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# Incorporating Field Excavations in Introduction to Archaeology

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**Abstract**

The first experience of fieldwork for most archaeology students is a field school aimed at upper-division undergraduate majors. An excavation component in an Introduction to Archaeology class, however, can create an unequaled educational experience for students at all skill levels and interest in archaeology. Excavations help students to master basic field methods, understand the nature of archaeological inference, recognize the strengths and limitations of archaeological data, grapple with archaeological ethics, and foster a sense of archaeological stewardship. This paper explores the outcomes of providing a field work component in the introductory class at the University of Minnesota Morris, the liberal arts campus of the University of Minnesota system. The community-instigated excavation led to increased student learning that was particularly focused on higher-level cognitive activities, such as reflection and application. Although the logistics of field work can be prohibitively difficult, faculty may underestimate both the advantages and ease of providing this hands-on experience to their students.

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Undergraduate students seldom enter college with a clear understanding of archaeology or anthropology. An Introduction to Archaeology class, perhaps taken for a general education requirement, may be their gateway into the field or to the social sciences in general. The course, therefore, must meet the needs of students who will never take another class like it, as well as students who intend to make archaeology or anthropology their career. Defining the goals of such a course can be daunting, but they often include mastering the basic vocabulary of the field, understanding how archaeological inferences are made, recognizing the strengths and limits of archaeological data, fostering stewardship and a respect for archaeological ethics, and developing a greater understanding of and appreciation for past cultures around the world. As a general education course, the class may also need to model critical thinking, communication, and the scientific method.

Although fieldwork may seem better suited to a more advanced course – field schools are often cross-listed as undergraduate/graduate courses – the addition of field research to introductory courses can be an ideal way to meet the needs of the diverse students who take them. Field projects introduce the vocabulary, methods, ethics, and inferences of archaeology in a visceral way, engage students who might otherwise remain unengaged, and better prepare students who wish for a future in the field. They are particularly useful as an introduction to the key components of a 21$^{st}$ century archaeological education (Bender 2000), including stewardship, social relevance, real-world problem solving, and a recognition of diverse pasts. This article discusses the results of the inclusion of a field project in an Introduction to Archaeology class at the

University of Minnesota Morris, along with some practical suggestions for navigating the logistics.

## The Educational Setting

The University of Minnesota Morris (UMM) is the liberal arts campus of the University of Minnesota system, serving around 1,500 students with a 13:1 student to faculty ratio. UMM students are on par in academic achievement with students at the Twin Cities (UMTC) campus (as measured by test scores and high school standing); however, we have a higher percentage of first-generation students and students of color (Table 1; UMM Office of Institutional Research 2017). With approximately 20 percent of the student body Native American, we are a Native American-Serving Nontribal Institution (NASNTI). This is in partial reparation for the origins of the university as an Indian Boarding School in the late 19th and early 20th century. As a Native-American serving institution, UMM has both the obligation to train Native students in the study of the past and the opportunity to learn from their perspectives.

UMM is located on the western prairies, the homeland of the Dakota and Anishinaabe, near the South Dakota border, in a town of fewer than 4,000 permanent residents more than two hours from a metropolitan area. The university pulls heavily from reservations and rural areas in the Dakotas, Minnesota, and Iowa, as an alternative to large city campuses. For many of our students, Morris is the biggest and most diverse place they have lived. Nearly a third of our students, however, come from the Minneapolis/St. Paul metropolitan area and another 11 percent are international students. These students are seeking a smaller school where it is possible to have more one-on-one time with professors (Table 1; UMM Office of Institutional Research 2017).

| | Domestic students of color | Native American Students | International Students | Students from Greater Minnesota* | Total Enrollment | Student: Faculty ratio |
|---|---|---|---|---|---|---|
| U of MN Morris | 29.5% | 20.6% | 10.5% | 46.2% | 1,554 | 13:1 |
| U of MN Twin Cities | 23.7% | 1.35% | 8.3% | 14.2% | 31,455 | 17:1 |
| U of MN Duluth | 13.2% | 1.9% | 1.5% | 39.1% | 9,109 | 18:1 |

**Table 1. Student Demographics at the University of Minnesota System Campuses, Undergraduate Only.** Note columns and rows do not add up to 100% because some categories are overlapping and not all students are included.

