Teaching Anthropological Demography through Project- and Service-Based Learning: Case Study of the Symonds Street Cemetery Project

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Abstract

The Symonds Street Cemetery Project was initially suggested by Auckland Council, who desired to learn more about this first-generation colonial urban cemetery in Auckland, New Zealand. Undergraduate students enrolled in an anthropological demography course worked in groups to transcribe demographic information from existing gravestones. The undergraduates' assignment was to develop a demographic profile of one denominational section, comparing results from their transcriptions with those based on a database of known burials and considering issues of representativeness and preservation. The postgraduates developed their own original research questions. The final transcribed data and student papers were given to Auckland Council for their records and others' use. The postgraduate students also presented their findings in a public forum. The relatively large enrolment necessitated compromises in the project-based learning model. This led to implementation of a hybrid approach employing structural scaffolding, which allowed for traditional content delivery and project-based active learning. Observed benefits were consistent with the literature on fieldwork and service learning in anthropology and related disciplines, such as increased interest and motivation associated with working with 'real' data with a purpose beyond their own learning and assessment. The project thus accomplished specific pedagogical goals related to course content while developing students' transferable skills and including them in the process of community engagement as contributors to local heritage knowledge and preservation. However, provision of sufficient instructor support was identified as a challenge. I suggest that more attention to hybrid teaching approaches to PBL is needed, particularly from anthropology and in the form of service learning in a greater variety of contexts.

Introduction

In this article I examine the pedagogical benefits and challenges of project-based service learning in biological anthropology and related disciplines through a case study of my recent experience with the Symonds Street Cemetery Project (SSCP) and its launch as component of a course in anthropological demography.

This course, taught for the first time in 2016 and next scheduled for 2019, included both undergraduates in their third and final year of their Bachelor's programmes (both BA and BSc) and postgraduates completing coursework as part of their BA(Hons) at the University of Auckland in Aotearoa/New Zealand. The course was open to a wide range of students, but as a final-year course it was aimed primarily at Anthropology or Anthropological Science majors specialising in archaeology or biological anthropology. The topics covered included some specific archaeology content such as archaeological demography and palaeodemography, but focused mainly on historical and contemporary demography and health (see Appendix for an abridged course outline).

A major component of the course was a community service learning project that involved a public service contribution and interaction with members of the public (i.e., those beyond the University and academia). The project originated in 2015 with an inquiry from a representative of Auckland Council to several Anthropology faculty members as to the possibilities for research that could contribute to knowledge about the cemetery. The Symonds

Street Cemetery (SSC) is located on Symonds Street, which runs through the centre of the University of Auckland's main City Campus, at the edge of Auckland's downtown core. The oldest municipal burial ground in Auckland, it was in operation primarily from 1842 to 1886, though family burials continued into the twentieth century. It originally operated as five separate cemeteries corresponding to different religious and Christian denominational groups (Jewish, Roman Catholic, Anglican, Presbyterian, and Wesleyan/General). Much like burial grounds elsewhere, SSC functions today very much as a public space in the sense of a garden or park in the city, as well as a place of remembrance (see Williams and Williams 2007). Recent work had been done in the cemetery in terms of new informative signage and control of the extensive foliage, in conjunction with the newly-established Friends of Symonds Street Cemetery (FSSC) group whose aim is "to protect, preserve, enhance, restore, inform and educate the public about Symonds Street Cemetery" (FSSC 2017). Thus, at this time Council was interested in gaining more information about the cemetery and those buried within it, and as I was preparing a new demography course for the following year, a contribution of knowledge in that area seemed a good fit. Based on further conversations with Auckland Council, it was decided that for this course, the students would focus on demographic profiles of the various religious denominations. For the purposes of the undergraduates' coursework, this was further narrowed to the three largest remaining sections: Anglican, Presbyterian, and Wesleyan/General, while the postgraduates would work on data for all sections.

With the service project as its starting point, the course was envisioned along the lines of a project-led problem-based learning model. Problem-based learning (PBL) is characterized by a focus on problem-solving and was first developed at McMaster University in the 1960s specifically for medical education (Barrows and Tamblyn 1980). However, it has since expanded and been adapted for use in a variety of disciplines in both arts and sciences. Project-led problem-based learning (also known as project-based learning) is one variation that has emerged in this process. Ideally in project-led PBL, projects would be highly student-driven with significant student autonomy (Thomas 2000). The structure devised for this course thus represents a hybrid approach to project-based learning. Compromises in the project-led PBL model were necessitated by a larger class size than is usual for PBL and a requirement for traditional content delivery instruction. The resulting hybrid approach employs structural scaffolding, which uses high scaffolding and directive facilitation to enable project-led PBL (Savin-Baden 2016). For students accustomed to traditional teaching and learning formats, scaffolding can increase student confidence and comfort in engaging in PBL (Fukuzawa, Boyd, and Cahn 2017).

