

Project Based Learning and Community Based Learning – Promises for Political Science
and Higher Education

Kelly A. Clancy, PhD
Nebraska Wesleyan University

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kclancy@nebrwesleyan.edu

Abstract:

Experiential learning is an exciting way for political scientists to show students the immediate relevance of the work they are doing, as well as to use our colleges and universities as a venue for engaging with and enhancing our communities. This paper explores the possibility of using project-based learning in political science classrooms as a way to enhance experiential learning. Project-based learning focuses on using projects as a way to structure classroom experiences. Projects invite students to collaborate in teams on authentic, open ended problems, conducting research and sharing the outcome with significant stakeholders. The goal of the paper is to: a) explore the possibilities of project-based learning for social science in general, and political science in particular; b) offer an assessment of the ability of project-based learning to complement more traditional forms of experiential learning such as service learning. This paper uses two courses as case studies to answer these questions. In the first course, a first-year interdisciplinary seminar on Justice, students engage in 20 hours of service learning with Community Action Partnerships. In addition, their course work is organized around mini projects given them to the agency, where students explore questions such as whether lending circles would work in this community, and whether abandoned big box stores could be converted into public housing to help address the housing crisis in the area. The second class is an elective course on Political Activism in which students take on a project related to organizing in the community, such as exploring whether 16 year olds should be able to vote, pressuring the university to go carbon neutral, and organizing in support of undocumented students. These two courses provide a foundation for discussing the future of project based learning in political science classrooms.

Introduction

How can higher education in general, and the liberal arts in particular, maintain relevance in the 21st century? Political science has the potential to help envision the answer to this question: this paper explores how project based learning (hereafter PBL), particularly when paired with community engagement or service learning, adopting innovative pedagogical techniques to connect students to their communities and deepen their understanding of citizenship and democracy, facilitating knowledge and skill acquisition as students do community engaged work. Project based learning is also scalable. Organizing a social science curriculum around PBL has the capacity to transform higher education, creating a capacity for students to connect liberal arts, humanities, and social sciences to the broader public, and to think of education not in terms of grades or

skills in isolation, but instead in terms of the way that higher education can be partners with the community.

Most of the literature about PBL in higher education focuses on stem/science and society – which leaves an exciting area of growth for exploration in the social sciences. As we look for new ways to engage our students, having them research and practice citizenship for an entire semester seems like one promising avenue. Additionally, within political science, there are endless possibilities for how to design projects in terms of theme, impact, and outcome.

This paper provides a case study of how Nebraska Wesleyan University, a small liberal arts school, has begun to develop curriculum at the intersection of service learning and project-based. In particular, this innovation has occurred in the political science department and in the Justice Thread, which is an interdisciplinary program that explicitly engages students in community service, PBL, and social justice through classroom and community-based work. I've scaffolded service learning and project-based learning throughout the curriculum, developing a series of three courses that engage political science students and students from across the university in the practice of learning about social justice through experiential learning.

This paper has two goals. First, to provide a case study for scaffolding Project Based Learning across the curriculum at a small liberal arts school. The second is to present a model for integrating service learning and PBL in single classes, particularly in political science. Finally, I explore institutional and curricular approaches to supporting this approach to experiential learning, and advocate that future literature on PBL focus on the meta details of project delivery as well as the content details of project design. The paper

proceeds in three parts: the first section is an exploration of what PBL is, varieties of PBL. The second section looks at evidence for PBL in political science, particularly in terms of its potential for deepening civic engagement. The third part of the paper applies these models to our curricular and pedagogical innovations. The final section looks at ways forward, including best practices for supporting faculty and possibilities for assessment.

Part one: Why Project Based Learning

Project based learning holds a lot of promise for higher education. Kolodner et al. (2003) noted that active learning strategies like PBL engage students as researchers, which enables them to learn how to ask important questions; design and conduct investigations; collect, analyze, and interpret data; and apply what they have learned to new problems or situations. There is a major focus on teaching “21st century” skills of communication, negotiation, and collaboration (Bell, 2010). This modern focus is complimented by its historical roots; Mergendoller, Markham, Ravitz, and Larmer (2006) trace its roots to John Dewey’s constructivist approach to education, the way in which cognitive psychology has contributed to the way that knowledge is gained through exploring problems, and the success of revamping medical school curriculum to focus on project based inquiry around puzzling medical cases.

PBL has primarily been used in K-12 education, and there are a variety of insights in terms of implementation and assessment. (Bell, 2010; Halvorsen, Duke, Strachan, & Johnson, 2018; Tamim & Grant, 2013)¹. As J. S. Lee, Blackwell, Drake, and Moran (2014) note, “While progressive K–12 schools have begun using PBL as an effective instructional

¹(For a particularly fascinating look at project based learning in a K-12 setting, see Paulette Koss’s dissertation about project based learning in a juvenile detention facility (Koss, 2015).

model, higher education has been much slower in adopting project-based learning, despite original work with inquiry processes that has occurred in colleges and universities” (np). Thus, the evidence of PBL’s success in higher ed, as well as case studies or models for how to implement across the curriculum and in specific courses, are much scarcer than literature on K-12. As Savin-Baden (2000) rightly notes, PBL has the capacity to deliver the goals of liberal education and professional education, which means it should be better developed in higher ed.

What is Project Based Learning

This section defines project based learning and explores the scope of the varieties of PBL.

