

A CASE STUDY OF THREE UNIVERSITIES

Preparing Teachers for Project Based Learning

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Executive Summary

This report describes case studies of *Out of the Gate: Preparing Preservice Teachers to Use Project Based Learning (PBL) through PBL*, a professional development project focused on building the capacity of teacher education faculty members to prepare teachers to be ready “out of the gate” to use high quality PBL as a core instructional strategy with all students, including Black and Brown students. This project was funded through the generous support of the ECMC Foundation.

This report details the experiences of faculty members, their students (preservice teachers), and cooperating K–12 teachers in three Teacher Education Programs (TEPs)— University of Mary, Otterbein University, and Grand Valley State University—from the 2017-18 school year to the 2020-21 school year.



University of Mary in Bismarck, North Dakota, began *Out of the Gate* with a strong culture of innovation, dedicated time for faculty collaboration, and a district partner who was committed to the work of PBL. Faculty members adapted their existing culture, structures, and district partnerships to support collaboration around and facilitation of PBL. Faculty members, preservice teachers, and cooperating teachers who responded to the survey all reported high levels of facilitating projects in the courses they teach (89, 100, and 94 percent, respectively). Some faculty members will continue to use PBL in their coursework, and PBL training with cooperating and preservice teacher engagement will remain in place even after the *Out of the Gate* project is complete.



Otterbein University, in Westerville, Ohio, began *Out of the Gate* with one faculty member who had experience with PBL and a leadership that was supportive of PBL. TEP and university leaders participated in symposia, created press releases, and reached out to alumni to publicize the PBL work. About half of the faculty members who responded to the survey facilitated a project in their coursework at some point during *Out of the Gate*, and faculty members said they would continue to use PBL after the end of the *Out of the Gate* grant. Additionally, preservice teachers will continue to have the option of being paired with a cooperating teacher who has been trained in PBL.



Grand Valley State University, in Grand Rapids, Michigan, began *Out of the Gate* with somewhat limited prior exposure to PBL, but broad exposure to student-centered pedagogy and a culture of being very “open” to new ways of teaching that can engage and address the needs of diverse learners. During the implementation of *Out of the Gate*, faculty members experienced time constraints and challenges, including a new accreditation process and a change in state requirements in addition to their teaching, research, and preservice teacher observation requirements. Even with these challenges, about 70 percent of faculty members who responded to the survey said they had completed a project during *Out of the Gate*. Some faculty members will continue to use of PBL in their courses after the *Out of the Gate* grant is complete.

While the degree of change in capacity to use PBL in the classroom varied for these three universities, overall, we found five conditions that were supportive of PBL.

- **A culture that supports innovative practice.** A culture of learning and innovation at the university and district or school level was crucial for PBL implementation.
- **TEP-level leadership support for implementation.** Enthusiastic leadership support for implementation was needed for *Out of the Gate* to be successful.
- **TEP-district partnerships.** Strong district leadership, regular and enthusiastic communication, and system support for implementing PBL were crucial conditions to supporting PBL in the districts.
- **Dedicated time for planning and collaboration.** Designated time for cooperating and preservice teacher collaboration was cited as the most useful project element for supporting PBL.
- **Quality training and resources.** Participants needed PBLWorks' training and resources to prepare them to use PBL in their respective classrooms.

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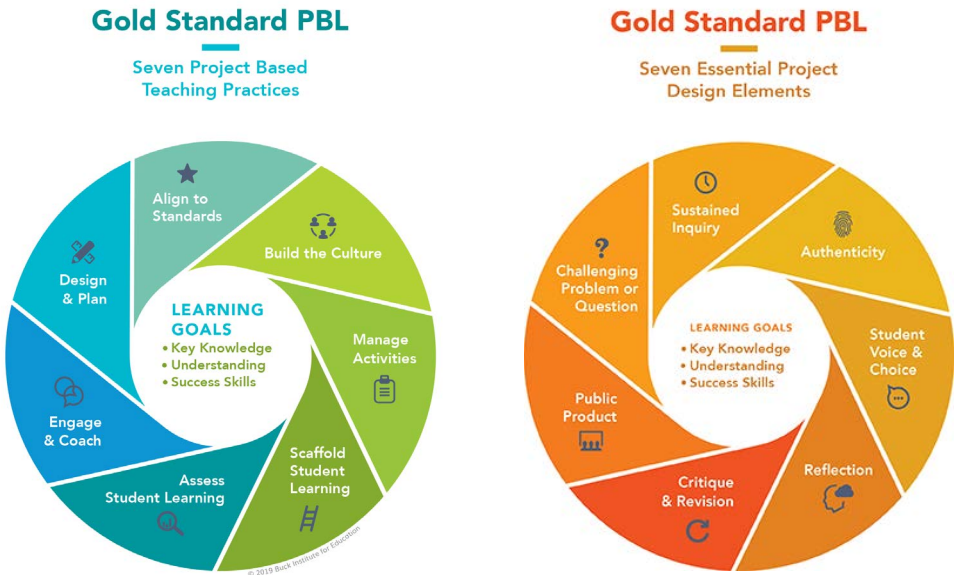
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Introduction

Out of the Gate is a unique project that focuses on preparing preservice teachers to implement project based learning (PBL) in the K–12 classroom “out of the gate” by building the capacity of teacher education program (TEP) faculty members to facilitate Gold Standard PBL. The project focuses on providing joint professional development at all levels of the teacher training system: to faculty members at TEPs, to cooperating teachers (experienced K–12 teachers who work directly with preservice teachers during their student-teaching semester), and to preservice teachers. The project also incorporates a racial equity focus, framing PBL as an ideal instructional method for engaging all students—and particularly Black and Brown students—in deeper, more meaningful, and more culturally relevant learning opportunities.

PBLWorks (dba the Buck Institute for Education) designed and facilitated *Out of the Gate*. This project was funded through the generous support of the ECMC Foundation. Three universities participated in *Out of the Gate* for three years (2017–2020): Grand Valley State University (Michigan), Otterbein University (Ohio), and University of Mary (with Dickinson State University in North Dakota). University of Mary also participated in an extension year (2020-21).¹ Participants received professional development and ongoing support from PBLWorks to facilitate high quality PBL, which is defined by Gold Standard Design Elements and Gold Standard Project Based Teaching Practices (figure 1). More information about these design elements and teaching practices are in the appendix of this report (box A1).

Figure 1. PBLWorks’ Gold Standard Design Elements and Gold Standard Project Based Teaching Practices



Source: PBLWorks project materials.

¹ Project implementation and evaluation were impacted by the COVID-19 pandemic in 2020 and 2021. Where relevant, the report describes activities that were adjusted as a result of the pandemic.

PBLWorks provided five *Out of the Gate* professional development activities: Project Slice, faculty implementation lab, PBL 101, sustained support visits, and symposia (box 1).

Box 1. Professional development services offered by PBLWorks as part of Out of the Gate

PROJECT SLICE

A two-day workshop designed to immerse preservice teachers, cooperating teachers, and TEP faculty members in Gold Standard PBL so that they have direct experience in PBL as learners.

FACULTY IMPLEMENTATION LAB

A half-day session specifically designed for TEP faculty members, personnel, and school leaders. The implementation lab is focused on articulating a clear vision for PBL throughout the TEP and all preservice teacher coursework. It also helps participants determine key actions needed to move the TEP forward in achieving the vision and goals of *Out of the Gate*.

PBL 101

A three-day, intensive, hands-on professional development session designed to deepen understanding of PBLWorks' Gold Standard Design Elements and Gold Standard Project Based Teaching Practices to support preservice teachers and cooperating teachers as they design or adapt projects they will implement during the student-teaching semester.

SUSTAINED SUPPORT VISITS

Two on-site visits from PBLWorks trainers, conducted during the student-teaching semester to refine project design and support the implementation of PBL.

SYMPOSIA

Annual events in which participating faculty members, cooperating teachers, and preservice teachers to showcase what they learned and accomplished using Gold Standard PBL in their practice by sharing lessons learned with an audience of peers, university faculty and leaders, and community members. These annual events are designed to deepen understanding of high quality PBL and cultivate support for PBL among stakeholders across the K–20 system in their region and state. Each participating TEP hosts a regional symposium as a culminating event for preservice teacher placements.

Source: PBLWorks project materials.

This report

PBLWorks hired Education Northwest to conduct a three-year (2017-18 to 2019-20) external evaluation of the project, with a one-year (2020–21) extension for additional data collection and analyses. This culminating report provides an analysis of data collected throughout the four years of the evaluation, including:

- Surveys with TEP faculty members, cooperating teachers, and preservice teachers
- Interviews with TEP faculty members, cooperating teachers, and preservice teachers
- PBLWorks attendance data and feedback forms²

We used the evaluation questions in box 2 to analyze these data sources. This case study report provides findings from this analysis at the university level and across cases.

Box 2. Evaluation questions

1. To what extent are the *Out of the Gate* activities implemented as intended?
2. How do TEPs change how they prepare preservice teachers with PBL over the course of *Out of the Gate*?
3. What are the similarities and differences in how *Out of the Gate* is implemented and experienced across the TEPs?
4. How and to what extent do *Out of the Gate* faculty members promote PBL among preservice teachers? How does their implementation of PBL change over time?
5. What supports and challenges do TEP participants experience related to the implementation of *Out of the Gate*? How can these supports be sustained and these challenges overcome?
6. How do *Out of the Gate* faculty members', cooperating teachers', and preservice teachers' knowledge, classroom practice, confidence, and attitudes related to PBL change over time?