Some of the coursework for the SSCP was based on an assignment designed by Professor Ann Herring (now Emerita) as part of her third-year demography course in the Department of Anthropology at McMaster University, Hamilton, Canada. I took a modified version of this course myself as a Master's student. For the SSCP, with permission I adapted many of Ann Herring's computer lab exercises (e.g., how to generate histograms and mortality pyramids in Microsoft Excel). Taking it into the 'service learning' category, the results of the SSCP from the 2016 course (the students' reports) were to be (and were) given to Auckland Council for their use and for future use by interested members of the public. The students' reports (seven in total – the best for each of the three denominational sections and the four submitted postgraduate reports) were also posted on the FSSC (2017b) website. The postgraduate students presented the results of their own studies in a conference-style session attended by representatives from Auckland Council, Auckland Libraries, University staff, and the undergraduate students in the course.

Below I provide a brief introduction to fieldwork and service learning in anthropology and related disciplines, followed by background information on Symonds Street Cemetery and the structure of Project and the course into which it was integrated. I describe the hybrid approach I employed, which allowed for project-based learning to happen in a course with relatively high enrolment and in which coverage of specific content (e.g. demographic theory) was required. I review the feedback from the student course evaluations, and discuss the various benefits I saw and challenges experienced. I conclude with some reflections and thoughts on the use of service learning projects and hybrid approaches to PBL in postsecondary anthropology programs. I suggest that while a hybrid approach can be a productive option, doing both traditional content delivery instruction and project-led PBL with a large class of variable prior experience presents particular difficulties. Greater scholarly attention to hybrid teaching approaches to PBL in anthropology is needed to inform our teaching strategies – especially in regards to service learning in a variety of forms and national and local contexts.

Fieldwork and Service Learning in Anthropology and Related Disciplines

In searching for pedagogical literature to inform my course design and reflection, I found little from anthropology that specifically spoke to the kind of course and curriculum I was teaching. Furthermore, the published pedagogical

literature in anthropology is fairly limited in general – especially outside of social anthropology – compared to many other larger fields. I therefore expanded my literature search to related disciplines. Just as fieldwork is considered a highly important and distinctive aspect of anthropology as a discipline, so too is it in geography (both human and physical). Accordingly, fieldwork has been described as "vital" to the teaching of geography (Kent, Gilbertson, and Hunt 1997: 328; Haigh and Gold 1993). As such, geography instructors have written fairly extensively about the pedagogical benefits of fieldwork in their discipline (e.g., in the Journal of Geography in Higher Education; see Kent, Gilbertson, and Hunt 1997 for a literature review covering the 1950s through 1990s with guidelines for good practice). This literature emphasizes the perception of fieldwork as promoting 'deep learning' as opposed to 'surface learning' (after Entwistle 1991; see for example Kern and Carpenter 1986, Fuller et al. 2006 and Boyle et al. 2007). One aspect of fieldwork suggested to be linked to deeper learning and improved student achievement was student enjoyment, associated with higher motivation and decreased anxiety (Boyle et al. 2007). Because fieldwork requires students' active engagement (Hope 2009), it is more memorable (della Dora 2011).

In anthropology and many other disciplines, this learning is often accomplished via specialized "field schools". For example, field schools are viewed as essential in the training of future primatologists (MacKinnon 2011). However, these often require travel and additional expenses, and tend to occur at the end of or after the completion of an undergraduate degree. In contrast, the 'spiral of learning' or 'spiral curriculum' model (Bruner 1960; Kolb 1984), much like the hybrid project-led PBL approach, embeds field-based research (data collection, analysis, writing) within traditional course and programme structures, in combination with classroom-based learning activities (lectures, labs, seminars, et cetera), thus linking theory with practice (Fuller et al. 2006). Embedding a research project within a regular course provides an opportunity for students to experience many stages of the research project lifecycle, from inception through data collection to dissemination of results (Nicholson 2011). Some include peer review and publication (e.g. Nicholson 2011). For example, as part of a social anthropology course Degnen (2013) used a local cemetery for teaching about both course content (in this case, personhood) and the process of doing ethnographic fieldwork. She argues that we need to understand more about how anthropology teaching beyond the classroom can be done more effectively (Degnen 2013: 4).