Mergendoller et al adopt the following definition: “a systematic teaching method that engages students in learning essential knowledge and life-enhancing skills through an extended, student-influenced inquiry project that is structured around complex, authentic question and carefully designed products and tasks” (p. 587). Thomas (2000)’s systemic review of the literature on PBL identifies 5 defining features: 1. PBL projects are central, not peripheral to the curriculum – projects *are* the curriculum; 2. PBL projects are focused on questions or problems that “drive” students to encounter (and struggle with) the central concepts and principles of a discipline; 3. Projects involve students in a constructive investigation; 4. Projects are student-driven to some significant degree; 5. Projects are realistic, not school-like.

PBLWorks (formerly the Buck Institute for Project Based Learning) offers the “gold standard” of PBL [Figure1]: These reflect the 6 As that the Buck Institute presents as key – “The Six A’s require that 1) the project presents an *authentic*, real-world challenge; 2) the project is *academically rigorous*, demanding breadth and depth; 3) learners *apply learning*

by using high- performance skills such as working in teams, communicating ideas, and organizing and analyzing information; 4) learners engage in *active exploration* by gathering information from various resources; 5) learners interact and make *adult connections*; and 6) various formal and informal *assessment practices* are embedded within the unit” (J. S. Lee et al., 2014). Crucially for the purposes of political science, PBLWorks add a public product and critique and revision/reflection to the model offered by Thomas. Thomas cites a variety of literature that indicates gains in standardized testing, problem solving, student understanding of subject matter, skill development, social skills such as problem solving and group work as evidence that academic gains are achieved through PBL.

[Figure 1: PBLWorks model of the Gold Standard of PBL]

For example, Rosen (2018), in her articulation of using project based learning in her research methods class (discussed further below), argues that “by building a semester-long project around a single question that is relevant to students’ lives outside of their major... Any project that results in students characterizing their research methods course as fun and clamoring for more courses—while also learning the relevant material— is worthy of consideration by instructors” (177).

There is an emerging consensus in the literature on what PBL is, although the boundaries between it and other interconnected terms referring to “constructivist-inspired pedagogical orientations” (Mergendoller et al., 2006) are less clear. These terms are sometimes used interchangeably and sometimes not. Examples include challenge based learning (Johnson, Smith, Smythe, & Varon, 2009), problem based learning (Barron et al., 1998), place based learning (Powers, 2004), design thinking (H. K. Lee & Breitenberg, 2010). Emblematic of the lack of distinction between these terms is the lack of consensus

over whether problem is a subset of PBL or visa versa (Mergendoller defines problem based learning as an example of PBL, whereas Lee defines PBL as falling under the umbrella of problem based learning). Mergendoller et al identify 13 separate project based learning varieties (figure 2), of which some are more easily applicable to political science, including community study, foxfire approach, museum model, senior projects (adapted into capstones in higher ed), service learning (though we distinguish between this and project based inquiry), and problem based learning.

[Figure 2: Varieties of Project Based Learning – Mergendoller et al, 2006]

Justification for Project Based Learning

Helle, Tynjälä, and Olkinuora (2006) identify four motives that faculty have for adopting PBL (faculty or administrators): professional motives (to train students for work in a given profession), fostering critical thinking, pedagogical motives, and democratic or humanitarian motives (related to community based learning and civic engagement); I would perhaps add two more: the interest in revitalizing higher ed/the liberal arts, and explorations in how to design inclusive education that is appropriate for a diverse student population. Professional motives related to medical education initially drove the innovation of PBL, and have driven engineering education as well.

Enhancing student learning

In terms of cognitive psychology, Helle et al. (2006) articulate six ways that PBL has the capacity to improve student learning: 1. problem orientation, 2. construction of a concrete product or artifact, 3. student-centered learning, 4. contextualized learning, 5. linking theory and practice, and 6. motivation, agency and “ownership” of the learning

process. (See also (Blumenfeld et al., 1991) on cognitive motivation for learning and PBL). Additionally, (Wenger, 2014) and other researchers have noted the potential for PBL to enhance information literacy, as students engage in iterative interactions with librarians and other sources of information over the span of their project as they discover the need for data and other information. Cook and Walsh (2012) provide an example of an intro to American Politics course co-designed by an instructor and a librarian that integrated information literacy into the different components of the project students were assigned. They found that this approach both increased student interest and raised information literacy skills.

Diversity

One of the major potentials of PBL is to create an inclusive, student centered approach that ideally would attract more diverse students and set them up for success. Another critical aspect of the conversation over assessment is the way in which students of different backgrounds and learning abilities would be affected (see, e.g., (Filippatou & Kaldi, 2010). For example, although the iterative, non-time-intensive nature might help certain students, it definitely can hurt other students coming in with different research, reading, and writing basics, as well as ability to collaborate. Randy Bass (lecture, WPI), and others have pitched PBL as a tool that lends itself to integrative, inclusive education (as opposed to disintegrative and exclusive). His work at Georgetown has shown how PBL better prepares first year students from non-traditional backgrounds to excel in college classrooms. Yet, Leggett and Harrington (2019)'s review of the literature shows that there is not sufficient evidence about the actual impact of PBL on student learning for students of lower socio economic statuses. This points to the need both for more systemic

investigation of the issue, as well as focus on how to design projects so that they take into account the unique needs of a diverse student population. For example, Hosman and Jacobs (2018) point to the potential of short term PBL/international field work experiences to expand the possibilities of study abroad to diverse students because they are more affordable options than semester or summer long programs.