To answer our evaluation questions, we administered a yearly survey to faculty members, cooperating teachers, and preservice teachers (survey participants are described in table A1 in the appendix). The survey asked participants about their project facilitation, use of *Gold Standard Design Elements*, understanding of *Gold Standard Project Based Teaching Practices* and confidence in using them, and challenges to project facilitation.

We also conducted interviews with faculty members, cooperating teachers, preservice teachers, project alumni, university administrators, and district partners. These interviews focused on the conditions that

² The evaluation team also conducted site visits and classroom observations in 2018-19 at each of the universities. However, some planned visits in 2019-20 were canceled due to the COVID-19 pandemic. Therefore, this report includes interviews from these visits but does not include observation data due to inconsistencies in data collection.

supported and inhibited project implementation and how participants planned to use PBL in the future. The evaluation team analyzed the surveys using descriptive statistics and compared between sites and between years. Additionally, the evaluation team analyzed correlations within the data where appropriate. Interviews were recorded, transcribed, and then coded using content analysis. More details about the data collection and analysis methods are provided in the appendix.

The remainder of this report examines consistencies and differences across the universities (cross-case findings); followed by the evaluation findings for each participating university (University of Mary, Otterbein University, and Grand Valley State University); and a brief conclusion.

Cross-Case Analysis

Education Northwest used the data collected at each university to compare and identify similarities and differences in *Out of the Gate* implementation and outcomes across cases. This cross-case analysis provides insights into which elements facilitate PBL success across TEPs.

Box 3. Comparison of general TEP characteristics

	University of Mary	Otterbein University	Grand Valley State University
Location	Bismarck, North Dakota	Westerville, Ohio	Allendale, Michigan
Type of university	Private, Benedictine	Private	Public
Number of students (2019)	3,779	2,853	24,033
Full-time TEP faculty (2021)	9	9	19
Degree programs	Undergraduate, graduate	Undergraduate, graduate	Undergraduate, graduate
District partners for <i>Out of the Gate</i>	Bismarck Public Schools (11 percent students of color)	Canal Winchester School District (28 percent students of color) Olentangy Local School District (19 percent students of color) Westerville City Schools (26 percent students of color) Whitehall City Schools (61 percent students of color) Worthington City School District (23 percent students of color)	Forest Hills Public Schools (13 percent students of color) Lowell Public Schools (5 percent students of color) Kenowa Hills Public Schools (14 percent students of color) Kentwood Public Schools (41 percent students of color) Kent Innovation High School*

Source: Information based on interviews with Education Northwest evaluation team, number of university students pulled from the Integrated Postsecondary Education Data System (IPEDS) <https://nces.ed.gov/ipeds/use-the-data>, and district student demographics pulled from the Common Core of Data (CCD) <https://nces.ed.gov/ccd/districtsearch/>

* Kent Innovation High School closed in 2020 and current demographic data was unavailable for this report.

Out of the Gate and PBL implementation

All universities emphasized the alignment of PBL with the type of teaching promoted within their university—innovative pedagogical practice—to recruit faculty members. Similarly, most faculty members who participated were motivated by the desire to improve and expand their pedagogical knowledge.

At all universities, PBL implementation was highest among cooperating teacher survey respondents, followed by preservice teachers (table 7). Based on survey respondents, the University of Mary had the highest percentage of both faculty members and preservice teachers who completed a project (89 percent and 94 percent, respectively), while Otterbein University had the lowest percentages in both categories (50 percent and 77 percent, respectively).

Table 1. The percentage of survey respondents who implemented a project varied across role and universities (2018–2021)

	University of Mary	Otterbein University	Grand Valley State University
Faculty members	89% (n = 9)	50% (n = 8)	69% (n = 13)
Cooperating teachers	100% (n = 38)	100% (n = 22)	92% (n = 37)
Preservice teachers	94% (n = 36)	77% (n = 26)	79% (n = 24)

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

* For individuals who completed the survey more than once, this reflects whether they ever completed a project.

Across all universities, the number of preservice teachers who completed a project was lowest in 2017-18 (see table A3 in the appendix), likely due to challenges with project startup. After the first year, the majority of preservice teachers and all cooperating teachers who responded to the survey completed a project as part of their participation in *Out of the Gate*.

Reasons TEP faculty members did not use PBL

Lack of time appeared to be the primary reason faculty members did not use PBL. Of the eight faculty members who provided feedback on why they did not complete a project, some cited the lack of time to design (38 percent) and implement a project (63 percent) as barriers (see other barriers in table A10 in the appendix). A few of these faculty members mentioned in interviews and open-ended survey responses that they felt pressure to cover a lot of material in fewer classroom hours than teachers typically have in K–12. As one faculty member who did not facilitate a project said, “I’m having a hard time choosing the big idea and making sure to get the content covered. The weighing of breadth and depth in higher education is a bit cumbersome for me.”

Across all sites, faculty member project implementation was not related to years of experience in the university or K–12 setting, nor was it related to the number of years a faculty member participated in *Out of the Gate* or the year they participated (details on this analysis are located in appendix A). Faculty members who did not complete a project also did not consistently identify training or resources as a challenge to implementation.

Out of the Gate alumni use of and beliefs about PBL

To determine the extent to which preservice teachers use what they learn in *Out of the Gate* in their own teaching practice, we also surveyed and interviewed project alumni. This information is limited in scope. Only 27 of 92 alumni provided personal emails for this survey, and 78 percent of these alumni completed a survey. Therefore, this information provides limited insights into the extent to which alumni use PBL in their practice after *Out of the Gate*.

Some *Out of the Gate* alumni are using PBL in their own classrooms within their first years of teaching. Thirty-two percent of alumni survey respondents across the universities were facilitating a project in their classrooms. These alumni used all or all but one of the *Gold Standard Design Elements* in their projects. For those who did not facilitate a project, about half indicated in write-in survey responses that they intended to do so but were still getting acclimated in their first year. In 2019–20 and 2020–21 surveys, a few others mentioned that they were impacted by the challenges of beginning their teaching career during a pandemic. Additionally, we spoke with two alumni in 2020–21 who were not facilitating a project, and both said they planned to facilitate a project after they had more classroom experience and got through the pandemic.

Nearly all alumni continue to see the benefits of PBL and plan to use PBL in their classrooms. Ninety-five percent of alumni survey respondents said they planned to incorporate PBL into their future work. All alumni survey respondents believed that incorporating PBL would improve instruction and student learning, and 90 percent believed that all teachers could benefit from using PBL.

Supportive conditions and outcomes

Institutional culture that supported *Out of the Gate*

A culture that supports innovation in teaching. Across all universities, the openness to using innovative pedagogical practices was described as an important contributor to *Out of the Gate* project fit. PBL was seen as aligning to faculty members' beliefs about teaching and learning.

Leadership support. At University of Mary, the dean spent considerable time developing a culture of collaboration and innovation, which supported faculty members' work in PBL. For Otterbein University, the department chair's leadership and enthusiasm was key to project success. Similarly, while TEP leadership turned over at Grand Valley State University, the incoming dean's support of the project ensured its continuance.

Prior knowledge and use of PBL. University of Mary and Grand Valley State University had a few faculty members with prior exposure to PBL, and all universities had cooperating teachers participating in *Out of the Gate* that had prior exposure to PBL. This may have helped with project rollout.

Policies and structures that were supportive of or changed in response to *Out of the Gate*

Including PBL in teacher training coursework. At all three universities, at least a few faculty members have restructured their courses to include a project. Leadership support for the use of innovative pedagogy—including allowing iteration and room for growth—was seen as important at all universities. Alternatively, faculty members at all universities described large-scale transformation of TEP policies and structures to include PBL as limited due to the freedom university faculty have to determine their own teaching practices.

Space for collaboration. At all universities, faculty members, cooperating teachers, and preservice teachers identified the importance of collaboration time for cooperating teachers and preservice teachers at the beginning of the year. They felt this opportunity to collaborate before they began student teaching set them up for success in a unique way. Additionally, at University of Mary, faculty members used training time and professional learning community time to regularly reconnect to PBL and improve their practice.

Changes in relationships with partner districts in response to *Out of the Gate*

Strengthened TEP-district relationships. All three universities described their experience in *Out of the Gate* as strengthening their relationship with at least some of their partner districts. While Otterbein University and Grand Valley State University described challenges with implementation and cooperating teacher recruitment in some of their partner districts, all three TEPs described strengthened relationships with district partners.

University of Mary's single district partner (BPS) may have helped in implementation. University of Mary faculty members reported fewer barriers to recruiting cooperating teachers than the other two universities. Due in part to *Out of the Gate*, they were also able to build a connection with their partner district and a commitment to PBL that will continue beyond the life of the grant.

Cooperating teacher capacity for PBL. At both University of Mary and Otterbein University, preservice teachers will continue to have the option to be paired with a cooperating teacher with PBL knowledge and experience. University of Mary will continue to train cooperating teachers in PBL, and Otterbein University is in the process of developing plans for future years.

Within-Case Analysis

University of Mary



Box 4. Overview of University of Mary TEP characteristics

Location	Bismarck, North Dakota
Type of university	Private, Benedictine
Number of students (2019)	3,779 (2019)
Full-time TEP faculty (2021)	9 (2021)
Degree programs	Undergraduate, graduate
District partners for <i>Out of the Gate</i>	Bismarck Public Schools (<i>11 percent students of color</i>)
Past exposure to PBL	Four faculty members (44 percent) and 30 cooperating teachers (79 percent) indicated on the annual survey that they had at least a moderate amount of experience with PBL prior to <i>Out of the Gate</i> .