*Outside the eight-county urban area of Minneapolis-St. Paul.

The Anthropology program at UMM incorporates community-based research in our classrooms. Community-based research is for, by, and of local communities, a collaboration between community members and researchers (Atalay 2012). Learning

through action is a key tenet of our educational approach, and we have a programmatic goal to engage every student in community-based learning at some point during their anthropology major.

## The Course

In the fall semester of 2014 (and briefly in Fall 2013), I included a community-initiated excavation experience in ANTH 2103: Archaeology, which served as our course in Introduction to Archaeology. The class covered world prehistory as well as basic archaeological methods. This course was required for all anthropology majors and minors, but according to the standard end-of-semester survey required by the university, the majority of students in the class took it out of general interest or to fulfil their social science general education requirement.

Rather than a lecture that meets three times a week, this course met for two hour-long lectures and a weekly two-hour lab session, for a total of four credits. In Fall 2014, students were given the choice between attending the weekly lab session or participating in an equal number of hours of fieldwork. Of the 24 students enrolled in the class, only three did not choose to participate in the fieldwork. More than half of the class chose to participate in both the fieldwork and the lab session in exchange for one additional credit of directed study, for a total of five credits. Exams, in-class activities, and assignments were essentially the same as other years.

The class was designed to meet course-specific learning outcomes, as well as to align with campus-wide learning outcomes, listed below.

*Campus-wide Learning Outcomes:*

- Knowledge of Human Cultures and the Physical and Natural World through in-depth study in a particular field: its schools of thought, advanced theories, language, and methods of inquiry, and engagement with big questions, both contemporary and enduring.
- Intellectual and Practical Skills, practiced extensively across students' college experiences, including inquiry and analysis.
- An Understanding of the Roles of Individuals in Society, through active involvement with diverse communities and challenges, including civic knowledge and engagement—local and global, intercultural knowledge and competence, and environmental stewardship.

*Class-specific Learning Outcomes:*

Students will be able to…

- describe the basic outline of human history, from 50,000 years ago into the historic period.
- describe the parameters that have shaped human societies, particularly human/environmental interactions, population pressure, and cultural contact.
- describe the basic techniques and methods archaeologists use to gather, synthesize, and interpret archaeological data, as well as their strengths and limitations.
- explain the ethical principles of archaeology.
- develop the research skills necessary to look for and explain patterns in scientific data, and to recognize the implications of those patterns for their life, public policy, and the society at large.
- apply archaeological and anthropological concepts independently, to their own society and to others.

Forty percent of a student's grade was based on two exams, which included a mixture of multiple-choice, fill-in-the-blank, and essay questions. Twenty percent came from the 13 weekly assignments, which were short (1-2 page) essays that asked students to consider the implications of class material to the modern world or their own lives. For example, one essay asked students to look at news coverage of archaeological discoveries and reflect on how the coverage reinforced biases or stereotypes about contemporary Indigenous peoples. Another essay asked students to look at their own lifestyle and consider what their "archaeological footprint" may look like to a future archaeologist. Twenty percent of a student's total points was based on participation which encompassed attendance but was mostly based on their engagement with in-class exercises where students were asked to debate readings or try their hand at analyzing simplified archaeological data. The final twenty percent of the grade came from the lab or fieldwork component. This portion included attendance in the lab or field, as well as a lab write-up or field journal for each experience. All students were also asked to write a short reflection paper at the end of the semester on what they had learned through their participation in the Boerner Cemetery research project, whether they had participated in the field work itself or had followed our progress from the classroom.

In addition to the normal class work, some students registered for directed studies so they could fully participate in the excavation as well as attend all the regularly scheduled labs for the class. These students also conducted independent research about the site and participated in the post-excavation outreach around the project.

## The Field Project

The field project was initiated by a local family, the Boerners, when their ancestral cemetery was destroyed. The Boerner Family Cemetery, outside of Herman, Minnesota, served as a burial ground for a German settler family and their neighbors from 1876-1902. Over a dozen men, women, and children were buried there, although non-family members were later moved to a nearby city cemetery. When the original owner, Julius Boerner, sold the land surrounding the cemetery, he exempted the graveyard, keeping it in the family to be maintained by the siblings, children, and grandchildren of those buried there (Figure 1).