The final categories -the potential for PBL to expand civic engagement or to deepen democracy the potential to enhance higher education, and how this could help appeal to a liberal education, is the focus of the remainder of the paper.

Part two: Political Science and Project Based Learning

As (Helle et al., 2006) note, advancing humanitarian or democratic goals is a crucial benefit of PBL. I argue that this is particularly germane to political science because of the integration of the field into debates over civic engagement domestically and internationally, and because of the relative low cost and multiple options of civically minded projects that can be scaled based on time, course level, etc. The democratic potential of PBL can be explored on both a pedagogical level (how are we creating better, more engaged citizens?) as well as on the level of higher education (how can higher education deepen its commitment to community, and how can PBL play a role in that?).

Project Based Learning in Political Science Courses

Research methods is an ideal place to incorporate PBL; Nebraska Wesleyan has integrated a version of Rosen (2018)'s Best x in Town project into our research methods sequence, attempting to have the research methods class map onto the research methods process itself (Clancy and Bauer, forthcoming). I will admit, however, that one of the major shortcomings of the way that we teach it, and perhaps of group projects more broadly, is

the lack of any metacognitive/meta-pedagogical work on *how* to coach group projects. This, Helle et al. (2006) and colleagues point out, is a critical function of how to measure the impact of PBL – is it instructed by an instructor trained in PBL, and are students engaging in the process willingly. Rosen’s article, although it articulates the project and student feedback, does not provide an articulation of how to *teach* this kind of project.

PBL can also be used to conjoin multiple political science classes; Vandenhouten et al. (2017) describe a project they term the Global Summit, where “The Global Summit on Sustainability (GSS) is a multiclass, semester-long role-playing simulation of United Nations policymaking that illustrates the benefits of creative and critical problem solving provided through a PBL experience. The GSS connects two large (sixty students each) general education courses, American Government and Global Politics. Students, in teams of six, role-play representatives of one of several countries in a summit designed to adopt a global resolution on sustainability” (126). Another example they give has a group of students role play as campaign managers.

Hunter and Botchwey (2017) describe an innovative project in an urban planning class that had college students and elementary students work on parallel, but interconnected, projects. They write: “The problem presented to the undergraduate students was to find a way to engage a segment of the population in the civic life of the community, specifically directed towards its neighborhoods. Given freedom to define both the specific problem and the problem-solving process, the undergraduates settled on two student-driven learning goals. The first goal was to develop a curriculum that would teach elementary students the principles of healthy neighborhoods and give them opportunities to apply what they learned (Botchwey et al. 2014). The second was to create a board game

that would teach elementary-aged students the principles of a healthy neighborhood. In keeping with project-based learning, the elementary students were presented with the driving question. "How healthy is your neighborhood, and how can you improve it?" This article maps the way that the two projects evolved in parallel with each other, meeting instructional goals of both college and elementary school instructors. The project also connected both higher ed and elementary students in civic engagement:

Through the civic process, the young students served as a bridge between the neighborhoods in their community and city officials who could address neighborhood quality issues. Through their presentations the children informed city officials of broken curbs, deteriorating sidewalks, and the need for a crosswalk at a dangerous intersection. While civic engagement was not a new experience for some of the university students, particularly for those matriculating in the urban planning program, introducing community members, and especially children, to the neighborhood development process was new for them. The work with the elementary students was a new form of authentic engagement for all persons involved, and the project not only had the potential to affect the future civic lives of the children but also presented the opportunity to make an immediate difference for all of the citizens living in the community.

do Amaral (2019) offers a systematic qualitative analysis of a community based learning project in Sao Paulo, Brazil, From 2014 to 2017, the course was taught 16 times, involving 379 students during which time 82 projects were completed on behalf of 20 community partners. This combination of community based learning and PBL allowed students to work on behalf of community partners. While the study found that doing good motivated students to work harder, the real life nature of the problems were messy and often interfered in their motivation, particularly over such a short period of time. However, the instructors felt that the authenticity of these complex learning experiences ultimately positively impacted student learning.

There's a good deal of support for this kind of learning in our neighboring field of urban planning and environmental education. Powers (2004), who writes about environmental place based education, notes "A broader hope on the part of the educators is to "tear down" school walls so that the community becomes integral to all facets of student learning—that is, that the school is open and inviting to the community and the community welcomes student learning occurring in many dimensions" (18). This is particularly applicable in terms of enhancing civic engagement – "Because a key component of many place-based education endeavors is the opportunity for civic engagement, the findings of a growing body of research into the effectiveness of service learning also contribute to the understanding of how place-based education works. The findings of several studies demonstrate powerful linkages between grounding the learning experience in the local context, enhanced student participation in community matters, and increased student engagement in their academic studies" (18).

[Figure 3: Place based education and civic engagement (In Powers 2004)]

Global examples

Project based learning is a particularly exciting possibility for implementing on an international level as political scientists look to deepen our students sense of global citizenship and engagement. Hosman and Jacobs (2018) describe a "a team-based, project-focused, multidisciplinary course with an international service learning travel component...Over the course of a quarter, students worked in teams to design and build solar digital libraries to deploy in the field in collaboration with the U.S. Peace Corps" (473). Feeley (2014) investigates the impact of PBL on developing global citizenship within upper

level political science classes through completion of a policy project paper. Dauletova (2014) offers analysis of for why Oman might be uniquely suited for PBL in the Gulf Region; both of these examples, as well as a plethora of evidence on PBL from the UK (see, e.g., (Savin-Baden, 2000)), offer exciting possibilities for cross-cultural collaboration, comparison of PBL in different cultural contexts, and PBL during service learning. All of these examples – PBL as a supplement or component of study abroad, as a project in an international class, and at international sites, provides insight into the myriad possibilities that exist to pursue PBL.

