

Building Knowledge *Out of the Gate*: 2020 Evaluation Report

Prepared for PBLWorks and the ECMC Foundation

June 30, 2020

Out of the Gate: Preparing Pre-service Teachers to Use Project Based Learning (PBL) Through PBL is a program that brings together university faculty members, the pre-service teachers they instruct, and the cooperating teachers who mentor pre-service teachers in schools. *Out of the Gate* is designed to transform teacher education programs (TEPs) by providing professional development to faculty members, cooperating teachers, and pre-service teachers. Professional development and coaching provided through PBLWorks gives TEP faculty members and cooperating teachers the skills they need to both teach using projects and support pre-service teachers in implementing PBL out of the gate, that is, as soon as they enter the teaching profession.

Out of the Gate was developed by PBLWorks (formerly the Buck Institute for Education), with support from the ECMC Foundation. Participants receive professional development and ongoing support from PBLWorks. In 2019–20, four TEPs and their local school districts participated in the project: Grand Valley State University (Michigan), Otterbein University (Ohio), University of Mary (with Dickinson State University in North Dakota), and Wichita State University (Kansas). Grand Valley State University, Otterbein University, and University of Mary have participated in the project for three years. This is Wichita State University's first year.

PBLWorks hired Education Northwest to conduct a three-year (2017–2020) external evaluation of the project, with a one-year (2020–2021) extension for added analyses. The purpose of this evaluation is to examine the process of implementing *Out of the Gate*, as well as multilevel outcomes associated with implementation. This annual report provides an analysis of data collected in 2019–20. During this time, the evaluators gathered information through:

- PBLWorks attendance data and feedback forms
- The Year 3 survey with faculty members, pre-service teachers, and cooperating teachers
- Interviews with TEP faculty members
- Interviews and focus groups with cooperating teachers and pre-service teachers
- Visits to TEPs

The primary focus of this report is Year 3 implementation. Comparative analyses of the Year 1 (2017–18), Year 2 (2018–19), and Year 3 (2019–20) surveys are presented, when appropriate. The final report, including comparative case studies of implementation and outcomes at each of the TEPs, will be available in 2021. Methods and data sources are in appendix A. In addition, the

COVID-19 pandemic affected some implementation and evaluation activities conducted in 2020. Where relevant, the report describes activities that were adjusted to deal with this disruption.

Evaluation questions and key findings

To what extent are the Out of the Gate activities implemented as intended?

- Participation in *Out of the Gate* activities varied by TEP.
- Most participants were satisfied with *Out of the Gate* activities and felt that facilitators were engaging and knowledgeable.

How do Out of the Gate faculty members', cooperating teachers', and pre-service teachers' knowledge, classroom practice, confidence, and attitudes related to PBL change over time?

- Nearly 90 percent of all survey respondents—faculty members, cooperating teachers, and pre-service teachers—reported facilitating a project in their classroom and including most, if not all, of PBLWorks' *Gold Standard Design Elements*.
- Pre-service and cooperating teachers reported using *Gold Standard Project Based Teaching Practices* in their classroom, but faculty members' observed projects used fewer of these practices in 2019–20.
- Although faculty members and cooperating teachers continued to report high levels of understanding of PBLWorks' *Gold Standard Project Based Teaching Practices*, pre-service teachers reported less understanding than in prior years.
- Overall, fewer participants reported confidence in implementing high-quality projects in 2019–20 than in prior years, particularly among pre-service teachers.
- Faculty members and cooperating teachers continued to report positive attitudes toward PBL, but pre-service teachers' reported attitudes were lower than in prior years.
- Observations of faculty members' classrooms showed that faculty members who implemented projects are in the beginning stage of developing PBL skills.

How and to what extent do Out of the Gate faculty members promote PBL among pre-service teachers? How does their implementation of PBL change over time? How do TEPs change how they prepare pre-service teachers with PBL over the course of Out of the Gate?

- Faculty members promote PBL among pre-service teachers by facilitating, teaching, and encouraging the use of PBL.
- Faculty members' *confidence* in implementing PBL to prepare pre-service teachers increased over time.
- Although the practices of individual faculty members changed, few structural changes in TEP practices occurred.

What supports and challenges do TEP participants (faculty members, as well as pre-service and cooperating teachers) experience related to the implementation of Out of the Gate? How can these supports be sustained and these challenges overcome?

- Some faculty members, cooperating teachers, and pre-service teachers said they face challenges with the instructional time needed to implement PBL. About half of cooperating teachers and pre-service teachers also said they found it challenging to find time to plan projects.
- Implementing *Out of the Gate* requires relationships, resources, and learning by doing.
- Sustaining the progress made through *Out of the Gate* requires continued support and engagement.



Evaluation question:

To what extent are the Out of the Gate activities implemented as intended?

Participation in *Out of the Gate* activities varied by TEP

There were five *Out of the Gate* activities: Project Slice, faculty implementation lab, PBL 101, sustained support visits, and symposia (box 1). PBLWorks provided Education Northwest with data on participation in these activities, and Education Northwest conducted secondary analysis of these data for this report.

Box 1. PBLWorks services as part of Out of the Gate

- **Project Slice**
This two-day workshop is designed to immerse pre-service teachers, cooperating teachers, and faculty members in PBL by having them experience high-quality PBL as learners.
- **Faculty Implementation Lab**
This half-day session helps TEP faculty members, personnel, and administrators articulate a vision for PBL in the TEP and courses. 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**
This three-day, intensive, hands-on professional development session is designed to deepen understanding of PBLWorks' *Gold Standard Design Elements* and *Project Based Teaching Practices* to support pre-service teachers and cooperating teachers as they design the projects they will implement during the student-teaching semester.
- **Sustained Support Visits**
PBLWorks conducts two on-site visits during the student-teaching semester to refine project design and support the implementation of PBL.
- **Symposia**
At these annual events, participating faculty members, cooperating teachers, and pre-service teachers share lessons learned; deepen their understanding; and cultivate support for high-quality PBL among stakeholders in the university, among school and district partners, and across the region and state. Each participating TEP hosts a regional symposium as a culminating event for pre-service teacher placements.