**Figure 1. Grant County in west-central Minnesota, homeland of the Dakota and Anishinaabe, and the location of the University Minnesota Morris and the Boerner family cemetery.**

Over the generations, the Boerner family found it increasingly difficult to access the cemetery as the exact terms of land ownership were forgotten. In 2012, the farmer who owned the fields surrounding the cemetery allegedly dug a large hole and bulldozed the entire graveyard into it, including the gravestones and the copse of trees surrounding them (Figure 2). Because the destruction took place at the surface level, the burials themselves were mostly undisturbed. Scott Boerner, the great-grandnephew of Julius Boerner, contacted the University of Minnesota Morris Anthropology program in 2013, asking that we help relocate the graves so the site could be restored.

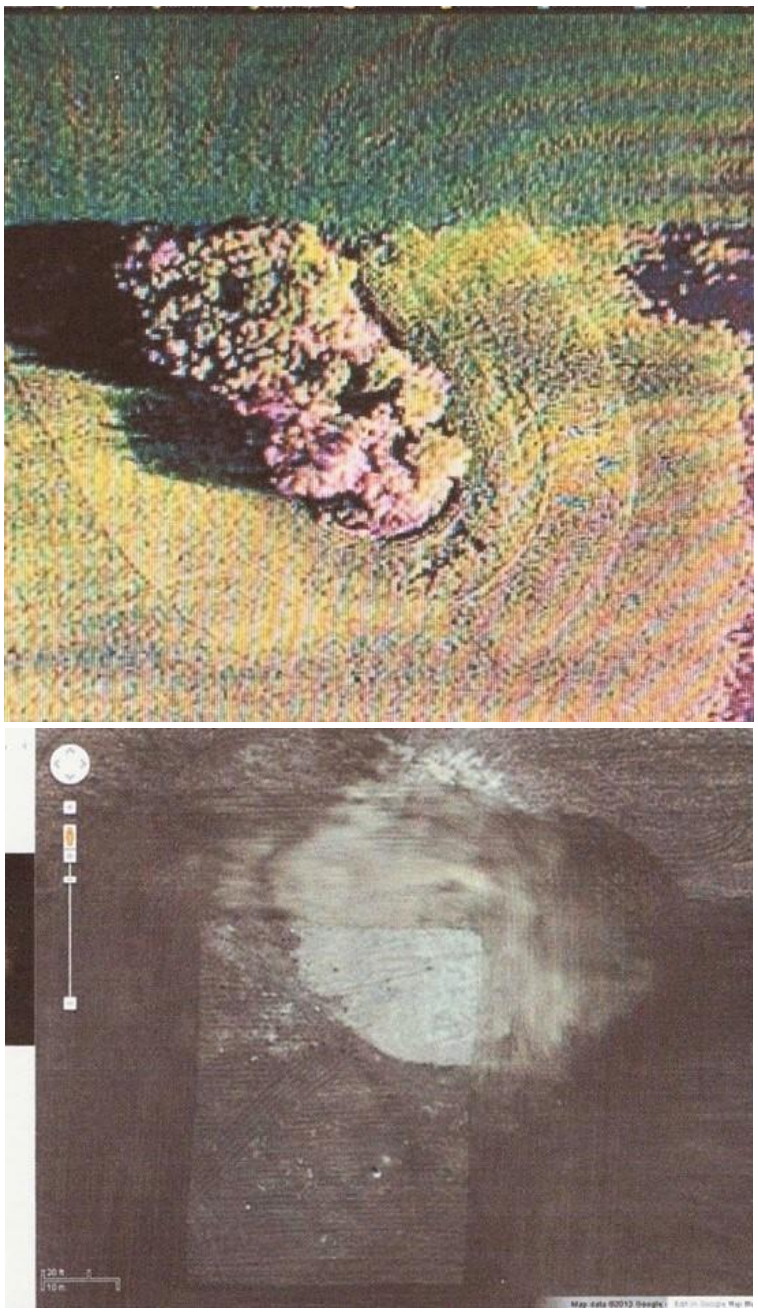

**Figure 2. Aerial photographs from before (above) and after (below) the destruction of the Boerner family cemetery. The cemetery was inside the copse of trees. The white outline of the pit in the picture below is located just northeast of the cemetery, which is visible as a lighter-colored rectangle. The pit was dug with a bulldozer and the trees and tombstones were pushed into the pit before it was closed and plowed over.**

From the beginning, the project faced legal and social barriers, including difficulty in accessing the cemetery when the adjacent landowner did not allow us to cross his land.