Democratic promise of PBL and pedagogy

There are a lot of attempts to revitalize civics education, including incorporating active or project based approaches (see, e.g., Pope, Stolte, and Cohen (2011)'s discussion of action civics as an inquiry and democracy driven approach to civics education).

Krueger and Schachterle (2002) reflect on what might make a project “useful” or deepen civic engagement: “Going back to Barber and Battistoni’s (1993) sentiment that Americans do not have the civic connections they once had and therefore their interest and knowledge to express their political demands continues to atrophy, can we really expect these students to understand the implications of their work? Perhaps what they are need the tools and venue to reflect on their social contributions. This is where the practice of reflection might be useful.”

Rejuvenating higher education’s civic mission

Furco (2010) notes that, although most higher education establishments in the United States have a focus on a public or civic mission, higher education is still routinely criticized for being disconnected from society or perpetuating an ivy tower, as well as its inability to

keep up with how society changes. Higher ed in general, though perhaps not political science in particular, has engaged in public outreach through community based initiatives, public engagement, service learning, etc. As Furco notes, community partners relied on a long standing commitment from higher ed. “For community partners, the lack of long-term commitment from higher education was a point of frustration. Community partners recounted stories of having to invest much time and energy to build a collaboration...only for the affiliated college or university to end the partnership when the funding...ended” (Furco, 2010, p. 378). Furco also cites community partner frustration with the academic-centered nature of goals from the partnership, and of the high cost of supervising interns and service learning students. Thus, the model of an engaged campus shifts the philosophy of higher ed to one that engages the entire campus as a community partner. Furco writes:

The emergence of the new philosophy challenges the traditional view of community and public engagement. No longer is community-engaged work seen as something that fulfills only the public service and outreach component of higher education’s overarching mission. Rather, public engagement serves all parts of the tripartite mission, including facilitating institutions’ achievement of their research/discovery and teaching/education goals...In this regard, public engagement can be used to advance the public service, teaching and research components of the higher education’s tripartite mission. Herein lies the essence of an engaged campus” (Furco, 2010, p. 381) [see figure 4].

How can this model be adapted to create a theory of change for PBL in political science?

[Figure 4 – The Engaged Campus in Furco 2014]

Developing a sense of how community-engaged research, community-based capstone experiences, or participatory action research could all be part of the way that PBL is integrated into political science. As Furco notes:

In community-engaged research initiatives, members of the community participate in the research enterprise not as research subjects, but rather as valued research

advisors, partners or co-investigators. Community partners can help identify appropriate research questions to ask, determine which instruments and measures might resonate best with particular populations, provide feedback on the procedures of data collection, offer assistance in analysing data, and provide important perspectives in the interpretation of findings and implications for future research and practice. Their understanding of the community and its issues provide important context and insights that enrich research conducted in the public interest. As partners in the research process, community members can help investigators provide access to hard to reach populations, secure greater trust and buy-in for research from members of vulnerable or marginalised populations, and bring greater on-the-ground legitimacy to the research investigation. (Furco, 2010, p. 383)

Conclusion

Project based learning holds potential for across the political science curriculum, in classes about US and International politics, in the classroom and in the community or the broader global field. Given the centrality of democracy and civic engagement to the field of political science and higher ed more broadly, there are multiple exciting avenues for pursuing PBL. If gold standard PBL involves long term, authentic projects, preferably with an outside audience, we can begin to generate a non-exhaustive list of what those might look like.

Project potentials- campus organizing, work with governmental or non-governmental organizations, creating digital archives of various artifacts, designing (social) media /awareness campaigns, lobbying days, rallies, dialogues, compiling datasets, designing and administering surveys, hosting lobby days or other events, organizing dialogues.

Many of these would require the deep research and knowledge that is expected in many political science classes, but can be paired with the expectation for active learning. The next section provides one model, using examples from the implementation of PBL at Nebraska Wesleyan University.

Part Three: Project Based Learning at Nebraska Wesleyan

In 2018, the administration at Nebraska Wesleyan became interested in making PBL a more central part of the curriculum. Much of this initiative built upon synergies already happening in individual courses and departments at NWU; by the administration taking an active interest, they put money into training faculty for PBL initiatives, as well as strategic planning to identify spots that PBL might be good fits. 1) This included developing a new “thread,” the “Justice Thread.” Threads are interdisciplinary paths that students take as part of the general education. The Justice Thread was designed from the beginning to be experiential, and have students engage in service learning at the beginning and a capstone PBL course at the end. 2) To scaffold PBL into various courses, including a political science course called Making Social Change that I teach. 3) To revamp our first year liberal arts seminar to be PBL instead of relying on a research paper model. The next sections of this paper review each of these initiatives.