This type of learning (learning by doing) encompasses a range of related approaches that goes by various names, including problem-based learning, project-based learning, experiential learning, research-led learning, inquiry-based learning, and situated learning. The geography pedagogical literature in particular heavily references Kolb's experiential learning theory (Kolb 1984). This experiential approach to learning is typically traced back to John Dewey (1977[1908]: 185, as cited in Hawkins 2014: 552), who asserted that "every educative process should begin with doing something" that is "inherently significant, and of such a nature that the pupil appreciates for himself [or herself/themselves] its importance enough to take a vital interest in it."

Community service learning, or simply service learning, builds on experiential learning to include a service component that addresses community-identified needs. It combines teaching/learning, research, and service. Service learning is contrasted with traditional learning in being more social and applied (Table 1). Much of the existing literature on service learning in anthropology is situated in a firmly American context and framed in term of historical American concerns about a perceived breakdown in civic culture (see Baugher 2009; Nassaney 2009; Shackel 2009). The term "service learning" itself was coined in 1969 in the US (Baugher 2009). However, there are many examples of similar type of projects in other national contexts, though they may not use the same terminology (e.g. Baldry et al. 2011). Furthermore, Limoncelli (2017: 27) suggests that service-learning is growing in popularity outside the US, especially in the Asia-Pacific region.

Table 1. Traditional learning versus service learning. Content adapted from Eyler and Giles (1999: 9).

Traditional learning	**Service learning**
Individual	Cooperative
In isolation	Real problems in complex settings
Abstract knowledge	Specific contextualized knowledge

The pedagogical benefits of combining fieldwork and service have been examined in various social science disciplines and anthropological subdisciplines. For example, Nassaney (2004; 2009) describes archaeology as a natural fit for service learning due to the experiential nature of its training and its image as a public service. Mortuary archaeology in particular has a strong emotional and social appeal (Williams and Williams 2007: 48), lending itself especially well to

engagement from both students and the public. Project-based service learning can be an opportunity to teach anthropology ethics surrounding consultation with community members, valuing local knowledge and expertise, writing in accessible language, and returning knowledge to the community (Ann Herring, personal communication). Such practices are especially central to applied anthropology but are increasingly an important part of anthropological research generally (see Kedia 2008 for discussion of training and education for applied anthropological work).

Symonds Street Cemetery

Auckland is located on New Zealand's North Island and today is by far its largest city. After the signing of the Treaty of Waitangi in 1840, it served as the country's capital until 1865. Located on the Waitemata Harbour, it became an important port and commercial centre. Symonds Street was one of the 'first generation' urban cemeteries of colonial New Zealand, before new cemeteries were established farther away from growing urban centres (Deed 2015: 138). The Cemetery began in 1842 with area for Anglicans, followed by an area to its north for 'others' (what became known as the Wesleyan/General section) (see Figure 1); later Jewish (1843), Catholic (1852) and Presbyterian (1869) sections were added. Located on steep slopes above Grafton Gully, Eastern sections were seen as more desirable because they had a view of the harbour. In 1840s, Auckland's population was small, with approximately 2,000 people, and the vast majority of whom were Anglican. The 1886 Census (Statistics New Zealand 2013: Table XVIII) recorded 33,161 non-Māori Auckland residents, or a total of 57,048 if its suburbs are included. Of the 33,161 non-Māori Auckland residents in 1886, 13,207 (39.8 per cent) were Anglican – still the largest single denomination, but no longer the majority (Statistics New Zealand 2013: Table III.VII). The three next most common religious denominations in Auckland as recorded by the 1886 Census (Statistics New Zealand 2013: Table III.VII) were Roman Catholic (6,610), Presbyterian (3,951), and Wesleyan (2,424).

Figure 1. Part of the Wesleyan/General section of the Cemetery (also known as the Nonconformist section), on the northeast side of Grafton Bridge. The Anglican section lies on the other side of the Bridge, to the southwest. Photo by author.

