. (2014:7), whose original "Grand Challenges" provided the impetus for the original conference papers, called for grand questions to be addressable through empirical evidence. Going forward, Archaeology Education will not only need to continue to implement the model outlined in the work presented, but to assess its impact. The articles in this issue also attest to the need for further research. Kristensen et al. (in Grand Challenge No. 5) illustrated the importance of ongoing evaluation in the development of narratives, and Welch acknowledged that the success of the SFU course was in early stages and would require evaluation. Therefore, there remains work to do to meet the grand challenges of Archaeology Education in the coming 50 years. It is continuing to do the work that will have the most relevant impact on archaeology as archaeologists reach their hands both back to the past and forward for the future.

Returning to Fagan from 1995, his final words then serve well as words to spur the work going forward for Archaeology Education: "It is time for action, for change comes from deeds, not from constant oratory" (2003:3).

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