Justice Thread

First, with funding from the Cooper Foundation, Nebraska Wesleyan and Community Action Partnerships created a “core course” for the thread, an interdisciplinary course where students complete 20 hours of service learning at Community Action. Students are organized into “tracks,” where they specialize in the work of projects such as financial well-being, early head start, emergency services, supportive housing, and foster care support. In the classroom, students engage in conversations about poverty and privilege, and are encouraged to constantly “close the loop” between classroom material and their experience at Community Action. The course was developed with intense work

from me the lead instructor and curriculum designer, Shari Sorenson, who is NWU's service learning coordinator, and Georgeann Roth, the head of volunteer services for Community Action. After the first semester in spring of 2019, there were a series of conversations about how to enhance the course for the second group of students, and a series of changes were implemented on both the classroom side and the organizational side: this included coaching students and CAP supervisors on how to contextualize for students what they were observing, creating three dialogues between students and CAP supervisors over the course of the semester about course content (topics included "why are there poor people in a rich society?" and "race, gender, and poverty").

The second component of the NWU-CAP relationship focused on scaffolding project based learning into the curriculum. In February of 2019, Rick Vaz, the head of PBL for Worcester Polytechnic Institute, led a two-day workshop on Project Based Learning at NWU, which was attended by me, Shari Sorenson, and Georgeann Roth, as well as other faculty and administrators from NWU. Over the summer, Shari and I represented the team at a weeklong intensive PBL workshop hosted at WPI. This professional development equipped me to begin incorporating PBL into her courses to enhance service and experiential learning. In the second iteration of the class, students worked on mini projects based on challenges issued from CAP ("would lending circles work in Lincoln," "how can families living at the poverty level save for college," and "what can be done about affordable housing in Lincoln?"). This enabled students to connect three levels of knowledge – first hand experience from their service learning, instructor curated course material, and then independent, project based research, in order to inform their understanding of poverty,

privilege, and social justice. Students researched these questions, working in teams, and then presented “pitches” to CAP supervisors at an end of semester symposium.

A brief narrative illustrates some of the promise. Students in community action largely play shadowing roles, learning how the organization works. The first time we did the class, I was a conduit between the organization and the students, articulating how the students would take their experiences in the field at CAP and put them in conversation with the readings. The second semester, we set up three conversations between CAP and the students, two of which happened over Zoom after students had written short papers. This time, the students were in control of the conversation, asking CAP tough questions about intersectionality (like why they don’t offer targeted services for queer members of the community). The members of CAP were taken aback by the conversation. This semester, their supervisor is having all of them do the same reading our students are doing to be more prepared for the tough conversations. This process – students get more exposure to the “real world,” practitioners get exposure to what higher ed is doing, and there’s a constant effort to close the loop.

Stand-alone courses: Making Social Change: Grassroots Activism and Community Organizing

In spring 2018, I taught a political science elective class on community organizing where students were required to complete 20 hours of service with a grassroots organization. Students volunteered with a variety of organizations like planned parenthood, League of Conservation Voters, etc. The experience was variable, both because of commitment on the agency’s behalf and because the variability in student schedules made it difficult to give them real work to do.

This semester, I developed a project-based Political Science course on grassroots organizing and activism, being taught in the Spring 2020 semester, primarily focused on racial issues in Lincoln; rather than working exclusively with one organization, students are embedded with a variety of community partners working on issues such as raising the profile of immigrant and refugee stories around Lincoln, organizing a social justice literacy event for the Title I middle school in the area, and working on a commemoration of historical instances of lynching in Nebraska.

One of the major differences in terms of the delivery of this class is a focus on how to coach students through the PBL experience. For example, on the first day of school, I had them do a 10 minute thought experiment – if you were asked to explore 16 year old voting for NE, how would you do that? We spent a lot of time brainstorming what they already knew, what they would need to know, how they would get the information, who experts might be, before jumping into the solution. Getting students to focus on the problem definition, and then gather research, and not jump straight to a solution, is one of the harder parts of the project.

Justice: An Introductory Experience

Nebraska Wesleyan University offers students a series of interdisciplinary “threaded” courses, where students take courses from different departments organized around themes such as Justice, Democracy, Public Health, etc. In 2018, I helped to create the Justice Thread, which was designed specifically to offer students experiential learning opportunities. In spring of 2019 and fall of 2019, I piloted the core course, where a select group of first year students participated in 20 hours of service learning with Community Action Partnership, working on tracks such as early head start, financial wellness,

supportive housing, etc. The service learning was paired with classroom discussions and readings about power, privilege, and oppression.

In the fall of 2018, we added “mini-projects” to the course; students continued to complete 20 hours of service learning, but we added a project component. We asked Community Action to give us challenges – after how WPI says they do things, we asked them what they would do if they had one additional staff member. Students were asked to research the feasibility of lending circles in Lincoln, college savings plans for people at the poverty level, and affordable housing. They then shared their research and “pitched” their findings to Community Action.

As expected, there was some variance in terms of the quality of the projects, as well as in terms of what was produced at the end. Another instructor is repeating the mini-projects this semester. In spring of 2021, we plan to pilot a capstone project that is a culminating project for the thread, focusing on issues of justice in the community.

Archway Seminar – transforming the liberal arts seminar into active project based learning

Finally, I am developing the interdisciplinary components of project based learning at Nebraska Wesleyan, where PBL may eventually “bookend” the interdisciplinary curriculum. I am working on a pilot to convert the traditional first year liberal arts seminar to one a project-based course; I will pilot the course in the fall of 2020, with a focus on 100 years of women’s suffrage and voting rights movements around the world. Students will work on the challenge: “Should 16-year-olds be allowed to vote?” I am working with various other actors at Nebraska Wesleyan to set up an assessment of traditional version of the seminar and PBL versions of the seminar using a pre-test/post-test design.