Table 1. Number of participants who attended events by site, 2017–2020

Participant site and role	Project Slice	PBL 101	Sustained support visit 1	Sustained support visit 2
Grand Valley State University				
2017-2018	16	33	21	19
2018-2019	33	29	25	2
2019-2020	28	22	22	19
Otterbein University				
2017-2018	45	22	5	6
2018-2019	39	48	39	35
2019-2020	42	45	33*	10
University of Mary				
2017-2018	66	53	51	52
2018-2019	42	37	32	28
2019-2020	35	33	28	26
Wichita State University				
2019-2020	33	25	14	-

Note. “-” indicates the group was not offered this service. Participants from Dickinson State University are included in the counts for University of Mary.

*This number includes two fall sustained support visit events.

Source: PBLWorks participation records.

Wichita State University faced specific challenges in implementing *Out of the Gate*. These challenges are described in box 2.

Box 2. Wichita State University's challenges with implementing Out of the Gate, according to faculty members and pre-service teachers

The two primary challenges that Wichita State University faculty members and pre-service teachers described were competing district mandates and a lack of clear communication between stakeholders from the outset of the grant.

Although we did not speak with cooperating teachers, faculty members and pre-service teachers said mandates from the district (such as the introduction of a new grading system and the implementation of a new math curriculum) overwhelmed cooperating teachers this year—and the amount of time they needed to dedicate to *Out of the Gate* exacerbated this stress, according to faculty members and pre-service teachers.

During a focus group, pre-service teachers said many of their cooperating teachers were not fully engaged or did not participate in *Out of the Gate*. Due to these factors, most pre-service teachers said they felt they did not have the support they needed to implement PBL in the classroom, especially since they were just becoming familiar with teaching basics (e.g., classroom management) and would have relied heavily on cooperating teachers' support.

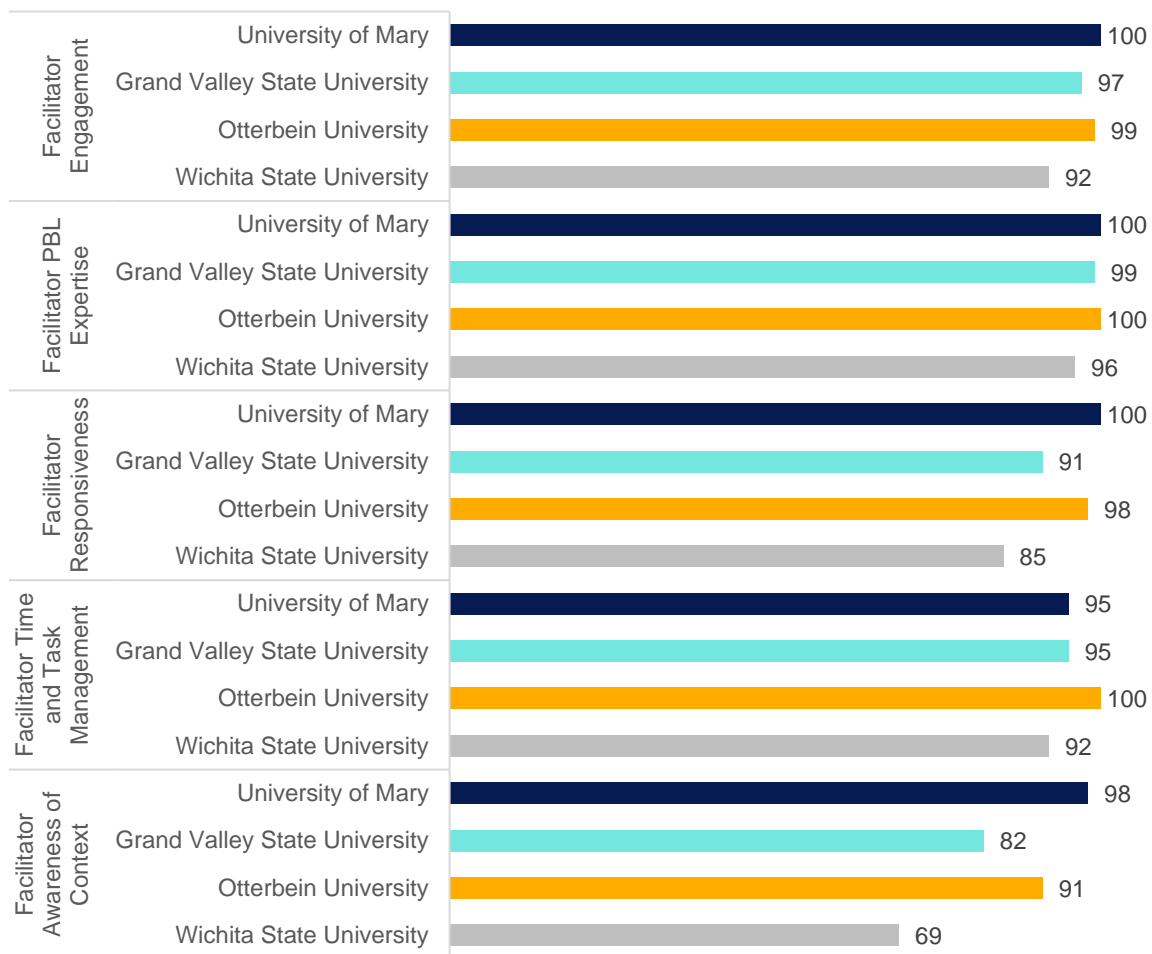
Further, faculty members said they did not have a complete understanding of the commitment they and the partner district were making far enough in advance to build district and cooperating teacher partnerships before the start of the semester, especially with such a large district. Pre-service teachers also said they felt their school's leaders were focused on district-mandated curriculum and were not committed to PBL.