Source: Information provided to Education Northwest during interviews and analysis of survey data from 2018–2021, number of university students pulled from the Integrated Postsecondary Education Data System (IPEDS), <https://nces.ed.gov/ipeds/use-the-data>, and district student demographics pulled from the Common Core of Data (CCD) <https://nces.ed.gov/ccd/districtsearch/>

History of university involvement in *Out of the Gate*

Faculty members at the University of Mary became interested in the *Out of the Gate* project based on their relationship with Bismarck Public Schools (BPS). BPS includes PBL as one of its primary teaching practices and contracted with PBLWorks to provide professional development for its teachers on PBL prior to its participation in *Out of the Gate*.

Most University of Mary faculty members were recently in the K–12 setting, implementing innovative practices in their own classrooms. Therefore, interest in PBL was grounded in recent engagement with innovative pedagogical practice. In an interview, the dean of the college said he found it easy to recruit faculty members and get them excited due to the culture of continuous learning within the department, which encourages faculty members to be innovative and open to new practices.

To meet preservice teacher enrollment numbers suggested by PBLWorks for *Out of the Gate*, University of Mary partnered with Dickinson State University (DSU), a public university in North Dakota. While DSU faculty members and students were actively involved in the training elements of *Out of the Gate*, the program was primarily administered through University of Mary. Therefore, this case study focuses on the systems conditions at University of Mary that supported implementation.

University of Mary employs a full-time director of student teaching who manages logistical coordination of *Out of the Gate* between the district and the TEP. However, faculty members described cooperating teacher recruitment as mostly occurring through BPS administrators and teacher networks, which promoted *Out of the Gate* as a useful and quality professional development opportunity. Additionally, according to University of Mary faculty members, BPS has a long history of recruiting preservice teachers from the university due to their high level of training. The collaboration in *Out of the Gate* was an extension of this relationship and was viewed as another way for the district to recruit University of Mary preservice teachers.

Participation in *Out of the Gate*

Participation of University of Mary faculty members, preservice teachers, and cooperating teachers in *Out of the Gate* activities (along with DSU faculty members) was highest in the first year of the project (2017-18) (table 2). University of Mary was the only university that chose to continue participating in *Out of the Gate* for a fourth year (2020-21), albeit with intentionally reduced enrollment. In annual surveys among all participants for all years, 97 percent of University of Mary respondents felt they received high quality training from PBLWorks.

Table 2. Attendance at PBLWorks’ training activities was highest in 2017-18 for University of Mary (count)

	Project Slice	PBL 101	Sustained support visit 1	Sustained support visit 2
UNIVERSITY OF MARY				
2017–18	66	53	51	52
2018–19	42	37	32	28
2019–20	35	33	28	26
2020–21	14	15	7	11

Source: Education Northwest analysis of PBLWorks attendance data from 2018–2020.

Changes in mindsets and teaching practices

Most University of Mary respondents (96 percent) completed at least one project during their time in *Out of the Gate* (table 3).

Table 3. Most University of Mary respondents completed at least one project from 2017-18 to 2020-21

	Completed at least one project*
Faculty members	89% (n = 9)
Cooperating teachers	100% (n = 38)
Preservice teachers	94% (n = 36)

Source: Education Northwest analysis of *Out of the Gate* annual survey responses from University of Mary (2017–2021).

*For individuals who completed the survey more than once, this reflects whether they ever completed a project.

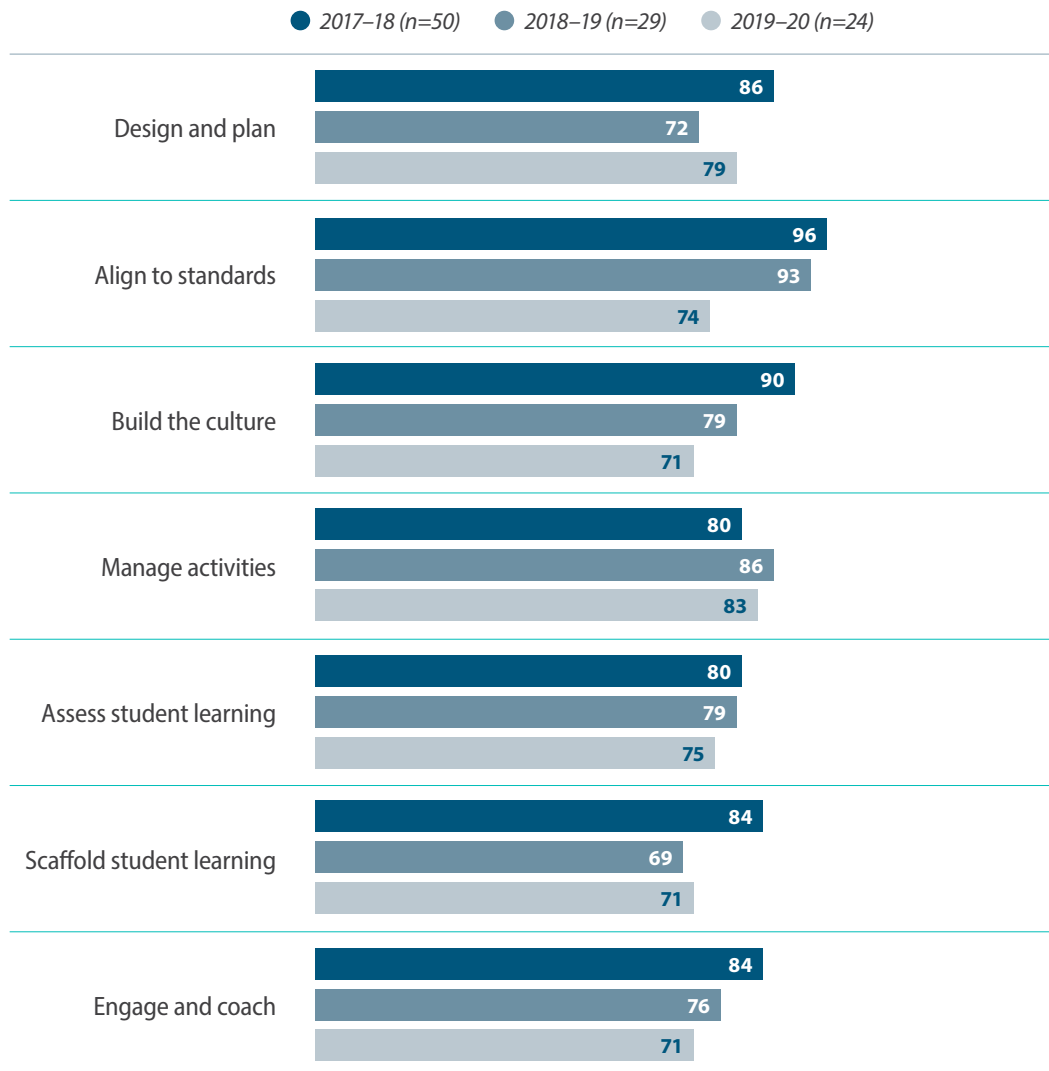
“ When we first started, I sort of felt like, ‘I know so much about PBL.’ I used it so much as a high school teacher, and I wasn’t sure how much I would get out of it. And I got so much out of it. I just continually learned. I had a few gaps in my game that I didn’t even know I had.

– University of Mary faculty member

In interviews, faculty members and leaders stated that nearly all faculty are engaged with *Out of the Gate* to an extent and understand the *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices*. They stated that while not all faculty are implementing high quality PBL in their courses, all students experience it in some way throughout the program. As one faculty member said, “Many of our faculty are currently including PBL as a part of their courses in a variety of different ways, whether it be full implementation of an actual PBL unit in a class or teaching those foundational skills of ‘this is what PBL looks like.’”

Nearly all University of Mary respondents (90 to 100 percent) reported using PBLWorks’ *Gold Standard Design Elements* in their projects across all years (see table A2 in the appendix). Additionally, most respondents reported confidence in implementing PBLWorks’ *Gold Standard Project Based Teaching Practices*, although this was highest in the first year of *Out of the Gate* (figure 2).

Figure 2. The percentage of University of Mary survey respondents reporting that they were “confident” or “very confident” in implementing Gold Standard Project Based Teaching Practices declined somewhat after 2017-18



Source: Education Northwest analysis of Out of the Gate annual survey responses from University of Mary (2017–2021).

Beliefs about PBL remained consistently positive throughout the project. Most respondents (94 to 100 percent) agreed or strongly agreed that PBL is appropriate for all student groups (e.g., students performing below grade level, English learners). Additionally, most respondents (98 percent) believed that incorporating PBL would improve instruction and student learning. Ninety-two percent of respondents agreed or strongly agreed that all teachers would benefit from using PBL and that preservice teachers were especially well-suited to learning it.

Respondents also identified challenges to implementing PBL. About 15 percent of respondents agreed or strongly agreed that adding PBL to preservice teaching was too much for preservice teachers, and a few cooperating teachers said in open-ended survey responses that preservice teachers “have enough on

their plate already” to get through their training. Additionally, about half of respondents felt that fitting PBL into existing curricula was a challenge.

System-level change

This section describes both the conditions within University of Mary that supported the facilitation of PBL, as well as TEP system changes that occurred during implementation of *Out of the Gate*.