Part four: Lessons learned

This section explores some of the lessons that the literature and my personal experience have provided in terms of facilitating successful PBL. The first section focuses on the macro level of how to build an ecosystem or infrastructure that supports PBL, and the second focuses on the question of how to effectively support faculty in the creation of these projects.

Building a community of support around PBL

One of the conundrums of any type of experiential learning – how can you make this benefit the agency, the institution, and the students most importantly? Having faculty and staff that are committed to regularly offering courses that engage agencies so they can depend on the consistency is a hugely important thing. One key to this is to cultivate long-term relationship with community partners who are interested and able to support and innovate with these types of projects. As taken directly from WPI, we start by asking community partners “If you had one extra staff member, what would you have them working on? What’s a ‘back burner’ project that you’re excited about?”

Additional concerns are about saturation and competency. In terms of saturation, the question is how many projects can a small town absorb? If this model is scaling to be the entire community, it quickly demands an awful lot of potential projects. In terms of competency – although these take less commitment on an agency’s behalf than service learning does, they are relying on some kind of output – if students don’t deliver, then it jeopardizes the agency’s willingness to work with the school in the future. Conversely, not all agencies are created equal. It takes a significant amount of mentoring of the institution

itself to get them to the point where they understand what projects are. If it doesn't work, a student's entire learning experience could collapse.

Assessing civic and democratic impacts

One question I have is the appropriate scaffolding of projects and service learning to deepen empathy and avoid white saviorism that might come with service learning. Ways to alternate and integrate project based and community based learning might be the best of both worlds. One area of interest is how different types of experiential learning create empathy/connection to underserved communities, for instance whether projects might replicate the idea that students are uniquely positioned to solve other people's problems, rather than creating advocates or allies.

Conditions for fostering PBL

This section explores some of the considerations in terms of creating the conditions under which PBL could work. J. S. Lee et al. (2014) examine faculty perceptions of PBL, and find that faculty report that finding a community partner to work within the peculiarities of a semester schedule driven by a syllabus is difficult, but finding one that works is rewarding. Student engagement, particularly in terms of genuine collaboration, was difficult, but was rewarding to see students actively engage themselves in the project. There is also the potential impact on tenure and promotion, including on teaching evaluations, where teachers are often "punished" by students for trying new things or violating their expectations, and for publication expectations, where public scholarship is not often rewarded.

When thinking about integrating PBL on a wider scale, how to scaffold experiences is important, particularly when you're thinking about civic engagement and service learning. Having it paired with service learning at first, where there is a sustained curriculum focused on the dangers of white savior and drive by activism, and then building to a project that extends the capacity of people doing good work.

Based on my experience, effective PBL involves more mindfulness than other types of pedagogical approaches. For example, frequent work to check in on teams and manage team stress and dynamics (WPI has psychologists on staff specifically for managing project team stress). Providing a lot of time in class, with regular checkpoints and coach sessions with access to professors. These also make sure there's some level of student buy in.

One reality of this kind of work, that needs to be taken seriously by institutions if they value it, is the time and resource intensive nature of the project: "It would be difficult to overstate just how resource-intensive these courses are. The time involved in establishing and maintaining partnerships; planning the actual service component or project; establishing an agreement with the partner; recruiting and raising awareness among students about the class; designing the class with the learning objectives in mind and preparing all of the activities; planning the logistics of the trip; fundraising for the trip and any other aspects of the project; and (finally!) running the actual class, all while still maintaining all of the aspects above, is an enormous task" (Hosman & Jacobs, 2018, p. 487).

Another major challenge is that PBL requires instructors to teach at the edge of their experience both in terms of topics, pedagogy, and classroom management. Instead of selecting case studies that the instructor knows well, student led interest and research can head in any number of directions. Project based pedagogy requires a different approach to

structuring courses and assessment. How do you evaluate projects when you're teaching on the edge of knowledge? It also requires a lot of metaskills in terms of team dynamics that most instructors have never been trained in. These all have implications for instructor buy in, course evaluations, etc.

Project based learning requires adjustments and training for administrators, faculty, and students. Mergendoller et al. (2006) quote a teacher who is an expert in PBL as saying "I had to unlearn the idea that teaching was about my content; I had to learn it was about their thinking." Although there are exciting potentials for change, there can major barriers to effectively implementing a project based curriculum – as (Barron et al., 1998) succinctly put it, implementing project-based curricula requires "simultaneous changes in curriculum, instruction, and assessment practices—changes that are often foreign to the students as well as the teachers" (271). In other words, there are significant start up costs for instructors (Ertmer & Simons, 2005).

Supporting faculty

Mergendoller and Thomas (2005) develop a model of "pervasive project management" to describe the most effective role of teachers in supervising PBL, and provide a model for how instructors can think of their role as project managers in the classroom (Figure 4). Based on my experience, effective PBL involves more mindfulness than other types of pedagogical approaches. For example, frequent work to check in on teams and manage team stress and dynamics (WPI has psychologists on staff specifically for managing project team stress). Providing a lot of time in class, with regular checkpoints and coach sessions with access to professors. These also make sure there's some level of student buy in.