Additionally, pre-service teachers said they had to cancel or cut short their projects due to the COVID-19 pandemic. This meant they were unable to see their projects to fruition.

Most participants were satisfied with *Out of the Gate* activities and felt that facilitators were engaging and knowledgeable

Participants from all universities felt that the *Out of the Gate* activity facilitators were engaging and knowledgeable about PBL. However, about 30 percent of Wichita State University attendees felt that the facilitator did not understand the unique context of their school and district (figure 1). When asked to explain their responses, these respondents said they struggled to align PBL with district-mandated curricula and felt that communication challenges between their school and district regarding PBL exacerbated these challenges. Some said they had hoped facilitators would provide them with more specific recommendations on how to integrate PBL into their district's curriculum requirements.

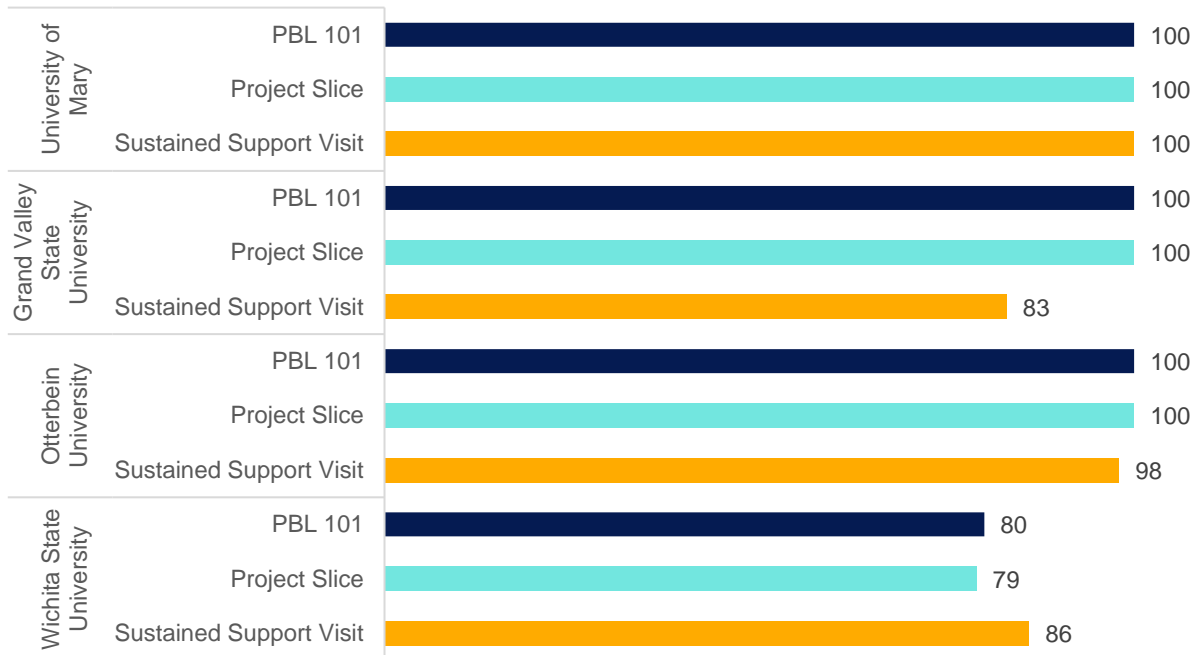
Figure 1. Percentage of Out of the Gate activity attendees who agreed or strongly agreed with statements regarding their activity facilitators' skills, expertise, and understanding



Source: Education Northwest analysis of PBLWorks' data from attendee feedback forms.

Additionally, *Out of the Gate* participants from University of Mary, Grand Valley State University, and Otterbein University reported high levels of satisfaction with services (figure 2). Participants from Wichita State University reported relatively lower satisfaction. When asked to explain their lower ratings, about a fifth of respondents said they found the materials to be repetitive, overwhelming, or challenging to integrate into the existing curriculum. Additionally, a few said they struggled with the time commitment to attend activities.

Figure 2. Percentage of Out of the Gate activity attendees who agreed or strongly agreed that they were very satisfied with the services PBLWorks provided



Source: Education Northwest analysis of PBLWorks' data from attendee feedback forms.

In interviews, cooperating teachers and pre-service teachers were generally positive about their experiences with PBLWorks' trainings and resources provided through *Out of the Gate*. Cooperating teachers were especially enthusiastic about the quality of professional development they received and felt that the resources PBLWorks provided were of high quality and useful for implementation. Pre-service teachers appreciated the resources, collaboration time, and opportunity to experience a project as a learner.