Institutional culture

Faculty members described “tremendous” administrative support for PBL. The dean of the college described building a “dynamic positive culture” in the department that supports continuous learning, collaboration, innovation, and risk-taking. There is a sense of “trust” between faculty and administrators that limits “fear of failure” and leaves staff “open to new ideas.” Additionally, administrators mentioned that the university’s small, nimble bureaucracy allowed it to work well within the project structure of *Out of the Gate*.

Faculty members viewed PBL as having a positive impact on multiple aspects of the TEP educational experience, including better student engagement, a stronger relationship between students and faculty and between students and cooperating teachers, and improved faculty teaching. Due to the benefits seen by faculty members, *Out of the Gate* has built an environment in which PBL is deeply embedded in the culture of the TEP. One faculty member said they think students may start to demand student-centered instruction because of its prevalence and effectiveness.

We’re in an era where ... they don’t need us to be up there, spewing out readily available information as a talking head ... students who are coming from these engaging, deep-learning schools are not going to put up with that. They just aren’t. They’re not used to learning that way. And I think fewer and fewer [students] are coming from those real teacher-centered models, so they’re going to demand something different.

– University of Mary faculty member

Changes to course requirements and sequencing

Faculty members we spoke with in 2020-21 said they planned to continue using PBL in their courses, including a differentiated instruction course, a course on cultural diversity, an educational psychology course, and the capstone course. These courses fall across the levels, including both undergraduate and graduate courses. A few faculty members discussed how they would continue to refine their PBL instruction, such as incorporating more *Gold Standard Project Based Teaching Practices* in each of their projects in the future.

Policies and structures

Faculty members used PBL101 time every year to build a collaborative project among faculty. This project focused on how PBL could be used with students who have an individualized education program. In addition to their work in PBL101, existing structures around faculty collaboration were adapted during *Out of the Gate* to support the use of PBL in the university. Faculty members used their work in professional learning communities to support learning around PBL facilitation in their work. Finally, professional development days were used early on to allow “early-innovators” to share their PBL-related work.

Relationships with partner districts

University of Mary and BPS share a strong vision of PBL as an important instructional strategy that prepares both K–12 and university students to tackle real-world problems. As part of its accreditation process, University of Mary’s TEP is required to develop partnerships with local education agencies, and BPS has been an important partner for many years. Throughout this partnership, BPS has engaged with PBL through trainings and professional development, and they have now made individualized learning (including PBL) a part of their strategic plan.

University of Mary faculty members felt that *Out of the Gate* strengthened their relationship with BPS due to the side-by-side training activities. Many *Out of the Gate* preservice teachers have been hired by BPS, creating a “pipeline” from the university to the district. *Out of the Gate* preservice teachers are valued for their high level of training, and the project also increased their social networks in the district.

“ I have noticed that at all of our public showcases, we have a number of principals there, and even high-ranking administrators at the college level and our state superintendent. So those leaders are seeing what kids are doing. And that’s really fun.

– University of Mary faculty member

Within-Case Analysis

Otterbein University



Box 5. Overview of Otterbein University TEP characteristics

Location	Westerville, Ohio
Type of university	Private
Number of students	2,853 (2019)
Full-time TEP faculty	9
Degree programs	Undergraduate, graduate
District partners for <i>Out of the Gate</i>	Canal Winchester School District (28 percent students of color) Olentangy Local School District (19 percent students of color) Westerville City Schools (26 percent students of color) Whitehall City Schools (61 percent students of color) Worthington City School District (23 percent students of color)
Past exposure to PBL	Four faculty members (44 percent) and 30 cooperating teachers (79 percent) indicated on the annual survey that they had at least a moderate amount of experience with PBL prior to <i>Out of the Gate</i> .

Source: Information provided to Education Northwest during interviews and analysis of survey data from 2018–2021, number of university students pulled from the Integrated Postsecondary Education Data System (IPEDS), <https://nces.ed.gov/ipeds/use-the-data>, and district student demographics pulled from the Common Core of Data (CCD) <https://nces.ed.gov/ccd/districtsearch/>

History of university involvement in *Out of the Gate*

Otterbein University’s participation in *Out of the Gate* built on a prior PBL grant from the U.S. Department of Education’s Institute of Education Sciences, which focused on teaching English as a second language using PBL. This grant increased faculty members’ familiarity with PBL and fueled their desire to “go deeper.” TEP administrators were also excited about the exposure *Out of the Gate* would provide for the university, and they trusted the department chair (who acted as project lead) to administer the project.

Faculty members were recruited by the department chair, whose enthusiasm was crucial to *Out of the Gate*’s success. The department chair served as a champion of PBL and a “persuasive” leader who got the grant and encouraged participation. She tapped into existing faculty interest, highlighting PBL’s compatibility with the university’s overall approach to teacher training, which includes multiple pedagogical approaches and an emphasis on innovation.

“ I think we’ve always been an institution that uses best practice, like authenticity and student-centered instruction—the components that make PBL what it is. I think [Out of the Gate] helped some of us refine our work. – Otterbein University faculty member

The successful recruitment of cooperating teachers varied considerably by district partner. Some districts found it easy to recruit teachers for the project due to their close relationship with Otterbein University, while others found it difficult due to large bureaucratic structures. Even with a dedicated field experience staff member at the TEP, one faculty member described the challenge of cooperating teacher recruitment: “I’m not kidding when I say I started working on placements in April, and they weren’t done until August.”

Faculty members also described Ohio’s educator licensure requirements as a particular burden and said they posed a challenge to preservice teachers’ participation in *Out of the Gate*. Otterbein University preservice teacher survey respondents were also more likely to indicate licensure requirements as a challenge to PBL participation than participants from other universities (44 percent compared with 8 percent at University of Mary and 4 percent at Grand Valley State University).

Participation in *Out of the Gate*

Participation of Otterbein University faculty members, preservice teachers, and cooperating teachers in *Out of the Gate* activities grew in year 2 (2018-19) and year 3 (2019-20) of the project (table 4). In annual surveys among all participants for all years, 96 percent of Otterbein University respondents felt they received high quality training from PBLWorks. In interviews, faculty members said they appreciated the resources they received from PBLWorks. For example, they said the tools and templates they received, such as those related to authentic assessments, helped make their ideas about progressive education more “concrete” and grounded in actual classroom practice.

Table 4. Attendance in Out of the Gate activities increased for Otterbein University participants, although attendance at the sustained support visits varied (count)

	Project Slice	PBL 101	Sustained support visit 1	Sustained support visit 2
OTTERBEIN UNIVERSITY				
2017–18	66	53	51	52
2018–19	42	37	32	28
2019–20	35	33	28	26

Source: Education Northwest analysis of PBLWorks attendance data from 2017–2020.

*This includes attendance at two separate sustained support visit events

Changes in mindsets and teaching practices

Most respondents in Otterbein University (82 percent) completed at least one project during their time in *Out of the Gate* (table 5).

Table 5. All cooperating teachers but only half of Otterbein University faculty members completed at least one project from 2017-18 to 2019-20

	Completed at least one project*
Faculty members	50% (n = 8)
Cooperating teachers	100% (n = 22)
Preservice teachers	77% (n = 26)

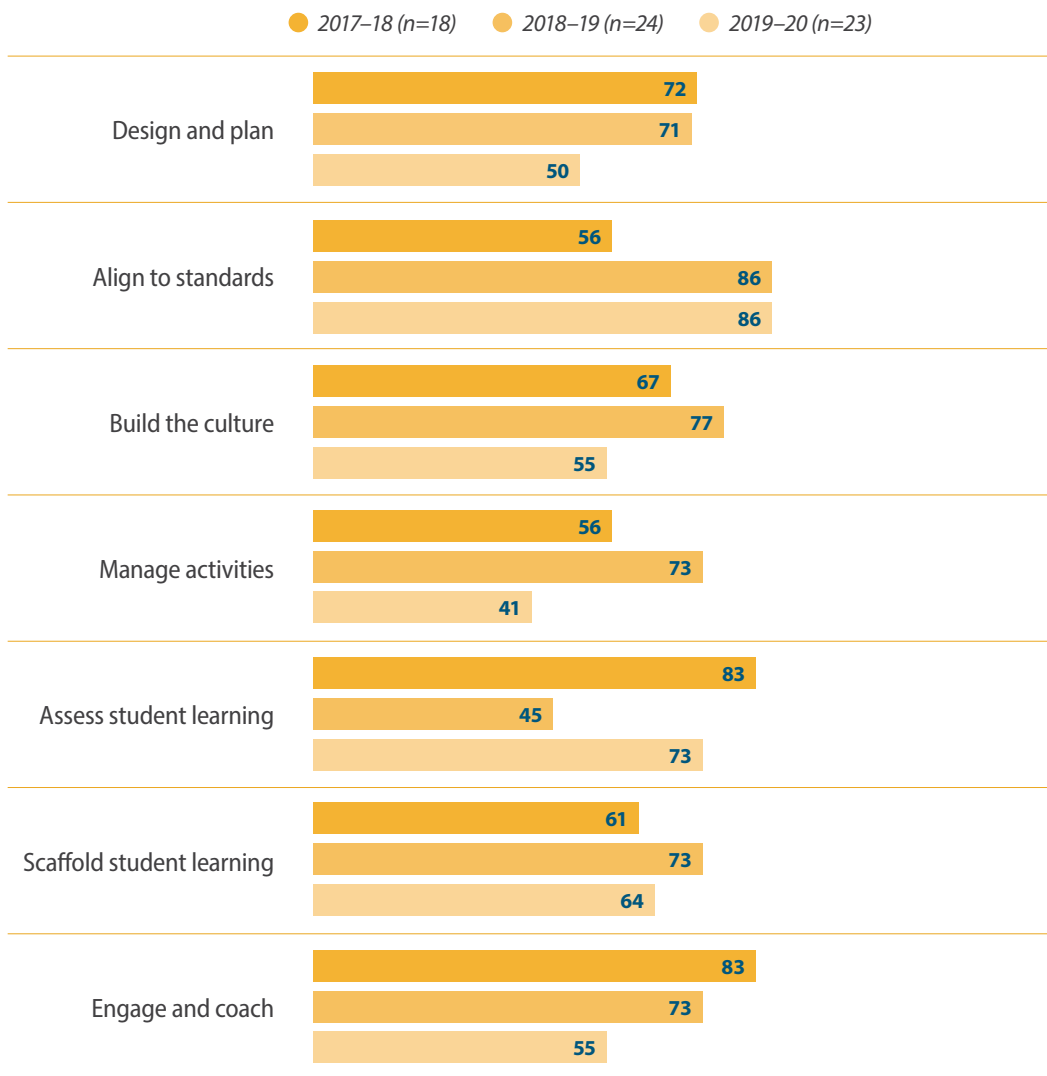
Source: Education Northwest analysis of *Out of the Gate* annual survey responses from Otterbein University (2017–2020).