[Figure 5 Pervasive Management Activities in PBL (Mergendoller and Thomas)]

Teachers unfamiliar with this type of teaching “are likely to encounter difficulties in all aspects of PBL instruction: planning, implementing, and assessing” (Ertmer & Simons, 2005, p. 3). Kokotsaki, Menzies, and Wiggins (2016) offer six recommendations for effectively implementing PBL into the classroom:

1. *Student support*: Students need to be effectively guided and supported; emphasis should be given on effective time management and student self-management, including making safe and productive use of technological resources.
2. *Teacher support*: Regular support needs to be offered to teachers through regular network- ing and professional development opportunities. The support from the school senior management is crucial.
3. *Effective group work*: High-quality group work will help ensure that students share equal levels of agency and participation.
4. *Balancing didactic instruction with independent inquiry method* work will ensure that students develop a certain level of knowledge and skills before being comfortably engaged in independent work.
5. *Assessment emphasis on reflection, self and peer evaluation*. Evidence of progress needs to be regularly monitored and recorded.
6. An element of *student choice and autonomy* throughout the PBL process will help students develop a sense of ownership and control over their learning (274).

Of course, these take time to do – for higher ed, AAC&U institutes such as the one hosted by Worcester Polytechnic Institute (WPI) is a good way to do this. Although teacher training is

a critical part of the process, Vandenhouten, Groessl, and Levintova (2017) emphasize the importance of institutional buy in and sustained commitment: “Ideally, PBL should be facilitated through team teaching, incorporating faculty members from several disciplines with contribution to make in solving particular interdisciplinary problems (all real-world problems are, by nature, interdisciplinary). It should also incorporate input, including long-term mentoring, from practitioners in the affected fields, and could benefit from use of various teaching formats (face to face, online, and hybrid). In essence, as educators, we should model what we teach through the very process of teaching and learning if we want students to truly internalize the interdisciplinary problem solving. Ideally, students would also have a practical experience outside the classroom following the PBL project to strengthen the newly acquired skills. Yet, team teaching involving liberal arts and professional degree faculty appears to be exceedingly rare...” (129).

Student responses

PBL needs to be student driven and create opportunities for students to get excited about it. One of the reasons that we lose students to social work and nursing is the perception that those are “helping” professions that have a career at the end of them. If we can re-brand political science, and associated fields, as people-focused and skills based – without just a vague promise that they can do any job they want at the end - can improve the major and have a trickle down effect of making the entire curriculum critically examine whether we’re sending students into the world ready to both pursue their vocations and to be the change they want to see.

It's difficult to get students tracked to what the core content of the class might be – it's much easier to direct other types of experiences. How do you make sure they're getting the same level of content? Student engagement, particularly in terms of genuine collaboration, was difficult, but was rewarding to see students actively engage themselves in the project. There is also the potential impact on tenure and promotion, including on teaching evaluations, where teachers are often “punished” by students for trying new things or violating their expectations, and for publication expectations, where public scholarship is not often rewarded (J. S. Lee et al., 2014).

The risk of students punishing their instructors via SETI is particularly acute when research finds that “students struggled to discern their roles and responsibilities in a PBL classroom, especially when it came to accepting responsibility for their learning (J. S. Lee et al., 2014)” Additionally, as Ertmer and Simons note, there are problems with assessment and transitioning students into an active role in their education.

Students need to understand why they're doing this, especially to disaggregate from the normal “group work” they don't love. Why PBL? You can help them unpack the hidden curriculum – draw a line for them between what they're doing and the skills they're using. You can also help them make the skills translate by crafting a line for their resume (perhaps with the help of the career center or people skilled at doing that kind of work). One way to help increase student buy in is by making skills translate. For example, naming PBL as a high impact practice, helping them understand the differences in expectations, and offering to decipher those skills and write a line for their resume.

It's also worth thinking about the start up costs of just doing a one-off PBL – both for students and for the institution. If students know this will be something they do repeatedly

(like writing and speaking) then they might be more willing to invest the time in learning the model and trusting the process.

Conclusion

All of these projects are based around the idea that education can be inclusive, student driven, and benefit the community. By taking the immersive aspects of service learning and combining them with the research and student direction of PBL, we are not only teaching our students to become more globally engaged citizens, but giving them the tools they need to effect change in their communities.

Figures

Figure 1: PBLWorks model of Gold Standard PBL



Figure 2: Varieties of PBL (Mergendoller et al)