These barriers greatly curtailed the Fall 2013 field season so most of the work was done in Fall 2014.

The learning goals of the field project were not necessarily the same as the class itself, although they overlapped considerably. As a Native American serving institution, one critical goal of the field project was to help students situate archaeological fieldwork within the context of collaborative research, with a focus on recognizing the power dynamics that occur between archaeologists and members of the descendant community. Although most North American researchers must grapple with the often fraught collaboration between colonial governments, white archaeologists, and Indigenous communities (Atalay 2012), this particular project involved a number of Indigenous archaeology students working with a white, settler descendant community. Since the power dynamics were, in some ways, different, this situation allowed students of all identities to explore the complicated history of archaeology in unique ways. Students were able to challenge colonial paradigms through critical reflection and recognize the subjectivity of knowledge (Hamilakis 2004), while the project empowered the perspectives of Native and non-Native students alike as they were invited to reflect on the meaning and purpose of the project through class discussion and written assignments.

Additionally, the project modeled the scientific method to students in a way that is seldom possible without actual field activity. In particular, the focus was on developing a student's ability to recognize and critique a problem-oriented research design, a critical aspect of field work (Pyburn 2003). Students read the research proposal for the excavation, and we discussed the various methods that could have been used to answer the questions asked, as well as why I chose the methods that I did. The connection with the Boerner family and the wider community kept students from forgetting that the methods we were learning and executing were in service to a larger goal, not the goal themselves. Students were constantly reminded that the purpose of the project was to restore the Boehner cemetery, not to learn shovel techniques, produce perfect profiles, or map accurately, although learning such skills was critical to the project's success.

The project, like all field work, was unpredictable in the data it produced. Therefore, it was not possible to include analysis of artifacts or the production of an excavation monograph as a part of the course. Working with "virtual excavations" or digital data can be an excellent way to teach students about identifying artifacts, basic statistics, inference, and communication (Agbe-Davies et al. 2014). The limitations of the Boerner project did not allow these objectives to be learning outcomes for my students. However, although the project did not provide useful data for students to analyze, it did teach students about the inevitable ambiguity and irregularity of any research project, and the necessity of embracing that ambiguity (and having numerous backup plans) to be successful in field research.

Finally, the project modeled the primacy of ethical and reliable science over pedagogical concerns or “finding things” (Atalay 2012; Pyburn 2003), helping students to develop a decision-making hierarchy that they could apply to other research endeavors. For example, students were taught that the ethical considerations of the descendant community came first. The site should not be disturbed just because we wanted to work there, but only because the Boerner family asked us to intervene. Although I had a permit that would have allowed me to insist on larger-scale excavations in fall 2013, I chose to respect the wishes of the local community and put off the excavations until the next year, despite the impact that had on students in my course (who had expected to participate in field work). There were many discussions within the class about what decisions were made, and the ethical or scientific considerations that led to those decisions.

## Logistics and Practical Considerations

The practicality of including fieldwork in an Introduction to Archaeology class depends on the educational context. The project must be simple enough that students can learn the skills required, even if they can spend only a limited number of hours in the field. In this case, each student spent a maximum of 30 hours in the field, in lieu of the usual 30 hours of lab time over the semester. A project of this type is not an alternative to a field school; it is simply an introduction to basic skills, a model of the scientific method, and a vehicle for exploring research ethics. For this reason, the Boerner Cemetery project largely consisted of digging and mapping simple ditches to look for disturbance of the clay beneath the top soil. Students learned how to use hand tools, to identify differences in soils, and how to lay out and map archaeological units using pencil, paper, and measuring tapes. These were learning experiences they could master within the time frame available. The nature of the excavation did not require students with lower levels of motivation to engage with more challenging skills, such as learning to map with a total station, although these experiences were available to those students who were interested (Figures 3 and 4).

A field project included within an introductory class must not have a looming deadline. The Boerner excavation could have started months earlier, had it been part of a summer field school. Waiting for the beginning of fall semester (August – December) both delayed the start of the excavation and curtailed its length, since it is not practical to take students into the field after the start of deer hunting season in early November, because of safety and the inclement Minnesota weather. Furthermore, a smaller number of highly-motivated and more experienced students could have excavated more efficiently. Few of the students on the project had any experience, and some had insufficient motivation to make it past the first few hours of hard work and difficult weather. If the project must be finished quickly and efficiently, an introductory class is probably not the best mechanism for getting the work done.