I really, really enjoyed Out of the Gate. I didn't know what to expect going into Project Slice. And then they told us, "Oh, it's going to be a mini-project so you know what your kids are going through when they do PBL." And I thought that was really fun. I got super into it really quickly. And then PBL 101 was a lot of fun too. After Project Slice, I really, really looked forward to November. I was very excited to go to PBL 101, plus it was with our same facilitators, and they were amazing people. I love both of them.
(Pre-service teacher)



Evaluation question:

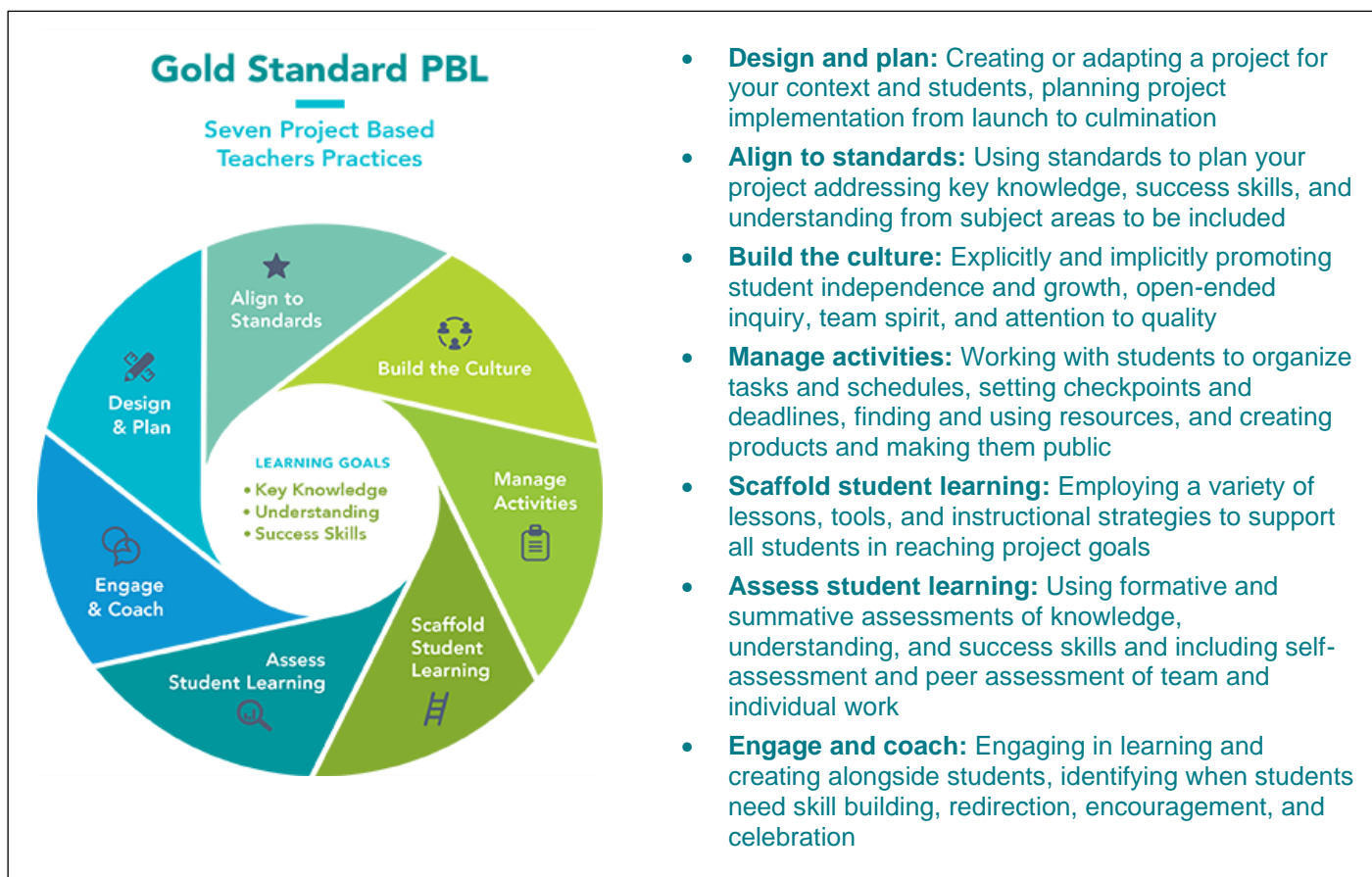
How do Out of the Gate faculty members', cooperating teachers', and pre-service teachers' knowledge, classroom practice, confidence, and attitudes related to PBL change over time?

Nearly 90 percent of survey respondents reported facilitating a project in their classroom and including most, if not all, of PBLWorks' *Gold Standard Design Elements*

Number of projects

In the Year 3 survey, participants reported their use of projects in their teaching throughout 2019–20 (table 2). Respondents were prompted to think of “projects” as PBL using PBLWorks' *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices* (box 3).

Box 3. PBLWorks' Gold Standard Project Based Teaching Practices



In Year 3, about 66 percent of university faculty members reported including a high-quality project in at least one of their courses compared with 62 percent in Year 1 and 75 percent in Year 2 (see the second interim evaluation report and Year 2 annual evaluation report for these results). In interviews, some cooperating teachers and pre-service teachers said projects they had planned had either been canceled or cut short due to the COVID-19 pandemic. However, all cooperating teachers and 90 percent of pre-service teachers reported teaching at least one high-quality project in their classroom this year.

Table 2. Projects reported during 2019–20, by role

Number of projects	University faculty members*	Cooperating teachers	Cohort 3 pre-service teachers
None	33%	0%	10%
1	29%	33%	85%
2	21%	22%	3%
3	8%	11%	0%
4 or more	8%	33%	3%

* University faculty members were asked about the number of courses including projects. All other survey participant groups were asked about the number of projects.

Note: University faculty members (N = 24), cooperating teachers (N = 36), Cohort 3 pre-service teachers (N = 39). Percentages may not total 100 due to rounding.