Symonds Street was closed to new burials, apart from previously purchased plots, in 1886 when Waikumete Cemetery, located at a greater distance from the growing city, opened as a replacement. SSC operated as five separate cemeteries associated with their own chapels and churches until 1909 when they were formally closed by an act of

Parliament and the entire area handed over to Auckland Council as a public park. Motorway works cut through the Cemetery in 1964, resulting in the disinterment of remains in large portions of the Catholic and Anglican sections. These remains – many more than were expected based on the number of headstones present – were reinterred in two memorial sites within the Cemetery. The Catholic section was most affected by the motorway works, with more than 2,000 graves in approximately two-thirds of its overall area being disturbed. Before the motorway works in the 1960s, information from the Cemetery's gravestones was transcribed. Those transcriptions recorded 1,874 graves.

Upkeep of the Cemetery has long been an issue, even in the nineteenth century when it was in active use. One 1876 article in the New Zealand Herald explains,

> The dilapidated wall, the broken fences, and unsightly footpaths with their rank undergrowth of weeds and fern, were the salient features of a cemetery, which, by courtesy, was called "God's acre." This state of things was threatening to become a positive scandal to the denominations concerned, when a few earnest men, "provoked to good works" by the example of their Presbyterian brethren on the other side of Symonds Street, took the matter in hand, got trustees appointed from the several communions interested, and commenced operations…. We regret to hear that in some cases where the trustees had a right to expect substantial pecuniary aid – owing to the fact that that persons concerned had many of 'their dead' lying there, and had enclosed considerable areas of ground – they have met with no response to their appeal. ('Cemetery improvements' 8 June 1876: 2)

And again, in 1909 in the Auckland Star:

> Neglected, desolated, and devastated, the Symonds Street Cemetery, situated almost in the heart of the city, and the resting place of some of New Zealand's greatest pioneers, soldiers, and leaders, is a disgrace to Auckland. … The constructive works in connection with the new Grafton bridge of course led to the removal of a number of bodies, and the moving of the headstones, but the state of disorder referred to is to be found in every part of the cemetery on the eastern side of Symonds street; and the graveyard, which should be a place of historic interest, is an unkempt wilderness. ('The forgotten dead' 29 July 1909: 6)

These details were discussed in class to familiarise students with the history of the Cemetery and prompt them to think critically not only about the data they would obtain and the interpretations they would make, but also about issues of heritage preservation in general and differences in what people choose to preserve and how.

Structure of the Course and Project Coursework

This was an undergraduate course officially titled "Birth, Death, and Disease: Anthropological Demography" (ANTHRO 337) with an enrolment of 40 students. However, I also had five postgraduate BA Honours students taking a Special Studies version of the course (ANTHRO 739), with a modified curriculum and assessments (see Appendix). A key aspect of the course was students learning how to collect, analyse, and present demographic data.

Prior to the start of the course, I was required to file a Field Activity Plan detailing all aspects of the off-campus activity and plans in place in case of emergency. Though the Cemetery was located only a few short blocks from the main campus in the city centre, there was still detailed planning involved. The first visit was an optional class orientation walk-through, followed by data collection coordinated by denomination section groups. There were particular concerns about possible injury due to the Cemetery's steep outlook and overgrown areas (see Figure 2), as well as the winter timeframe of the course. I developed a short list of health and safety guidelines for students to follow as they engaged in data collection at the Cemetery in July and August of 2016:

1.   Do not go alone (in pairs at minimum).
2.   At least one person in the pair or group must carry a cell phone.
3.   Conduct your data collection during daylight hours only.
4.   Wear appropriate footwear and clothing – e.g. shoes with good treads, as the ground is uneven and may be slippery in wet weather.
5.   Do not attempt to collect data from tombstones where it is unsafe to do so (e.g. on steep slopes or into the bush).

Only specific demographic information was collected, rather than additional inscriptions or other details such as materials used or condition of the grave or grave marker. Students were asked to record (as far as possible): name, gender (inferred from name and other info such as "wife of…"), age, dates of birth, death, and burial, and place of birth.

Figure 2. View of graves on one of the slopes within Symonds Street Cemetery in 2016. Photo by author.

Similar to Baldry et al. (2011), in order for the work to be useful to both the students and future users of the data and results, a graduated series of assessments was designed in order for feedback at multiple stages prior to final submission of reports – i.e., for each weekly computer lab and for the preliminary report (for the undergraduates) and the literature review (for the postgraduates) (see Tables 2 and 3). Critical reflection and comment were also required from each student on their weekly labwork, as reflection has been identified as an essential aspect of both successful project-based learning and community service learning (e.g. McLaughlin 2009).