TABLE 22.1
Varieties of Project Based Learning

<i>Project Type</i>	<i>Description</i>
Community Study (Gillis, 1992)	Students explore community issues, interview citizens, collect and interpret data, develop a community profile, and evaluate their work.
Design and Technology Experience (Davis, Hawley, McMullan, & Spilka, 1997)	Students apply their learning to a situation or problem by developing a prototype or working model.
Environmental Investigation (Elder, 1998)	Students collect, organize, graph, and interpret real-world data to learn more about the conditions, processes, populations, and life cycles or organisms.
Expeditionary Learning (Berger, 2000)	Students conduct interdisciplinary, in-depth studies of a single theme or topic that emphasizes family or community involvement, and both intellectual and character development.
Field Study (Willis, 1997)	Teams of students address a question, problem, or issue outside of the classroom and present their conclusions and recommendations to an audience outside the classroom.
Foxfire Approach (Wigginton, 1986)	Students interview and document community members' lives and experiences.
Microsociety (Fletcher, 1996)	Students create and run a miniature community within a school.
Museum Model (MacFarlane, 1989)	Students plan, organize, and display their learning about a particular place, person, object, or event.
Early Childhood Education Project Approach (Chard, 1992)	Students and the teacher pose questions that guide their research.
Senior Project (Glasgow, 1997)	High school seniors work on intensive in-depth academic, artistic, community service, or career development projects of their own choosing.
Service Learning (Kinsley & McPherson, 1995)	Students apply skills they have learned in school to carry out work serving the needs of individuals, groups, and organizations in their own community.
Work-Based Learning (Naylor, 1997)	Work-based learning includes a variety of approaches designed to increase students' career understanding and job skills. It has variously been called experiential learning, experience-based career education, school-to-work initiatives, cooperative education, tech prep, youth apprenticeships, coordinated workforce development, job shadowing, internships, and mentoring.
Telecommunications Projects (Harris, 1994)	Students use the Internet to conduct projects that involve classrooms around the world gathering and sharing data, solving problems, exchanging cultural information, or creating products together. Students and teachers communicate using World Wide Web browsers or e-mail or other available tools. Examples include Learning Circles (Riel, 1998); WebQuests (Dodge, 2004) and online science inquiry projects (Feldman, Konold, & Coulter, 2000).
Problem-Based Learning (Delisle, 1997; Lambros, 2002, 2004; Maxwell, Mergendoller, & Bellisimo 2004; Torp & Sage, 2002)	Students, playing the roles of interested stakeholders, investigate and resolve ill-structured problems modeled on those encountered outside the classroom.

Figure 3: Place based education and civic engagement (In Powers 2004)

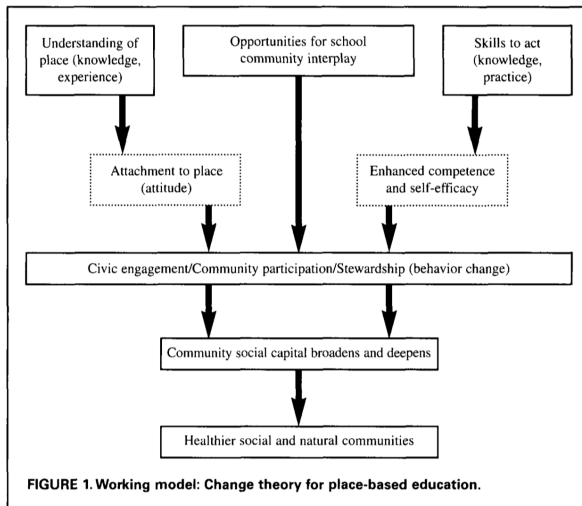


Figure 4 – The Engaged Campus (in Furco 2010)

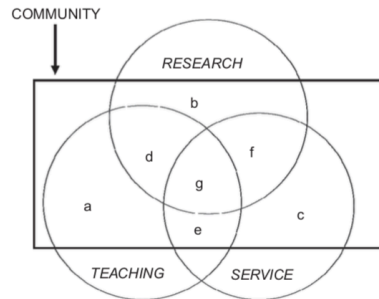


Figure 1. The engaged campus and the tripartite mission of higher education

- a = Community-Based Learning
Teaching/learning that is directly connected to or occurs in the community or field
- Field studies, Internships, Professional Practica, Project-based learning
- b = Community-Based Research
Research activities that are focused on community issues; the research activities may or may not be based in the community
- Community-based research, Social research, Applied research
- c = Community Service and Outreach
The engagement of students, faculty and staff in community-based activities that are designed intentionally to provide a genuine service to the community
- Community service, Volunteerism, Outreach programmes, Community and governmental relations
- d = Community-based Capstone Experiences
Teaching/learning experiences that include a strong research component and are directly connected to or occur in the community
- Community-based capstone experiences, Community-based student research projects, Course-based community-based research projects
- e = Service-Learning
Course-based teaching and learning activities that engage students in the community both to provide a service that meets a community need and to enhance students' learning of the course content
- Academic service-learning, Co-curricular service-learning, Service-based internships
- f = Participatory Action Research
Community-focused or community-based research activities that are designed to directly serve an identified community need
- Action research, Participatory action research
- g = Community Service-based Capstone Experiences
Teaching/learning experiences that include a strong research component and which seek to provide service to the community to address an important, identified community need
- Community service-based capstone projects

Figure 5 Pervasive Management Activities in PBL (Mergendoller and Thomas)

330 MERGENDOLLER ET AL.

TABLE 22.2
Pervasive Management Activities in Project Based Learning

<i>Project Stage</i>	<i>Management Activities</i>
Stage 0 Project Planning	<ul style="list-style-type: none"> • Define project scope, problem and Big Idea • Develop a Driving Question • Select content standards and incorporate simultaneous noncontent outcomes • Plan assessments • Organize resources • Decide on grouping strategies
Stage 1 Project Launch	<ul style="list-style-type: none"> • Stimulate student interest, enthusiasm, and concern • Establish high expectations • Clarify rules, procedures, products, timeline, and grading practices
Stage 2 Guided Inquiry and Product Creation	<ul style="list-style-type: none"> • Facilitate resource use • Help students define tasks and assess progress • Scaffold learning and working • Cultivate presentation skills
Stage 3 Project Conclusion	<ul style="list-style-type: none"> • Stage exhibition • Conduct summative assessment • Reflect on project learning and process

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