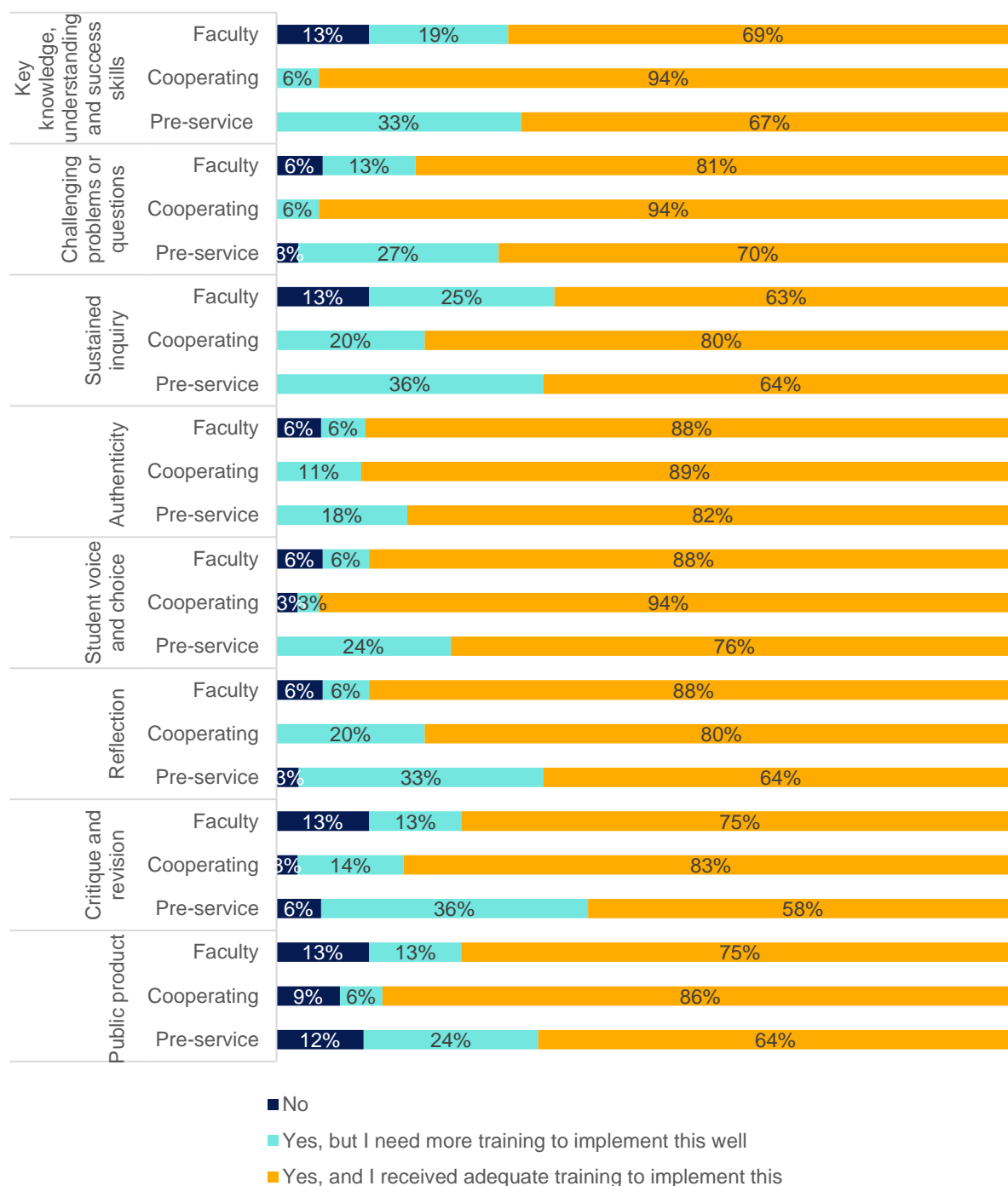
Source: Education Northwest analysis of participant survey data.

Overall, 100 percent of cooperating teachers reported integration of PBL into classroom practices. In addition, cooperating teachers indicated in surveys that 94 percent of the projects they implemented were facilitated with their pre-service teacher.

Quality of projects

In addition to tracking the number of projects that participants facilitated, the evaluation collected self-reported data about the quality of projects. Participants indicated which of PBLWorks' *Gold Standard Design Elements* they included in their projects and whether they felt their training was sufficient for them to include each element (figure 3). Cooperating teachers and pre-service teachers who facilitated projects included nearly all *Gold Standard Design Elements* in their projects, with the exception of a public product and opportunities for critique and revision, which fewer than 15 percent of teachers included. Most faculty members included all *Gold Standard Design Elements*. Additionally, most participants felt they had the training needed to implement each of these elements, although cooperating teachers were consistently higher in this regard (figure 3).

Figure 3. Percentage of faculty members, cooperating teachers, and pre-service teachers who indicated they used PBLWorks' Gold Standard Design Elements in their projects, 2019–20



Note: Percentages may not total 100 due to rounding.

Source: Education Northwest analysis of participant survey data.

In interviews, most cooperating teachers said they were already facilitating projects or using some PBL teaching practices before they participated in *Out of the Gate* activities, but a few said they were teaching just “dessert” projects or that their projects did not include PBLWorks’ *Gold*

Standard Design Elements. They also said participation in *Out of the Gate* helped them refine their process, as well as improve their work through access to tools and resources.

My class did projects, but I wouldn't say "project-based learning" because it was so tightly controlled by me and by the content standards and those kinds of things. ... So, I'm not an expert by any stretch since my student teacher and I just did one project-based learning unit this year, but I'm excited for the future and collaborating with my language arts team to move our whole department forward. (Cooperating teacher)

Pre-service and cooperating teachers reported using *Gold Standard Project Based Teaching Practices* in their classroom, but faculty members' observed projects used fewer of these practices in 2019–20

This increased knowledge of *Gold Standard Design Elements* also translated to broader classroom practice. A few cooperating teachers and pre-service teachers said learning about PBLWorks' *Gold Standard Design Elements* was important not only for class time they spent facilitating a project but also for transforming their classroom practice.