**Figure 3. University of Minnesota Morris anthropology students in the field, Fall 2014. The tombstone was recovered from the pit and is not in its original location, but the Grant County sheriff's department left it in the field to mark the area. (Photograph by author)**

**Figure 4. The author and students Kaelyn Olson and Dylan Goetsch in the field in Fall 2014. Although most field activities were relatively low-skill and accessible for students at all levels, there were opportunities for interested students to learn higher-level mapping and excavation skills. (Photograph by author)**

The class size must also be conducive to the work. A class that is too large would be unwieldy. Unless the project area was very large, equipment was abundant, and there were plenty of graduate students to supervise, a class of 100 undergraduates, each of whom needs to find 30 hours to volunteer over the course of perhaps 10 weekends, would lead to too many people in the field and make it too difficult for the site/course supervisor to keep control. UMM's small size made this project possible.

The structure of the class must allow for fieldwork. At UMM, the field project was easily substituted for the weekly 2-hour lab session. Instead of attending lab each Friday over 15 weeks, students could choose 30 hours of fieldwork from among the pre-scheduled weekends at the site. Faculty at other institutions may be able to schedule the fieldwork in lieu of a lab or third weekly lecture. Alternatively, they could create a dedicated lab class associated with, but not required, for the Introduction to Archaeology course. In 2016, the UMM Anthropology program replaced the class described here, ANTH 2103, with two courses: one four-credit lecture class and a separate two-credit course which could include lab or fieldwork.

Faculty must also recognize that including an excavation project in the classroom will require cutting out material, including some formal lectures, readings, and standard class activities that otherwise might be included. To get the most out of the educational experience, it is critical that the course include numerous readings, assignments, in-class activities and discussions that are related to the project itself. This adjustment requires dropping something from the pre-excavation version of the syllabus. The critical question any faculty member should ask themselves before embarking on a project of this sort is: what are my goals for the course? If your goal is to ensure that every student memorize a list of dates and places from world prehistory, then an added excavation project will not help them achieve that outcome. If major class goals, however, include "applying archaeological ethics in real world situations" or "implementing the scientific method," then an excavation may be for you. In short, while fieldwork may not be as effective as lecture/exam cycles in the type of learning that is low on Bloom's taxonomy (Bloom et al. 1956), it is excellent for delivering the deeper learning associated with the higher levels.

## Challenges

Some challenges of including fieldwork in an introductory class include the work load for the faculty member and the differential access of students to the field opportunity. Regardless of its structure, the class must offer an alternative to fieldwork for students with disabilities or work/family conflicts. If the class does not have a scheduled lab, alternatives could include volunteer lab work, archive, or background research related to the site. This step essentially swaps one type of research for another, but again requires relatively simple research tasks and constant faculty supervision. In order not to perpetuate the barriers of class, race, gender, and ability

that already make students' educational opportunities unequal, it is imperative that this alternative be educationally meaningful.

Faculty must recognize the significant time investment required in running an excavation through their introductory class. Although most students in the class participated in the field program, some took the normal labs. Others took the field program as an independent study so that they participated in both labs and field. This arrangement meant that I taught all the normal labs on Friday *and* was running the field project on the weekends. Long-term, this schedule would be an unsustainable work load, considering we have no graduate assistants. I was essentially teaching an extra class on top of my normal 20-credit class load. I recommend faculty attempt to negotiate a course reduction, perhaps by arguing that such High Impact Practices (HIPs) in introductory classes have been shown to improve retention, particularly of at-risk students (Kuh 2008). HIPs, which include such activities as undergraduate research and internships, help students develop useful academic and job skills, as well as a feeling of connection to the university and community, leading to lower drop-out rates.