Table 2. Phases of the Symonds Street Cemetery Project for 2016.		
	Actions	**Assessment and value**
Phase 1	Collect demographic data from headstones in your denomination; create Excel database.	Part of 20% labwork mark
Phase 2	Demographic analysis of existing headstones in assigned denomination (materials & methods and results so far) and annotated bibliography of additional contextual sources.	First report - 1,000 words plus tables/figures (15%)
Phase 3	Comparison of data/profile from first report with data/profile of all known burials in that section (from online database). Discuss findings in light of historical and theoretical literature. Write up final report in scientific style (abstract; intro; literature review; materials & methods; ethics; results; discussion; conclusion; references; appendices).	Final report – 1,500 words plus tables/figures, references, and appendices (25%)

Table 3. Division of Symonds Street Cemetery Project for ANTHRO 337 and ANTHRO 739 students in 2016.

Class	Data collection (in teams)	Data analysis and assessment (individual)	Division of work	Outcome (public)
ANTHRO 337 (40 students)	Tombstone data from Cemetery today (Anglican, Presbyterian, and Wesleyan sections only).	1. Demographic profile of existing tombstones in one denomination section (assigned) = first report. 2. Comparison of data/profile of assigned section based on existing tombstones with data/profile of all known burials in that section (from online database) = final report.	Data collection and analysis divided by student surname. Data collected in teams and shared with class.	Best final reports for each section compiled for Auckland Council.
ANTHRO 739 (5 students)	Data from online database (1950s transcriptions, burial records, etc.). All sections.	Based on development of own demographic research question. Can use current tombstone data, online database, or combination, but expected to bring in additional information (e.g. Census). 1. Literature review in lieu of first report. 2. Final report to include the full analysis and discussion in relation to lit review. 3. Presentation	Data collection by surname of buried individuals, divided among students.	All satisfactory reports included in compilation for Auckland Council.

Student Feedback from Course Evaluations

In the final weeks of the course, students were invited to complete an online summative course evaluation, known at the University of Auckland as SET (Summative Evaluation Tool). The SET report was generally positive, with an overall course quality mean rating of 3.94 ± 1.16 (out of 5). Students were asked whether they 'strongly agreed', 'agreed', 'disagreed', strongly disagreed', or were 'neutral' on a series of statements. The results were reported in terms of what percentage 'generally agreed' (agreed or strongly agreed), 'generally disagreed' (disagreed or strongly disagreed), or were neutral. Of the 45% of students enrolled in the undergraduate course who submitted an evaluation, 77.8% generally agreed that the course helped them to develop their thinking skills "(e.g. framing an inquiry, critical analysis, problem-solving)", with 22.2% neutral. 77.8% generally agreed (22.2% neutral) with the statement "I found this course intellectually stimulating." The lowest scores (55.6% generally agreed, 16.7% neutral, 27.8% general disagreed) were received in response to the statement "I was satisfied with the quality of the small group teaching… associated with this course," reflecting the dissatisfaction of some students with level of instructor support available in computer lab sessions (one tutor hired as a lab demonstrator for the two lab sections).

Unfortunately, the course evaluations did not provide any indication of what aspects of the project or the service learning approach were especially beneficial or challenging or unsatisfactory from the students' perspective, as no students commented on this directly. Instead, respondents focused on the traditional aspects of the course: assessment structure (e.g., the length of reports and midterm test), readings, class discussions, lectures, feedback provided on assessments, and computer lab support. In retrospect I should have been more specific about the role of the service project in their learning, and prompt students to reflect on this directly. In future, I will ask specific questions about the project/service learning aspect on the SET evaluation or in a separate evaluation/feedback structure.

As described above and in additional written comments on their SET evaluations, some students expressed dissatisfaction with the level of instructor support available during computer labs. Other students felt the labs were the most useful aspect of the course and saw the combination of step-by-step instruction sheets and one tutor as sufficient. This points to a wide variety/disparity in the background of students entering the course in terms of previous experience with Excel and with statistical analysis, indicating a need to know from the beginning of the course (if not before) what skills and experience students are entering with and where additional support is needed.