It was nice to find pieces of PBL that I would use in my everyday teaching when I'm not doing PBL, like being an authentic teacher or having authentic learning, giving the students more voice and choice with their projects or how they present using a public audience, rubrics. I think it gave me a lot of skills that will help me just in everyday teaching. (Pre-service teacher)

Use of *Gold Standard Design Elements* in observed classes

In addition to reviewing faculty members' self-reports, we observed their classrooms at University of Mary and Wichita State University in spring 2020. In each classroom observation, we evaluated the project based on the *PBLWorks Gold Standard Project Based Teaching Practices* rubric. Four full class periods were observed with three faculty members at University of Mary and Wichita State University. To evaluate faculty members' use of projects, we developed a rating system that categorizes projects based on the following metric: 1 = beginning PBL, 2 = developing PBL, 3 = Gold Standard PBL.

On average, the three faculty members who were observed implementing projects are at or nearing the "developing PBL" stage in most of PBLWorks' *Gold Standard Project Based Teaching Practices* (table 4).

Table 4. Ratings of university faculty members' use of projects based on PBLWorks' Gold Standard Project Based Teaching Practices

Practice	2019–20 average
Design and plan	1.75
Align to standards	2.00
Build the culture	2.00
Manage activities	1.75
Scaffold student learning	1.50
Assess student learning	1.75
Engage and coach	2.00
Number of classes rated	4

Note: 1 = beginning PBL, 2 = developing PBL, and 3 = Gold Standard PBL. These ratings are based on classroom observations in which PBL was occurring, not in which PBL was discussed. These ratings also include a review of artifacts and brief discussions with students and faculty members about their project.
Source: Education Northwest analysis of classroom observation data.

These analyses are limited by several factors: selection bias of the faculty members willing to have us observe their classrooms, the small number of classrooms we were able to observe, and the ability to observe all elements of *Gold Standard Project Based Teaching Practices* in a single observation. Thus, these findings should be taken as illustrative rather than indicative of the quality of projects in the university setting.

Planned trips to Grand Valley State University and Otterbein University were canceled due to the COVID-19 pandemic. For these universities, we reviewed faculty member interviews and artifacts of projects provided by faculty members to develop an understanding of their projects. We then used their descriptions and the artifacts, including syllabi and slide decks, to build a description of the projects they designed for their courses. The descriptions of these projects, as well as those that were observed in classrooms, are in appendix B.

Based on artifacts collected and classroom observations, as well as brief conversations with both faculty members and pre-service teachers, projects were introduced in these university-level classrooms to increase student engagement, capture the “real life” and authentic nature of PBL, and teach tangible classroom management skills. Faculty members often used resources from the *PBLWorks* website to develop their unit plans, grading rubrics, and other materials to implement and teach projects. Faculty members also said they incorporated real-world standards into their plans and organized classrooms to encourage student collaboration and small-group discussion.

Although faculty members and cooperating teachers continued to report high levels of *understanding of PBLWorks’ Gold Standard Project Based Teaching Practices*, pre-service teachers reported less understanding than in prior years

Participants rated their understanding of PBLWorks’ *Gold Standard Project Based Teaching Practices* on a four-point scale: no understanding, little understanding, moderate understanding, and full understanding (table 5). In 2019–20, at least 80 percent of faculty members and cooperating teachers indicated moderate or full understanding of each practice. Pre-service teachers in Cohort 3 reported a slightly lower ranking for “align to standards,” “manage activities,” and “scaffold student learning.”

Table 5. Percentage of participants indicating moderate or full understanding of PBLWorks’ Gold Standard Project Based Teaching Practices

Gold Standard Project Based Teaching Practices	University faculty members			Cooperating teachers			Pre-service teachers		
	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20
	(N = 26)	(N = 25)	(N = 26)	(N = 54)	(N = 35)	(N = 36)	Cohort 1	Cohort 2	Cohort 3
<i>Design and plan</i>	81	92	100	89	86	97	95	93	90
<i>Align to standards</i>	81	92	96	96	97	94	95	93	79
<i>Build the culture</i>	81	96	96	94	97	97	90	97	82
<i>Manage activities</i>	73	88	100	91	97	94	93	100	80
<i>Scaffold student learning</i>	77	84	92	94	91	86	91	100	75
<i>Assess student learning</i>	88	84	96	94	97	92	93	93	82
<i>Engage and coach</i>	81	92	96	91	94	92	95	93	82

Source: Education Northwest analysis of participant survey data.