*For individuals who completed the survey more than once, this reflects whether they ever completed a project.

While most faculty members participated in trainings at least in the first year, some expressed a “mixed” view of PBL in their own work due to the amount of work involved. In interviews, some faculty members said they were somewhat overwhelmed with the intensity of “true” PBL and instead chose to implement projects that were more limited in duration and scope.

Nearly all Otterbein University respondents who completed a project reported using most of the *Gold Standard Design Elements* in their projects (94 to 100 percent) (see table A2 in the appendix). Confidence in implementing *Gold Standard Project Based Teaching Practices* varied considerably across the years, particularly “assess student learning,” which showed a steep decline in 2018-19 (figure 3).

Figure 3. Otterbein University survey respondents' confidence in implementing PBLWorks' Gold Standard Teaching Practices varied across years (percentages)



Source: Education Northwest analysis of Out of the Gate annual survey responses from Otterbein University (2017–2020).

While some faculty member interviewees described mixed feelings about their own use of PBL due to the level of work required, survey responses regarding beliefs about PBL remained consistent through the study years. Most respondents (95 to 100 percent) agreed or strongly agreed it is appropriate for all student groups (e.g., students performing below grade level, English learners). Additionally, most respondents (98 to 100 percent) believed that incorporating PBL would improve instruction and student learning, and all respondents planned to incorporate PBL into their future work. Ninety-three percent of respondents agreed or strongly agreed that all teachers would benefit from using PBL.

Respondents also identified challenges to implementing PBL. About 16 percent of respondents did not think that preservice teachers were well-suited to learning PBL, and about 16 percent

felt that adding PBL to preservice teaching was too much for preservice teachers. Additionally, 63 percent of respondents felt that fitting PBL into existing curricula was a challenge.

System-level change

This section describes both the conditions within Otterbein University that supported the facilitation of PBL and the TEP system changes that occurred during implementation of *Out of the Gate*.

Institutional culture

Within the department, the administration was highly supportive of participation in *Out of the Gate*. Faculty members have begun to include PBL in the professional development they offer to the district, the newsletters they send to alumni, and in press releases.

“ I think campus-wide our department is known for being effective at implementing PBL.

– Otterbein University faculty member

At the university level, the Office of Sponsored Programs supported the project. Symposia were attended by the dean of the college, the university provost, and other university administrators. A few faculty members from the school of education were given leadership opportunities due to *Out of the Gate*. For example, they were seen as champions of PBL facilitation within the university and gave presentations on PBL to other departments.

Changes to course requirements and sequencing

Faculty members described PBL as a “tool” that works well with their style of teaching. PBL also proved to be highly adaptable and effective during the shift to remote learning caused by the COVID-19 pandemic. Three faculty members said they had “reshaped” their courses to include PBL. This includes methods and curriculum courses at both the undergraduate and graduate level. Other faculty members said they would continue to include elements of PBL in their courses. One faculty member said participation in *Out of the Gate* had caused a shift in their approach to teaching, leading them to “back off” and learn from and with students. Other faculty members also described learning from their *Out of the Gate* experiences and implementing new structures related to PBL as a result.

In interviews, faculty members said they had coordinated their efforts to ensure PBL was taught across all licensure grade bands. The TEP also connected PBL with the “senior year experience,” a course that creates an interdisciplinary experience to allow for reflection and integration of learning.

Policies and structures

While Otterbein University faculty members described significant changes to individual courses, they identified limited changes to TEP policies or structures that have occurred around PBL due to *Out of the Gate*. The TEP added an item on their student teaching intake form that allows preservice teachers to request a PBL placement with a cooperating teacher who has gone through PBL training. They also described the importance of the annual rollout of Project Slice, but it is unclear whether that activity will continue in the future. Faculty members said all “next steps” were dependent on how they emerged from the pandemic.

Relationships with partner districts

Otterbein University works closely with five large school districts. The districts that had more buy-in for *Out of the Gate* and PBL typically had a longer history with the university, and their school and district administrators provided support for cooperating teacher recruitment and attended symposia and conferences.

“ I really am grateful for *Out of the Gate* because it forced the district partners and us to [collaborate] more consistently ... These districts have always been our partners, but *Out of the Gate* put us into a situation where we’re constantly working through issues, whether there were puzzles of placements or problem solving around how we can get a different school involved or a different licensure band involved. We were just engaged much more frequently, and I think that really made a difference in the relationships.

– Otterbein University faculty member

In three of the five districts, *Out of the Gate* provided a shared vision and helped strengthen the university-district relationship. Otterbein University faculty members used the time and collaboration opportunities provided by *Out of the Gate* to develop a secondary grant with these three districts to continue to build on this success. The department chair who led Otterbein University in its three years of *Out of the Gate* participation is now working with one of these districts and is hoping to continue work with PBL after the COVID-19 pandemic has diminished.

Within-Case Analysis

Grand Valley State University



Box 6. Overview of Grand Valley State University TEP characteristics

Location	Allendale, Michigan
Type of university	Public
Number of students	24,033 (2019)
Full-time TEP faculty	19 (2021)
Degree programs	Undergraduate, graduate
District partners for <i>Out of the Gate</i>	<p>Forest Hills Public Schools (<i>13 percent students of color</i>)</p> <p>Lowell Public Schools (<i>5 percent students of color</i>)</p> <p>Kenowa Hills Public Schools (<i>14 percent students of color</i>)</p> <p>Kentwood Public Schools (<i>41 percent students of color</i>)</p> <p>Kent Innovation High School*</p>
Past exposure to PBL	Seven faculty members (37 percent) and 16 cooperating teachers (41 percent) indicated on the annual survey that they had at least a moderate amount of experience with PBL prior to <i>Out of the Gate</i> .

Source: Information provided to Education Northwest during interviews and analysis of survey data from 2018–2020, number of university students pulled from the Integrated Postsecondary Education Data System (IPEDS), <https://nces.ed.gov/ipeds/use-the-data>, and district student demographics pulled from the Common Core of Data (CCD) <https://nces.ed.gov/ccd/districtsearch/>

*Kent Innovation High School closed in 2020 and current demographic data was unavailable for this report.

History of university involvement in *Out of the Gate*

Most faculty members said in interviews they had some experience with the style of learning in PBL (active student engagement, inquiry-based learning), in either a K–12 or university setting. However, the university did not have PBL-specific experience prior to joining *Out of the Gate*. The university came to *Out of the Gate* by way a faculty member who has since retired. After she expressed interest, the dean of the college went to a PBLWorks meeting in California and subsequently encouraged faculty members to participate. While this dean left the college after the first year of the project, administrative support continued to be strong.

After the initial year, faculty members were primarily recruited via an email from the project lead, who described it as a great opportunity to learn about PBL as an innovative practice. Faculty member recruitment posed a challenge for Grand Valley State University due to heavy course loads and research and observation requirements.

Cooperating teacher recruitment also faced some state-specific challenges. Michigan requirements state that cooperating teachers can have a preservice teacher only once every three years. Therefore, cooperating teachers interested in PBL could only participate in Out of the Gate once before the TEP had to find other interested cooperating teachers. Field coordinators worked with administrators in the four participating school districts to find cooperating teachers. Recruitment was made easier due to the university's existing relationships with the four districts. For example, all four districts employed teachers who were Grand Valley State University alumni.

Participation in *Out of the Gate*

Grand Valley State University's attendance at *Out of the Gate* activities remained steady throughout the three years (table 6), with the exception of the second sustained support visit in 2019-20. In annual surveys among all participants for all years, 97 percent of Grand Valley State respondents felt they received high quality training from PBLWorks.

Table 6. Attendance remained steady for Grand Valley State University participants, although attendance at the second sustained support visit varied (count)

	Project Slice	PBL 101	Sustained support visit 1	Sustained support visit 2
GRAND VALLEY STATE UNIVERSITY				
2017–18	16	33	21	19
2018–19	33	29	25	2
2019–20	28	22	22	19

Source: Education Northwest analysis of PBLWorks attendance data from 2018–2020.

Changes in mindsets and teaching practices

Most respondents in Grand Valley State University (81 percent) completed at least one project during their time in *Out of the Gate* (table 7).