Project Benefits

While traditional PBL calls for small courses, and undergraduate research placements and capstone courses are often restricted by GPA and other criteria, a hybridized project-led PBL approach can allow for a greater range of students to experience conducting original research (see discussion in Watson, Willford, and Pfiefer 2013). Certainly, one major pedagogical benefit of the Project was the opportunity for students to experience working with complex data. However, this could also be considered a challenge. As I marked their assessments through the various phases (Table 2), I found that many students struggled to grasp many of the complexities of the data and the interpretative limitations, particularly the idea that they might not be able to determine the 'real' demographic patterns they wanted to see in the data (at least not in a straightforward way). It was an important teachable moment about limitations of data and how complex and difficult it can be to try to use cemetery data to make demographic inferences. For example, students needed sort out and consider multiple layers of potential differential representation and inclusion, including:

1. those who lived in Auckland at various points in time;
2. those who died and were buried in Auckland;
3. those who were buried in SSC rather than elsewhere;
4. those whom we know were buried in SSC (through burial registers, gravestones, newspapers, et cetera);
5. those who received commemoration (inscribed gravestones); and
6. those whose gravestones survived (through construction disturbance, weathering, vandalism, etc.) to be accessible and legible in 2016.

This is not just a problem with students new to the topic – researchers have also been criticised for their attempts to use commemorated populations as representative of biological ones (see University of Leicester Graveyards Group1's 2012 critique of Capelle and Smith 1998 and Foster and Hummel 1995). This, despite the well-known unrepresentative nature of grave monument inscriptions (see Cannon 1995; Dethlefsen 1969; Hopkins 1987; Parkin 1992). By using the online database in conjunction with the data collected from surviving gravestones, this project was able to go beyond the more simplistic types of graveyard studies (based solely on grave monument inscriptions) often used in teaching (e.g. Capelle and Smith 1998). More broadly, such 'authentic' complex contexts also provide the opportunity to convey the importance of historical knowledge and understanding in addressing current problems and concerns (McLaughlin 2009).

Similar to others (Baldry et al. 2011; McLaughlin 2009: 61), I observed greater engagement and enthusiasm from my students when they worked with 'real' data with a purpose beyond their own learning and course grade. Baldry et al. (2011: 93) have noted that this makes students more conscientious, and I saw the same. Some students expressed that they wished they had more time to learn and write longer, more in-depth papers as they found the material so rich and wanted to do more with it. For such students, this sparked a greater interest in pursuing postgraduate study.

Another pedagogical benefit came from the nature of the service-oriented assessment. Students gained experience writing a slightly different style of document than they were used to (e.g., not an essay). As the report was limited to a much smaller word count than their usual essays or research papers, students had to think hard about how to write succinctly and how to present information in other ways (i.e., in tables and figures rather than paragraphs). Additionally, the progressive nature of the assessment in the course emerged as particularly valuable in relation to the research project. The weekly lab assignments specifically calling for reflection allowed for a rapid feedback loop, consistent with Kolb's (1984) experiential learning cycle and Novak et al.'s (1999) Just in Time Teaching strategy (see discussion in Nicholson 2011). A first report followed by feedback before submission of the final report allowed for additional formative feedback, providing students opportunities for corrections and improvement (Blackman 2003; Nicholson 2011). I found this formative feedback especially important given the novelty of the report style for many of the students.

Finally, students benefitted from the connection between their learning of demographic and anthropological theory and methods to service to the local community. Capelle and Smith (1998: 690) describe this (relating of science principles to students' own community) as a "responsibility" of science teachers. Service learning in mortuary archaeology and cognate fields can be especially effective in allowing students to make emotional or social connections to the past, even without excavating and examining the skeletal remains (see Williams and Williams 2007). Some of my students might even have had ancestors of their own buried at Symonds Street (though none disclosed this to me). No longer were my students studying 'infant mortality' or 'child mortality', for example, in the abstract (e.g. as rates), but rather as people with names, stories, and tangible physical locations and memorial markers (see Figure 3). The Project also became an opportunity for students, especially those from outside Auckland or from overseas, to learn more about the history of the city and of New Zealand. This concurs with Kent et al.'s (1997) literature review that noted geography fieldwork undertaken in areas local to their university or college as particularly beneficial for students, being more relevant to them and allowing them to identify with the area.

Figure 3. A child's grave monument in Symonds Street Cemetery, 2016. Photo by author.