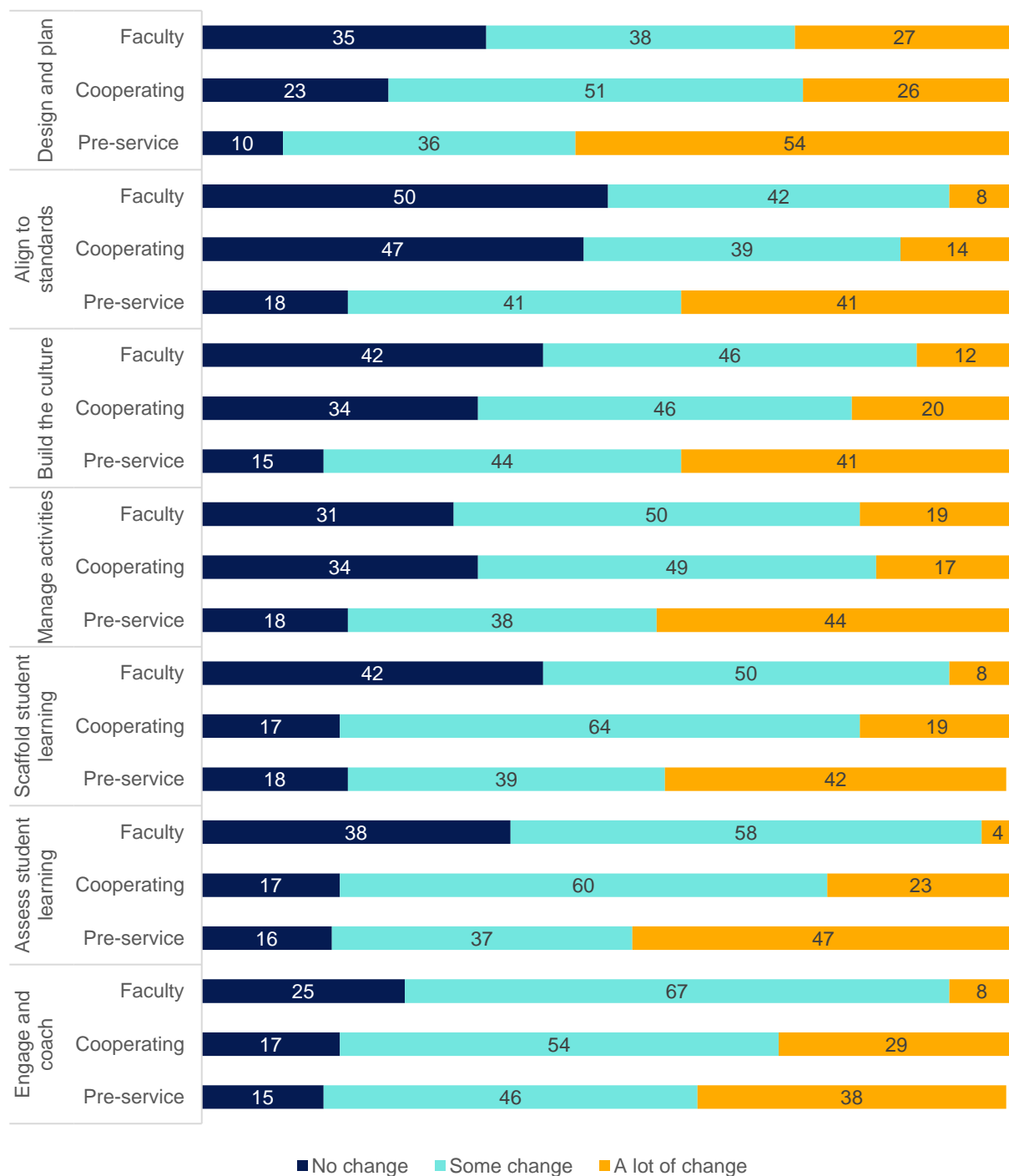
More faculty members reported moderate or full understanding of many of PBLWorks’ *Gold Standard Project Based Teaching Practices* between 2017–18 and 2018–19. These gains grew in 2019–20. Cooperating teachers and pre-service teachers reported high levels of understanding of all of PBLWorks’ *Gold Standard Project Based Teaching Practices* in 2017–18 and 2018–19. Cooperating teachers’ understanding remained consistent in 2019–20, but fewer pre-service teachers in Cohort 3 reported moderate or full understanding. For example, although all pre-service teachers in 2018–19 indicated that they understood how to manage activities and scaffold student learning, 80 percent and 75 percent of pre-service teachers, respectively, reported understanding of these practices in 2019–20.

Participants also rated whether their knowledge of PBLWorks’ *Gold Standard Project Based Teaching Practices* had changed over the last year due to their participation in *Out of the Gate* (figure 4). On average, more pre-service teachers than cooperating teachers or faculty members attributed a change in their knowledge to participation in the program. In 2018–19, more cooperating teachers attributed their change to *Out of the Gate*. This could be because 83 percent

of faculty members and 46 percent of cooperating teachers have experienced more than one year of the program.

Faculty members and cooperating teachers noted the most change in their ability to design and plan PBL, manage activities, and engage and coach. They noted the least change in their ability to align projects to standards. Over 80 percent of pre-service teachers attributed some or a lot of change in all areas of their understanding of PBLWorks' *Gold Standard Project Based Teaching Practices to Out of the Gate*.

Figure 4. Percentage of participants attributing increases in their understanding of PBLWorks' Gold Standard Project Based Teaching Practices to participation in Out of the Gate



Note: Percentages may not total 100 due to rounding.

Source: Education Northwest analysis of participant survey data.

Overall, fewer participants reported *confidence* in implementing high-quality projects in 2019–20 than in prior years, particularly among pre-service teachers

Participants rated their confidence with implementing high-quality projects using PBLWorks’ *Gold Standard Project Based Teaching Practices* on a four-point scale: not at all confident, somewhat confident, confident, and very confident (table 6).

Table 6. Percentage of participants indicating they were confident or very confident with implementing high-quality projects

Gold Standard Project Based Teaching Practices	University faculty members			Cooperating teachers			Pre-service teachers		
	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20
	(N = 26)	(N = 24)	(N = 26)	(N = 54)	(N = 35)	(N = 35)	Cohort 1 (N = 41)	Cohort 2 (N = 30)	Cohort 3 (N = 37)
Design and plan	38	50	54	81	86	71	72	60	52
Align to standards	58	75	65	87	89	82	72	83	71
Build the culture	68	63	58	85	86	69	72	73	47
Manage activities	54	63	54	71	77	69	72	80	51
Scaffold student learning	58	58	65	67	77	66	74	67	49
Assess student learning	69	58	64	81	69	74	72	80	49
Engage and coach	69	58	69	77	77	71	81	73	49

Source: Education Northwest analysis of participant survey data.