Table 7. Most cooperating teachers but fewer faculty members and preservice teachers from Grand Valley State University completed at least one project (2017-18 to 2019-20)

	Completed at least one project*
Faculty members	69% (n = 13)
Cooperating teachers	92% (n = 39)
Preservice teachers	79% (n = 24)

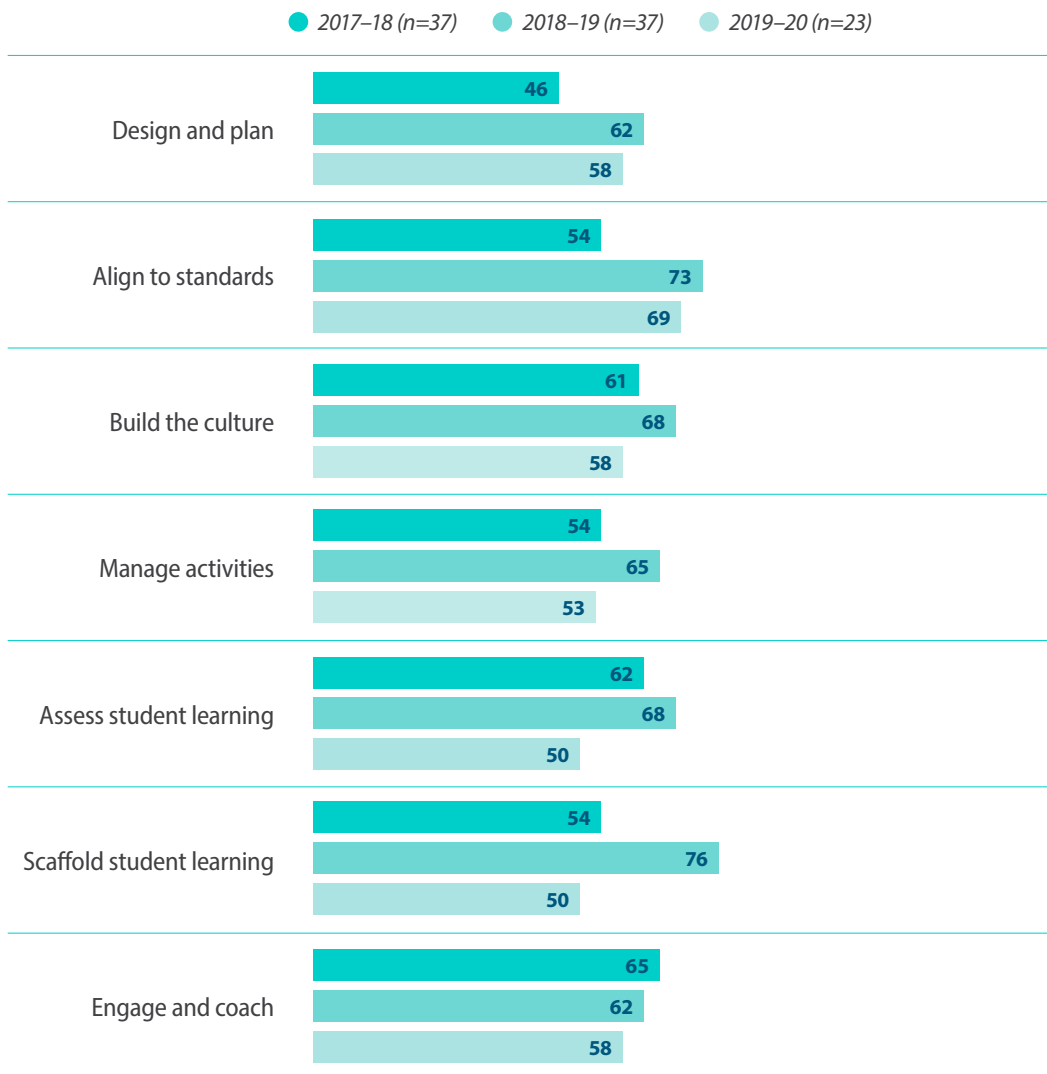
Source: Education Northwest analysis of *Out of the Gate* annual survey responses from Grand Valley State University (2017–2020).

*For individuals who completed the survey more than once, this reflects whether they ever completed a project.

In interviews, faculty members described being “overloaded,” especially during the pandemic, and feeling that their time was too limited to engage in PBL. They described having a heavy course load, plus having their own research and preservice teacher observations to do. One faculty member suggested that PBL might be more successful at Grand Valley State University if there was an explicit component to the work that she could easily integrate into her research.

Most Grand Valley State University respondents (82 to 100 percent) reported using PBLWorks’ *Gold Standard Design Elements* in 2017-18 and 2019-20, but fewer reported using the design elements in 2018-19 (81 to 85 percent) (see table A2 in the appendix). Alternatively, more respondents reported confidence in using PBLWorks’ *Gold Standard Project Based Teaching Practices* in 2018-19 compared to other years (figure 4).

Figure 4. Figure 4. The percentage of Grand Valley State University survey respondents reporting that they were “confident” or “very confident” in implementing Gold Standard Project Based Teaching Practices peaked in 2018-19 before declining in 2019-20



Source: Education Northwest analysis of Out of the Gate annual survey responses from Grand Valley State University (2017–2020).

Beliefs about PBL remained consistent across the three years, with most respondents (93 to 100 percent) agreeing or strongly agreeing that it is appropriate for all student groups (e.g., students performing below grade level, English learners). Additionally, most respondents (97 percent) believed that incorporating PBL would improve instruction and student learning, and 98 percent of respondents planned to incorporate PBL into their future work. Ninety-four percent of respondents agreed or strongly agreed that all teachers would benefit from using PBL, and 90 percent of respondents felt preservice teachers were well-suited to learning PBL.

Respondents also identified challenges to implementing PBL. About 22 percent felt that adding PBL to preservice teaching was too much for preservice teachers. In open-ended responses, a few respondents said that preservice teachers need more classroom management experience and more exposure to PBL prior to facilitating a project. Additionally, 63 percent of respondents felt that fitting PBL into existing curricula was a challenge.

System-level change

This section describes both the conditions within Grand Valley State University that supported the facilitation of PBL, as well as TEP system changes that occurred during implementation of *Out of the Gate*.

Institutional culture

Faculty members at Grand Valley State University were “open” to new ways of teaching that could address different learning styles and student needs. Faculty members viewed PBL as “another tool in the toolbox” for student engagement. Many faculty members reported viewing PBL as a useful, innovative practice that aligns with real-world needs, but PBL was not a primary approach within the TEP, either in faculty members’ own instruction or as an instructional strategy taught to preservice teachers.

“ The most important factor that helped us was the willingness of faculty to be open to something like this ... Not every student learns in the same way. So that translates into trying different techniques and being willing to look at different ways of teaching. That’s something that’s pervasive throughout the college and it was the key to our ability to implement [*Out of the Gate*].

– Grand Valley State University faculty member

This may be due to severe time constraints and heavy workloads. The university recently experienced a reduction in staff, which led to increased course loads without pay increases. The TEP also underwent a series of structural changes impacted their ability to engage in PBL: a new accreditation process, changes in state requirements, and a consolidation process that merged the TEP with another department on campus. The TEP also experienced turnover in both the project lead position for *Out of the Gate*, as well as the dean of the college after the first year of the project. Despite these challenges, PBL has persisted in the TEP.

Changes to course requirements and sequencing

Faculty members described using student feedback for continuous improvement and engaging in data-driven decision making around their use of PBL. For example, when asked whether they would continue to engage in PBL in the future, one faculty member said she was waiting for course feedback. Additionally, a few faculty members mentioned a desire to use their PBL engagement in their own research and said they hoped to have an opportunity to share experiences across the three *Out of the Gate* universities in order to build a research agenda.

“ It would have been great to engage in research as a part of the project, so we didn’t have to worry about, ‘I have to do this, but then I also need to have my own scholarship that I can disseminate.’ Then the workload would have been less. It’s heavier if you have to do both. That would also create a symbiosis between doing this work and your scholarship. So, if there was some dissemination built in and engagement with that part of the scholarship, I think that would’ve made it a lot easier.

– Grand Valley State University TEP administrator

Faculty members started a curricular review to embed PBL into the TEP so that it was not isolated in one or two courses. However, other school requirements (e.g., accreditation) took precedence and the project was not completed. Some faculty members are still planning to implement PBL in their courses, including methods and assessment courses at the undergraduate level.

Policies and structures

During the first two years of the project, faculty members described challenges to aligning requirements for *Out of the Gate* and use of PBL with general student teaching requirements. Therefore, the university trained field coordinators (part-time staff members, usually former or retired teachers) in PBL to support their supervision of preservice teachers during their student teaching and trained staff members from the Center for Partnerships on how to observe PBL in the classroom.

While this helped to align expectations across the TEP, secondary-level content teachers were operating out of a separate department within the university and were less inclined to participate. This meant that secondary preservice teachers did not typically get PBL in their coursework until their student-teaching semester.

Relationships with partner districts

PBL was a good fit for some district partners. In fact, some of the participating school districts were already implementing PBL regularly. Faculty members have built ongoing initiatives that involve PBL and place-based education with local partners, but in interviews they said they would have to wait until after the COVID-19 pandemic to determine whether *Out of the Gate* strategies would be part of that work.