Overall, the service learning project aided in the development of skills and experience in multiple areas of the University of Auckland's Graduate Profile (2017), such as the ability "to apply theory, analysis, research and creative skills to solve problems and make reasoned decisions," "to systematically address complex problems," "to be able to learn and work autonomously and ethically," to "think reflectively and reflexively," and "to be able to receive and interpret information, express ideas and share knowledge with diverse audiences in a range of media and formats." Many other instructors have noted that fieldwork is useful in promoting the development of a range of skills, both academic, subject-specific and specialized technical skills and transferable skills, including interpersonal skills (Fuller et al. 2006; Boyle et al. 2007; Hope 2009). Inclusion of a service aspect adds to this potential skill development.

Project Challenges

One challenge was the workload and complexity of the Project. The Project plan required juggling various databases, two groups (ANTHRO 337 and ANTHRO 739), and helping students to deal with the complexity of the data and their analysis of it. The many sources of bias mean that gravestone demography is not truly a "simple" class project, despite arguments of some (e.g. Capelle and Smith 1998). This was originally planned as a single-semester project,

with a project planned for a different cemetery the next time the course would be taught. However, as others have also pointed out, service learning projects are often best accomplished as longer-term efforts over multiple semesters (see Baugher 2009 for a three-semester model), though this is more difficult in courses (such as ANTHRO 337) that are not offered every year. Similarly, the SSCP might have been better planned as a longer-term project that successive cohorts could work on and develop over time, in subsequent years of the same course or in other courses. For example, an archaeology course could use the compiled demographic data and build on it while examining different questions – about motifs, preservation of materials, and so on. This is, of course, still a possibility, though it requires others coming on board.

A potential challenge related to data collection was cultural practices related to visiting burial grounds. For example, Māori students might have faced a barrier to participation resulting from the belief that items carried into a burial site should not be carried out again. Students were able to manage this themselves at their own discretion, and ultimately this did not pose a problem for any individuals in the class as far as I was made aware. However, it is possible that such concerns might have affected students' decisions to register for the course in the first place, and it would be worthwhile to prepare alternative options for students unable to undertake the on-site data collection for any reason (e.g., disability) and to make information about these options available to prospective and enrolled students as early as possible.

One further challenge was facilitating meaningful public engagement in the short period of one semester (fourteen weeks, including a two-week intra-semester study period). In the end, it made the most sense for the 'public' at the postgraduate students' research presentations to be a somewhat limited audience of directly interested individuals from Auckland Council, Auckland Libraries, Friends of Symonds Street Cemetery, and University of Auckland faculty, staff, and students. The students' reports are also now available to the general public via Auckland Council, Auckland Libraries, and on the FSSC website. Auckland Council expressed satisfaction with the outcomes of the Project and a desire for future courses to continue such work, perhaps on another local historic cemetery. Broader public engagement (e.g. with media attention to reach more people) is envisioned for future sessions of the course.

Conclusion

Project-led PBL in the form of service learning presents a useful option for both undergraduate and postgraduate anthropology degree programs, as students often need to do original research to build their CVs but can face barriers to accessing opportunities (e.g., financial costs of field schools). Such experiences can be important for both academic (e.g., fieldwork experience, publication) and non-academic (e.g., applied work experience) career development and can intersect with and build those skills and understandings specified in universities' and individual faculties' graduate profiles. In terms of disciplinary skills, service learning can be particularly useful for teaching anthropological ethics related to working with local communities. For students with interests in archaeology, bioarchaeology, and human palaeontology, service learning can open up opportunities for those not able to or wanting to engage in direct excavation-based fieldwork, as there is significant scope for participation beyond 'digging'. Service learning can thus contribute to accessibility in the discipline.

I found service learning in the context of the Symonds Street Cemetery Project to be pedagogically effective in several important ways. Particularly, it provided the opportunity for students to directly confront the complexities and difficulties associated with demographic reconstruction, especially in a colonial context, using 'real' data. The experience demonstrated to me that good service learning projects should push students and public to consider biases and disturbances rather than uncritical or simplistic interpretations. It was challenging to manage the workload for both students and instructor, resulting compromises in some areas – and the feeling that the Project was not going far enough. There were other challenges such as safety concerns, some of which were general concerns relating to any off-campus activities and some of which were specific to the Cemetery site and its particular location and topography, but none that suggest significant barriers to future work.