In general, making the fieldwork educationally meaningful requires more than throwing students into the trenches for the requisite number of hours. The Boerner excavation project was integrated into the class throughout the semester. Students were asked to read the research design, to debate the ethics (a particularly interesting exercise when a third of the students were Native American and we were excavating a settler cemetery), to discuss the findings of the on-going excavations, to apply course concepts to their field experiences, and to reflect on the experience afterward. These assignments required a great deal of reading and writing from the students, and a lot of grading and engagement from me. Students were asked to write a two-page journal entry after each day in the field and to write a reflection paper at the end of the semester. These journaling and reflection pieces were pass-fail. As long as students showed true engagement with the topic, they were given credit. This approach helped make the grading load manageable.

Finally, I suggest that any introductory course with a field component be designed for flexibility, so that if (or when) things go wrong, students still have a useful learning experience. My own experience in the fall semester of 2013 underscores the need for flexibility. The Boerner Family Cemetery project was delayed in 2013 by legal and social barriers. As a result, I was able to take the students into the field for only one weekend before cold temperatures and deer hunting season put an end to our season. Most students were prevented from experiencing actual excavation methods. However, the class had a series of labs that were used to provide alternative hands-on experiences. Furthermore, the Boerner Family Cemetery project was still central to the course, so students followed along and reflected on the initial research design and logistics of the excavation. They were able to meet family members and hear about the meaning of the project to the local community. Their understanding of archaeological

ethics, of stewardship, of the political meaning of the past, and of research design was deepened by their experience. They also were introduced to the harsh reality of research: Murphy's Law applies, and you must be ready to roll with the punches.

## Educational Outcomes

In Fall 2013, 17 students enrolled in the course. The following year, after word of the fieldwork had spread throughout our small campus, enrollment increased to 24. Students who participated in fieldwork had higher grades on average compared to those who did not. In Fall 2014, the average fieldwork-participating student received a median final grade of 87 percent in the class, while the students who did not participate had a median grade of 78 percent. The median final grade for all students in Fall 2014, when the fieldwork program was fully implemented, was 86 percent. The median grade the previous year, when fieldwork was carried out over only one weekend, was actually higher (89 percent). No quantitative measure of educational outcomes showed significant improvement from 2013 to 2014 (Table 2).

| | Enrollment | Median final grade |
|---|---|---|
| Fall 2013 (one field session) | 17 | 89% |
| Fall 2014 students who participated in field work | 21 | 87% |
| Fall 2014 students who did not participate in field work | 3 | 78% |

**Table 2. Educational Outcomes of the Boerner Family Cemetery Project.**

Exam performance was nearly identical in both years (82.4 percent average exam grade in Fall 2014 compared to 82.5 percent in Fall 2013), and there was no improvement in attendance (in fact, average daily attendance dropped in Fall 2014) or in scores on in-class activities. However, to fairly grade students who were not able to participate in the field project, as well as to maintain continuity between the Fall 2013 and Fall 2014 courses, exams in both semesters focused heavily on world prehistory and material from the textbook and lecture, rather than on the material related to fieldwork. Therefore, the comparisons do not reflect the strengths of the field program.

Improvements in student learning did occur in those aspects of archaeological knowledge that are less easily measured by simple exams. In-class discussions, student feedback, and essays showed improved understanding of the process, ethics, and political implications of archaeology, particularly of the following topics:

- *Site stewardship*: not only did students learn that the Boerner Cemetery had been destroyed, but they became aware of the many archaeological sites that are destroyed on an annual basis, right in their own backyards. They were able

to act upon the Society for American Archaeology's ethical principle number 1: stewardship (Society for American Archaeology 2019).

- *Ethics of choosing to excavate*: although all introductory archaeology classes should explore the Society of American Archaeology's ethical principle number 2: accountability, in this course the discussions about the difference between excavating a graveyard at the request of stakeholders, with permission of stakeholders, or without consulting stakeholders took on more meaning in the concrete than in the abstract. Since one third of the class was Native American, discussions of archaeological ethics were immeasurably enriched by the comparison between legal/ethical/political considerations related to excavating Euro-American historical sites and those sites that are part of Indigenous cultural heritage.
- *Importance of the past*: students were more aware of the meaning of archaeological sites to an individual's, family's, or community's sense of identity and legitimization. They recognized that, through our actions, we were modeling the Society for American Archaeology's ethical principle number 4: public education and outreach.
- *Excavation procedures*: students were able to much more accurately describe the process of setting up and excavating an archaeological dig, mapping techniques, and paperwork. They had a much better idea of the type of physical demands and teamwork involved. The project modeled for them the Society of American Archaeology's ethical principles numbers 6, 7, and 9: public reporting and publication; records and preservation; and safe educational and workplace environment, respectively.
- *Legal regulations of archaeology*: students were able to see the permitting process and the inevitable logistical difficulties that arise while putting a project in the field.
- *Political context and meaning of archaeology*: in our small community, students were frequently confronted by the friendship and kinship alliances that caused community members to take sides on the controversial issue of destroying and restoring the cemetery. Furthermore, students were given first-hand experience with the way that archaeology is influenced by the power relationships between the university and the community, and between Native and Euro-American students/community members.
- *Preparation for undergraduate research*: the Anthropology program, and UMM in general, encourages undergraduate research for all students. Through the field project, students learned first-hand about the difficulties that can impede research and how to either overcome those difficulties or to foster the flexibility and creativity needed to change the research focus.