Other district partners had strict curriculum requirements that made PBL integration challenging. Cooperating teachers at Grand Valley State University's participating districts were slightly less likely to report being very or extremely likely to suggest PBL to colleagues (74 percent) compared to University of Mary (88 percent) and Otterbein University (89 percent).

Conclusion

While the experience with *Out of the Gate* varied at each university, we found five conditions to be supportive of PBL implementation across all three TEPs.

- **A culture that supports innovative practice.** PBL facilitation was described as an iterative process in which participants grew their projects through trial and error. A culture of learning and innovation at the university and district or school level was crucial for PBL implementation. This included a belief that all students would benefit from learning through PBL.
- **TEP-level leader support for implementation.** Enthusiastic TEP leader support was needed for *Out of the Gate* implementation. This support included dedicated TEP staff time to support implementation for *Out of the Gate*.
- **Strong TEP-district partnerships.** Strong district leadership, regular and enthusiastic communication, and system support for implementing PBL were crucial conditions to supporting PBL in the districts. Building on existing TEP-district partnerships was useful for implementation, as well as the commitment of district resources (e.g., substitutes for cooperating teacher participation in trainings).
- **Dedicated time for planning and collaboration.** Dedicated time for cooperating and preservice teacher collaboration was cited as the most useful project element for PBL success. Faculty member collaboration (e.g., professional learning community time) also supported PBL implementation.
- **Quality training and resources.** Participants from all universities said PBLWorks' tools, resources, and examples were helpful in developing their knowledge of and engagement with PBL. Participants noted that experiencing PBL themselves in PBL Slice was helpful, while also highlighting the importance of the space for collaboration and planning that the initial trainings offered.

Finally, Education Northwest has four primary recommendations for future programming and research.















- **Gauge university and district partner readiness.** When implementing programming in new site, look for conditions that support implementation, such as a culture of innovation, leader support, and strong TEP-district partnerships.
- **Support faculty member implementation in the university context.** Faculty members recommended more examples of PBL implementation in the context of higher education, as well as guidance on using their work in *Out of the Gate* to support research and publication requirements.
- **Further investigate the project impacts on outcomes for K–12 students.** Provide a deeper look at how preparing preservice teachers in PBL impacts the outcomes of students in various student groups, particularly Black and Brown students.

- **Continue to engage with past program participants.** Faculty members, cooperating teachers, and preservice teachers expressed interest in continued updates from PBLWorks about the latest resources and research about PBL, as well as an opportunity to connect with and hear from others who had gone through *Out of the Gate*. Many faculty members wanted to share ideas across universities, and preservice and cooperating teachers would like an avenue to share resources and challenges among past participants.

Appendix

This evaluation examined the extent to which *Out of the Gate: Preparing Preservice Teachers to Use Project Based Learning (PBL) Through PBL* made progress toward the project’s goals: to build the capacity of teacher education program faculty members to prepare teachers to be ready “out of the gate” to use high quality PBL as a core instructional strategy with all students. High quality PBL is defined by *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices* (box A1).

Box A1. Definitions of Gold Standard Design Elements and Project Based Teaching Practices

Seven Essential Project Design Elements			Seven Project Based Teaching Practices		
 <p>A Challenging Problem or Question The project is framed by a meaningful problem to be solved or a question to answer at the appropriate level of challenge.</p>	 <p>Sustained Inquiry Students engage in a rigorous, extended process of posing questions, finding resources, and applying information.</p>	 <p>Authenticity The project involves real-world context, tasks and tools, quality standards, or impact, or the project appeals to personal interests, concerns, and issues to the students' lives.</p>	 <p>Design & Plan Teachers create or adapt a project for their context and students, and plan its implementation from launch to culmination while allowing for some degree of student voice and choice.</p>	 <p>Align to Standards Teachers use standards to plan the project and make sure it addresses key knowledge and understanding from subject areas to be included.</p>	 <p>Build the Culture Teachers explicitly and implicitly promote student independence and growth, open-ended inquiry, team spirit, and attention to quality.</p>
 <p>Student Voice & Choice Students make some decisions about the project, including how they work and what they create, and express their own ideas in their own voice.</p>	 <p>Reflection Students and teachers reflect on the learning, the effectiveness of their inquiry and project activities, the quality of student work, and obstacles that arise and strategies for overcoming them.</p>	 <p>Critique & Revision Students give, receive, and apply feedback to improve their process and products.</p>	 <p>Manage Activities Teachers work with students to organize tasks and schedules, set checkpoints and deadlines, find and use resources, create products and make them public.</p>	 <p>Scaffold Student Learning Teachers employ a variety of lessons, tools, and instructional strategies to support all students in reaching project goals.</p>	 <p>Assess Student Learning Teachers use formative and summative assessments of knowledge, understanding, and success skills, and include self and peer assessment of team and individual work.</p>
	 <p>Public Product Students make their project work public by sharing it with and explaining or presenting it to people beyond the classroom.</p>			 <p>Engage & Coach Teachers engage in learning and creating alongside students, and identify when they need skill-building, redirection, encouragement, and celebration.</p>	

Source: PBLWorks program materials.

This evaluation was guided by the evaluation questions outlined in box A2. To address these questions, we use a mixed-methods approach, including surveys, interviews, and focus groups with university faculty members, cooperating teachers, and preservice teachers (table A1). We also conducted observations of faculty members at each TEP; however, the COVID-19 pandemic impacted our ability to complete these over multiple years, so analysis was limited.

Box A2. Detailed evaluation questions

1. To what extent are the *Out of the Gate* activities implemented as intended? Does implementation change from Year 1 to Year 2 and from Year 2 to Year 3?
2. How do TEPs change how they prepare preservice teachers with PBL over the course of *Out of the Gate*?
3. What are the similarities and differences in how *Out of the Gate* is implemented and experienced across the TEPs?
4. How and to what extent do *Out of the Gate* faculty members promote PBL among preservice teachers? How does their implementation of PBL change over time?
5. What supports and challenges do TEP participants experience related to the implementation of *Out of the Gate*? How can these supports be sustained and these challenges overcome?
6. How do *Out of the Gate* faculty members', cooperating teachers', and preservice teachers' knowledge, classroom practice, confidence, and attitudes related to PBL change over time?

Evaluation methods

Survey respondents answered questions regarding their beliefs about, knowledge of, and confidence related to PBL; their teaching practice; and their experiences with *Out of the Gate*. These survey responses were combined across the four years of the project and were analyzed using descriptive statistics. We used Pearson's correlation to examine the relationship between faculty project facilitation, years of experience in the university or K–12 setting, years a faculty member participated in *Out of the Gate*, and the year they participated. We found no statistically significant relationships ($p < .05$) between faculty project facilitation and these variables.

We asked interviewees about their experiences related to PBL, their teaching practice, their experiences with *Out of the Gate*, systemic changes that appeared to be occurring at their institution, and what was needed for their university to sustain the progress it had made with *Out of the Gate*. We recorded, transcribed, and analyzed each of the interviews.

Table A1. Survey and interview participants varied by year (counts)

Group	Year	Surveys	Interviews
Faculty members^a	2017-18	24	-
	2018-19	21	15
	2019-20	21	17
	2020-21	2 ^b	8
Cooperating teachers	2017-18	45	-
	2018-19	36	-
	2019-20	36	12 ^c
	2020-21	5 ^b	1
Preservice teachers	2017-18	41	-
	2018-19	31	-
	2019-20	26	10
	2020-21	3 ^b	-
Alumni	2017-18	-	-
	2018-19	10	-
	2019-20	5	-
	2020-21	6 ^b	2
Other	2017-18	-	-
	2018-19	-	-
	2019-20	-	-
	2020-21	-	5 ^d

^a This represents counts of individual interviews. Some faculty members participated in two or three years of interviews and are thus represented in this table more than once.

^b Due to the small number of participants in 2020-21 surveys, these responses are only included in by-university reporting, rather than by-year reporting.

^c Three of these participants were in a single focus group.

^d This included one administrator from each school and two district partners.

Select tables by university and year

Faculty members, cooperating teachers, and preservice teachers often reported using *Gold Standard Project Based Teaching Practices* in their projects (table A2).

Table A2. Percentage of survey respondents who reported using Gold Standard Project Based Teaching Practices in their projects

	University of Mary			Otterbein University			Grand Valley State University		
	2017-18 (n = 43)	2018-19 (n = 20)	2019-20 (n = 23)	2017-18 (n = 14)	2018-19 (n = 18)	2019-20 (n = 18)	2017-18 (n = 26)	2018-19 (n = 26)	2019-20 (n = 27)
Key knowledge, understanding, and success skills	100%	97%	96%	100%	95%	100%	96%	93%	100%
Challenging problems or questions	100%	97%	96%	100%	95%	100%	92%	93%	100%
Sustained inquiry	98%	97%	96%	100%	95%	100%	92%	93%	100%
Authenticity	98%	97%	96%	100%	95%	100%	100%	93%	100%
Student voice and choice	100%	97%	96%	100%	91%	94%	100%	90%	100%
Reflection	100%	97%	96%	100%	95%	100%	88%	93%	96%
Critique and revision	100%	93%	96%	100%	95%	94%	96%	93%	96%
Public product	100%	90%	96%	93%	91%	94%	100%	90%	85%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

The percentage of survey respondents who reported not doing a project was highest in 2017-18, the first year for *Out of the Gate* (table A3).