In considering what I would do differently and what I would suggest to others, firstly I did not conduct a post-experience survey (as suggested by McLaughlin 2009) that specifically targeted student feedback on the service learning aspect of the course. While a summative evaluation was done, it was the standard one used by the University and in retrospect I should have included Project-specific questions in order to gain more useful responses. Secondly, PBL use in a traditional curriculum (i.e., when students are not used to PBL or active learning) requires a greater degree of instructor support (Fukuzawa, Boyd, and Cahn 2017). I found the hybridized, structurally-scaffolded format largely successful, but in future would prepare more for uneven student support needs, particularly in regard to computer labs and in the early weeks of the course as students become accustomed to the course structure.

While traditional PBL calls for small class sizes, and undergraduate research placements and capstone courses are often restricted by GPA and other criteria, a hybrid project-led PBL approach can allow for a wider range of students to experience conducting original anthropological research (see discussion in Watson, Willford, and Pfiefer 2013). For instructors wanting to expand active learning and PBL beyond course labs or to incorporate a service component, but also needing to teach new content or dealing with a medium (rather than small) class size, a hybrid, structurally-scaffolded project-based approach could be a productive option. More research, discussion, and publication of instructors' and students' experiences with such approaches in anthropology specifically, and in a greater range of contexts, would help to improve teaching and learning in our discipline.

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Appendices

Appendix 1. Abridged course outline for ANTHRO 337 (Birth, Death, and Disease: Anthropological Demography), University of Auckland, Semester 2, 2016.

Description
Examines how human populations change over time, what factors underlie patterns of disease and death, and why demography is so important to the study of epidemics. The course will explore the use of demographic methods and theories of demographic and epidemiological transition to examine fertility, morbidity, mortality and migration from an anthropological perspective, with a particular focus on infectious disease dynamics.

Course goals and outcomes
1. Understanding of the theoretical basis of demographic and epidemiological analysis in Anthropology
2. Ability to employ basic methods of demographic analysis in original research, both independently and cooperatively
3. Contribution to preservation of Auckland heritage and understanding of local demographic and cultural history

Learning assessments

Assessment	Percentage (%) of final grade
Labwork*	20 *Submission of 7 out of 10 lab outputs mandatory for passing grade in course
First report – 1000 words	15
Final report – 1500 words	25
Midterm test (1 hour)	15
Final exam (2 hours)	25

Schedule

Week	Topic	Assessments Due
1	LECTURE: Introductions and course overview *NO LAB FIRST WEEK – OPTIONAL CEMETERY TOUR*	
2	LECTURE: Historical cemeteries as sources of demographic data LAB: Database construction and data entry	Lab output #1
3	LECTURE: Evolution and demography LAB: Data entry	Lab output #2
4	LECTURE: Archaeological demography and palaeo-demography LAB: Complete data entry, check for errors and consistency	Lab output #3
5	LECTURE: Fertility LAB: Age at death distributions and histograms	Lab output #4
6	**1st hour: MIDTERM TEST** LECTURE: Migration LAB: Mortality pyramids	Lab output #5
	Mid-semester study period (2 weeks)	
7	LECTURE: Demographic and epidemiological transition theory LAB: Chi-square	Monday - First report due Lab output #6
8	LECTURE: Mortality by cause and the McKeown Debate LAB: Presenting data in tables and graphs	Lab output #7
9	LECTURE: Measuring health and disease LAB: Data analysis for research project	Lab output #8
10	LECTURE: Sex, gender and health: Sex differences in morbidity	Lab output #9

	and mortality	
	LAB: Troubleshooting on research project	
11	LECTURE: Ageing and longevity; Uses of demography today: planning for the future	Monday - Final research report due
	LAB: Census data	Lab output #10
12	Presentations from 739 students	
	NO LAB – open office hours instead	

Appendix 2. Abridged course outline for ANTHRO 739 (ANTHRO 337 as Special Studies)

This Special Studies course follows the 337 course outline, with the following modifications:
In addition to lectures, readings, and labs, and in lieu of the midterm test and final exam, postgraduate students will complete a literature review on an aspect of Auckland's demographic and epidemiological history, which will relate to each student's course project topic, and will give a conference-style (15 min) presentation to the ANTHRO 337 class. We will also meet bi-weekly to discuss progress on the research projects.

Coursework breakdown:

Assessment	Value (% of final grade)
Labwork	30
Literature review (1,500 words)	25
Final project report (2,500 words)	35
Presentation (15 mins)	10