It is difficult to posit a direct correlation between the fieldwork and the difference in the final grades, since these averages may reflect the tendency for students with fewer social and economic barriers to participate in fieldwork, rather than the influence of fieldwork on their learning. Some reasons students could not participate, for example, included family obligations, work obligations, or concern over money for field clothes, all of which could also affect their overall grades in the class. Although the anthropology program attempted to mitigate these problems as much as possible, lower-income, first-generation, and non-traditional students, as well as students with disabilities, were less likely to participate in fieldwork.

For some students, the fieldwork portion of this course was merely a way to fulfill their required lab hours for the general education credit. For others, the fieldwork inspired them to volunteer for further fieldwork or research, which led to extracurricular experiences that helped to build their academic and professional careers. Five students presented papers on the Boerner Family Cemetery at the 2015 Central States Anthropological Society meetings in St. Paul, MN. Three students presented their research on the Boerner family and the settlement of the region to a large gathering of the community at the Herman, MN, Masonic Hall. These opportunities led to further research experiences, both at UMM and through other institutions. Because the fieldwork was integrated into an introductory class, these extracurricular opportunities were not limited to Euro-American students, the students with the highest grades, or to those with the lowest barriers to academic success. Many students from the class, including first-generation college students, Native students, and LGBTQ+ students, developed a deep engagement with the project.

The students who volunteered to get more deeply involved in the project became some of our most successful graduates. They include students who today are working professionally in CRM, who have become advocates for the cultural heritage of their communities, or are working on their MAs or PhDs in anthropology, history, or archaeology. These are students who will shape our understanding of the past for generations to come. These early experiences helped form their ethical orientation, their approach to archaeological inference, and their sense of obligation to descendant communities. As one former student recently wrote, unprompted, “[The Boerner field project and later conference presentation] changed my life and gave me better perspective and drive. Ethical anthro is a MUST, and as I’ve been finding over the years there is still much work to be done.”

## Student Voices

The students themselves are the best judges of the impact of the excavations on their education. Most student feedback expressed surprise at the pure physical labor involved in archaeology, the annoyance of working with other people (particularly whiners or complainers), and the difficulty in setting up a total station. Beyond that,

however, a number of themes arose from their reflections. Students felt that they had learned about aspects of archaeology that they otherwise would never have understood, particularly the experience of preparing and carrying out an excavation. A few quotes are illustrative:

> *It…made me see some of the things that textbooks don't include. They tell you the facts and procedures that are to be used in the field, but to actually experience a bit of it gave me the chance to see beyond just that.*

> *To talk in class about the conditions in the field is one thing, but it is always a very removed experience. The reality of what goes into preparing a site for work—or even just getting to a site—had never even played out in my mind. I think that unless archaeologists spent time detailing every aspect of an archaeological expedition (which would be a ridiculous expectation to have of anyone), there will always be some disconnect between what an archaeological mission really consists of and what most people think an expedition really means and requires.*

For many students, the biggest impact of the project was seeing the social and political importance of the past, and how community-based research can improve communities, as these quotes reflect:

> *I now see how much [archaeology] can help people.*

> *Growing up, I have learned about [my Native American family's] struggles with land ownership and the disputes they have encountered. I have never actually had this directly involve me, so it was interesting to be in a situation where similar struggles did involve me. I think it's extremely important to be involved in your culture, and I was very glad I was able to help the [Herman] community.*