Table A3. Percentage of faculty members, cooperating teachers, and preservice teachers who use no, 1, 2, 3, or 4 or more projects in their classroom

Number of projects	Faculty members			Cooperating teachers			Preservice teachers		
	2017–18 (n = 17)	2018–19 (n = 43)	2019–20 (n = 18)	2017–18 (n = 45)	2018–19 (n = 35)	2019–20 (n = 34)	2017–18 (n = 39)	2018–19 (n = 28)	2019–20 (n = 26)
None	35%	21%	33%	4%	3%	0%	33%	0%	12%
1	41%	47%	22%	47%	20%	32%	56%	75%	81%
2	24%	32%	28%	29%	31%	21%	10%	14%	4%
3	0%	0%	6%	2%	23%	12%	0%	7%	0%
4 or more	0%	0%	11%	18%	23%	35%	0%	4%	4%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

Tables by year and role across all universities

Faculty members across universities included more *Gold Standard Design Elements* in their projects in 2019-20 than in 2018-19 (table A4).

Table A4. Percentage of respondents reporting use of Gold Standard Design Elements

	Faculty members		Cooperating teachers		Preservice teachers	
	2018-19 (n = 19)	2019-20 (n = 12)	2018-19 (n = 35)	2019-20 (n = 33)	2018-19 (n = 28)	2019-20 (n = 22)
Key knowledge, understanding, and success skills	79%	92%	100%	100%	100%	100%
Challenging problems or questions	79%	92%	100%	100%	100%	100%
Sustained inquiry	79%	92%	100%	100%	100%	100%
Authenticity	79%	92%	100%	100%	100%	100%
Student voice and choice	79%	92%	100%	97%	93%	100%
Reflection	79%	92%	100%	100%	100%	95%
Critique and revision	74%	92%	100%	97%	100%	95%
Public product	58%	92%	100%	94%	100%	86%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2019–2021).

Note: Data for 2017–18 is unavailable for this question.

Faculty members generally reported lower confidence in implementing *Gold Standard Project Based Teaching Practices* than preservice teachers and cooperating teachers (table A5).

Table A5. Percentage of survey respondents indicating they were confident or very confident with implementing high quality projects, by role

	Faculty members			Cooperating teachers			Preservice teachers		
	2017-18 (n = 22)	2018-19 (n = 20)	2019-20 (n = 20)	2017-18 (n = 44)	2018-19 (n = 35)	2019-20 (n = 33)	2017-18 (n = 31)	2018-19 (n = 27)	2019-20 (n = 25)
Design and plan	41%	66%	50%	80%	85%	76%	74%	59%	56%
Align to standards	59%	80%	60%	84%	88%	84%	72%	85%	80%
Build the culture	67%	72%	60%	86%	86%	70%	69%	74%	60%
Manage activities	55%	66%	50%	70%	77%	70%	69%	81%	52%
Assess student learning	68%	62%	60%	82%	69%	76%	69%	67%	56%
Scaffold student learning	55%	64%	65%	68%	77%	67%	79%	78%	52%
Engage and coach	68%	64%	65%	77%	77%	73%	82%	74%	48%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

While cooperating teachers and preservice teachers reported understanding the *Gold Standard Project Based Teaching Practices* all three years, faculty members' understanding increased over time (table A6).

Table A6. Percentage of survey respondents indicating moderate or full understanding of PBLWorks' Gold Standard Project Based Teaching Practices

	Faculty members			Cooperating teachers			Preservice teachers		
	2017-18 (n = 22)	2018-19 (n = 21)	2019-20 (n = 20)	2017-18 (n = 45)	2018-19 (n = 35)	2019-20 (n = 34)	2017-18 (n = 38)	2018-19 (n = 27)	2019-20 (n = 26)
Design and plan	82%	90%	100%	91%	86%	97%	95%	93%	88%
Align to standards	77%	90%	95%	96%	97%	94%	97%	96%	92%
Build the culture	77%	100%	100%	93%	97%	97%	89%	96%	92%
Manage activities	77%	90%	100%	89%	97%	94%	92%	100%	88%
Assess student learning	86%	86%	95%	96%	97%	91%	92%	93%	92%
Scaffold student learning	82%	86%	95%	93%	91%	85%	92%	100%	85%
Engage and coach	82%	90%	95%	91%	94%	91%	95%	93%	92%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

Most survey participants agreed or strongly agreed that PBL is effective for different student groups (table A7).

Table A7. Percentage of survey respondents who agreed or strongly agreed that PBL is effective for different student groups

	Faculty members			Cooperating teachers			Preservice teachers		
	2017-18 (n = 24)	2018-19 (n = 21)	2019-20 (n = 21)	2017-18 (n = 45)	2018-19 (n = 36)	2019-20 (n = 35)	2017-18 (n = 41)	2018-19 (n = 30)	2019-20 (n = 26)
Average students	100%	100%	100%	100%	100%	100%	100%	97%	100%
Performing below grade level	92%	100%	100%	91%	97%	91%	88%	97%	100%
English learners	91%	100%	100%	91%	100%	89%	90%	90%	96%
In special education	96%	100%	100%	96%	97%	91%	93%	90%	85%
Eligible for free or reduced-price lunch	92%	100%	100%	98%	100%	97%	93%	97%	100%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

All survey respondent groups across all years reported largely positive views on PBL (table A8).

Table A8. Percentage of survey respondents who agreed or strongly agreed with positive statements about PBL

	Faculty members			Cooperating teachers			Preservice teachers		
	2017-18 (n = 24)	2018-19 (n = 21)	2019-20 (n = 21)	2017-18 (n = 45)	2018-19 (n = 36)	2019-20 (n = 35)	2017-18 (n = 41)	2018-19 (n = 30)	2019-20 (n = 26)
Incorporating PBL into preservice programs will improve teacher instruction	100%	100%	95%	98%	100%	97%	100%	100%	96%
Incorporating PBL into K–12 education will improve student learning	100%	100%	95%	98%	100%	100%	100%	97%	100%
I consider the PBL training I’ve received from PBLWorks to be high quality	100%	95%	95%	91%	100%	100%	100%	97%	96%
I plan to incorporate PBL into my future work.	100%	100%	95%	100%	100%	100%	95%	97%	100%
Preservice teachers are especially well situated to learning PBL	96%	81%	85%	84%	97%	94%	93%	90%	85%
All teachers could benefit from using PBL	83%	95%	86%	93%	100%	97%	93%	87%	100%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

While most respondents had positive views of PBL, the majority of faculty members and preservice teachers said they would like additional support or training. Many participants in all groups also found it challenging to fit PBL into existing curricula (table A9).

Table A9. Percentage of survey respondents who agreed or strongly agreed with statements about challenges to PBL

	Faculty members			Cooperating teachers			Preservice teachers		
	2017-18 (n = 24)	2018-19 (n = 21)	2019-20 (n = 21)	2017-18 (n = 45)	2018-19 (n = 36)	2019-20 (n = 35)	2017-18 (n = 41)	2018-19 (n = 30)	2019-20 (n = 26)
I need additional support or training to incorporate PBL into my future work	71%	60%	52%	55%	36%	34%	68%	60%	69%
Fitting PBL into existing curricula is challenging	42%	48%	43%	58%	42%	57%	63%	60%	58%
Adding PBL to preservice teaching is just too much for preservice teachers to learn without more teaching experience	8%	19%	14%	20%	14%	26%	17%	13%	8%
I am NOT able to apply what I've learned about PBL to my current work	0%	0%	14%	7%	9%	14%	7%	0%	4%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

The two biggest challenges for faculty members and cooperating teachers were lack of time for implementing projects and lack of planning time (table A10).

Table A10. Percentage of survey respondents who reported the following challenges to implementing PBL in their context

	Faculty members (n = 26)	Cooperating teachers (n = 63)
Lack of time needed to teach projects	65%	49%
Lack of planning time to design projects	27%	52%
Other	27%	13%
Too much (grade-level or standardized) content needs to be covered to allow time for projects	23%	38%
Too much initial effort needed to teach in a new way	12%	3%
Lack of adequate training on PBL	12%	6%
Lack of adequate resources to implement PBL	12%	6%
None	8%	11%
Lack of time to collaborate with other teachers	0%	29%
Non-supportive school or district administration	0%	6%
Lack of collaboration partners (i.e., teaching team)	0%	17%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).

When asked about the challenges that preservice teachers face in implementing PBL, faculty members and cooperating teachers focused on the lack of time for preservice teachers to plan and collaborate (table A11). Alternatively, preservice teachers saw lack of planning and collaboration time as less of a challenge than the lack of time in classroom they needed to teach a project.

Table A11. Percentage of survey respondents who reported the following challenges to preservice teachers implementing PBL

	Faculty members (n = 29)	Cooperating teachers (n = 65)	Preservice teachers (n = 49)
Lack of time to plan a project before student teaching semester begins	66%	72%	43%
Lack of time to collaborate with other preservice or cooperating teachers	62%	62%	29%
Lack of time in the classroom needed to teach projects	59%	54%	53%
Non-supportive school/district administration at placement school	59%	35%	8%
Inexperience with other areas of teaching that take priority over implementing projects (e.g., new teachers must learn classroom management)	59%	66%	37%
Lack of collaboration partners (i.e., teaching team)	59%	40%	18%
Too much grade-level content needs to be covered to allow for time for projects	55%	38%	29%
Other	7%	6%	8%
Lack of adequate training on PBL	0%	25%	4%
Lack of adequate resources to implement PBL	0%	9%	12%
Other licensure requirements take up time and energy	0%	0%	20%
None	0%	0%	10%

Source: Education Northwest analysis of Out of the Gate annual survey responses (2017–2021).