> *Many community members are happy with what our archaeology class did in helping out the Boerner family and I personally feel proud to be a part of this project and making the community aware of this issue.*

> *This project brought a new light of what I originally thought of archeology. [The farmer] destroyed not only a cemetery but also a family's heritage and a town's landmark for people they once knew in the past. [Cultural] heritage is a very important part of a person's identity. It can give someone a sense of closure or belonging.*

*Restoring the cemetery, then, became a way of restoring a bit of the dignity and culture of the surrounding towns (as evidenced by the grateful phone calls). While a legacy of settling and colonizing stolen land isn't exactly something to be proud of, the Boerner family cemetery was still a landmark of—ironically—the survival of the settling people in the area. It also seems like a strangely unifying little place; it is not just the "my place" of the Boerner family, it is also the "our place" of the surrounding communities, a kind of shared piece of history.*

*I think the most important thing I learned through this project is that archaeology can be used to do more than just reconstruct the past, which is something that I am ashamed to admit had not occurred before. I mean with this project we were helping right a terrible injustice done to a family by helping them reestablish their relatives resting spaces, and by extension honoring their relatives at the same time.*

## Conclusions

Although most introductory fieldwork experiences are part of upper-division or graduate-level field schools, there are substantial educational benefits to including fieldwork in an introductory course. Fieldwork is particularly useful in teaching students about archaeological methods, the nature of archaeological inference, and the strengths and limitations of archaeological data. Students grapple with archaeological ethics and foster their sense of archaeological stewardship through engagement with a visceral, local – and therefore more meaningful – example. While adding a field component to the course did little to improve my students' general knowledge of world prehistory, (a subject that was covered well in their book and in some in-class lectures or activities), it deepened students' understanding of archaeological ethics and the research process.

A fieldwork experience is particularly useful in an introductory course. High-impact practices, such as hands-on research, have been shown to improve retention of first-year students, particularly students of color, who are at the highest risk of leaving college (Kuh 2008). Furthermore, many students enter college with little to no knowledge of anthropology, or with a negative view of the field. Fieldwork gives opportunities for deep engagement with the field to students who may have never envisioned archaeology as a potential career. This aspect is particularly critical at UMM, a Native American-Serving Nontribal Institution.

Mostly critically, working with a specific research project can give students a sense of ownership and engagement that cannot be matched by in-class exercises. Fieldwork can teach the importance and meaning of the past and of our field in a way that no other experience can match:

*I always imagined if I went on a dig, that I would enjoy the history and the work. I never would have guessed that I would have felt… honored? I felt lucky to be given the chance to give back to the community.*

## Acknowledgements

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## References

Agbe-Davies, Anna S., Jillian Galle, Mark W. Hauser, and Fraser D. Neiman
2014 Teaching with Digital Archaeological Data: A Research Archive in the University Classroom. *Journal of Archaeological Method and Theory* 21:837-861.

Atalay, Sonya
2012 *Community-Based Archaeology: Research with, by, and for Indigenous and Local Communities*. University of California Press, Berkeley.

Bender, Susan J.
2000 A Proposal to Guide Curricular Reform for the Twenty-First Century. In *Teaching Archaeology in the Twenty-First Century*, edited by Susan J. Bender and George S. Smith, pp. 29-48. Society for American Archaeology, Washington D.C.

Bloom, Benjamin, Max D. Englehart, Edward J. Furst, Walker H. Hill, and David R. Krathwohl
1956 *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. Longmans and Green, New York.

Hamilakis, Yannis
2004 Archaeology and the Politics of Pedagogy. *World Archaeology* 36:287-309.

Kuh, George D.
2008 *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter*. Association of American Colleges and Universities, Washington D.C.

Pyburn, K. Anne
2003 What are we really teaching in archaeological field schools? In *Ethical Issues in Archaeology*, edited by Larry J. Zimmerman, Karen D. Vitelli, Julia Hollowell-Zimmer, pp. 213-223. Society for American Archaeology, Washington D.C.

Society for American Archaeology
2019 Principles of Archaeological Ethics. https://www.saa.org/career-practice/ethics-in-professional-archaeology, accessed February 3, 2019.

University of Minnesota Morris Office of Institutional Research
2017 Institutional Databook 2016-2017. *Campus Documents and Reports*. 18. http://digitalcommons.morris.umn.edu/camp_doc/18