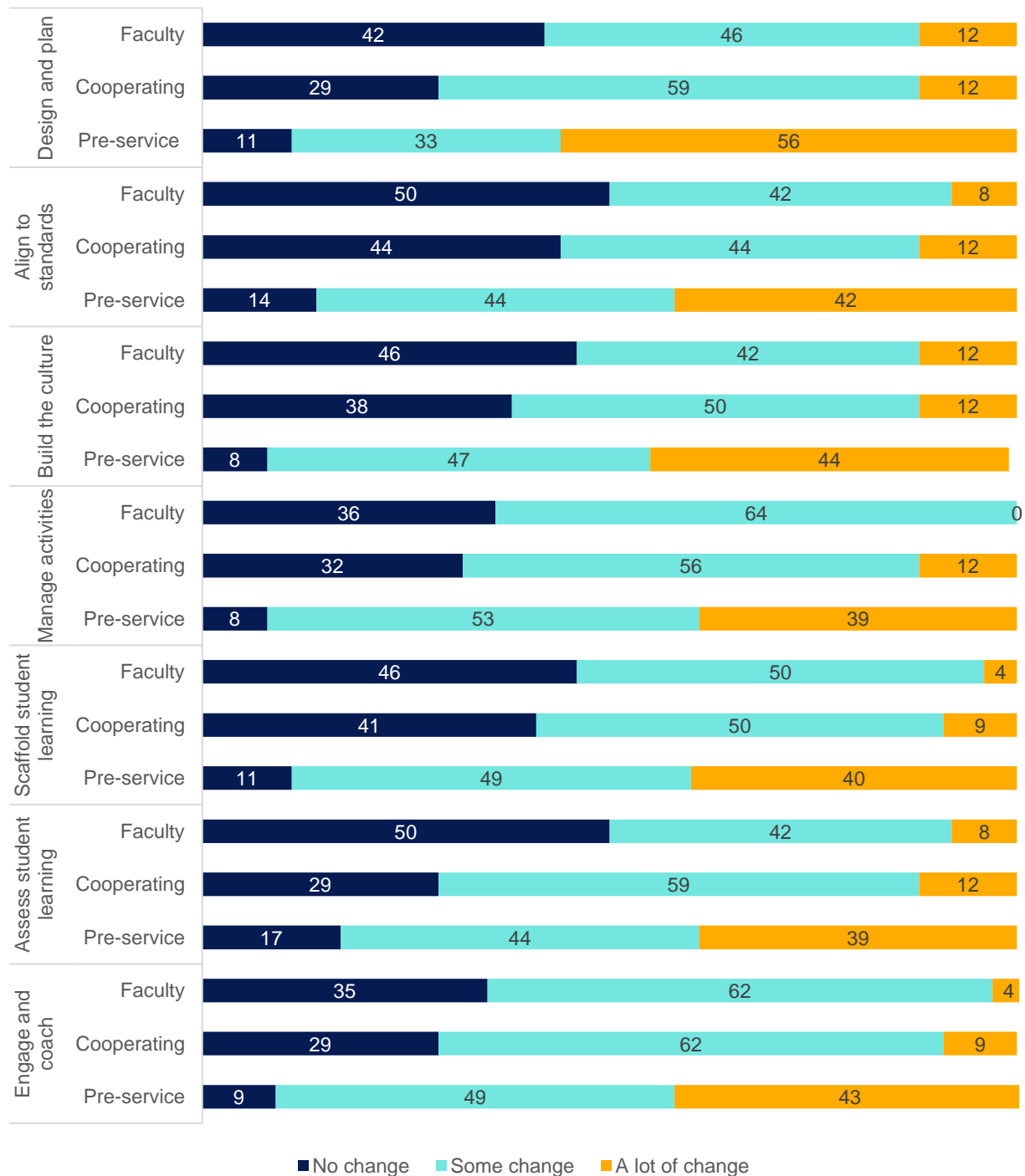
Overall, fewer participants expressed confidence in their ability to implement PBLWorks’ *Gold Standard Project Based Teaching Practices* (see table 6) than in their understanding of those practices (see table 5). Compared with university faculty members, a higher percentage of cooperating teachers across all project years said they were confident with implementing PBLWorks’ *Gold Standard Project Based Teaching Practices*. However, from 2017–18 to 2019–20, the percentage of cooperating teachers reporting confidence declined notably in designing and planning projects (81 percent and 71 percent, respectively) and building culture (85 percent and 69 percent, respectively). Fewer Cohort 3 pre-service teachers reported confidence in all areas from 2017–18 and 2018–19 to 2019–20. Although the proportion of Cohort 3 pre-service teachers reporting confidence was below 70 percent in no areas in 2017–18 and in only one area in 2018–19 (designing and planning), it was 51 percent or below in all but one area in 2019–20. These declines may be attributed to the change in population surveyed; this is the first year that Wichita State University’s participants have been included in the survey. Additionally, some pre-service teachers’ classroom experiences were cut short or shifted due to the COVID-19 pandemic. This may have affected their level of confidence, as they did not have the opportunity to see their projects through to completion.

In interviews, most cooperating teachers and pre-service teachers from Grand Valley State University, Otterbein University, and University of Mary said hearing about and experiencing high-quality projects helped build their confidence in facilitating PBL.

When you experience [PBL] the first time, it is hard to visualize the end. And I think a lot of good instruction starts with the end in mind, and you work your way backward. [With PBL] the confidence is very shaky at the beginning because you can't see that it's going to turn out OK, and it turns out great. So, knowing that that happened the first time through gave me a little bit more confidence the second time through. (Cooperating teacher)

Participants also rated the degree to which their confidence with implementing PBLWorks' *Gold Standard Project Based Teaching Practices* changed due to their participation in *Out of the Gate* (figure 5). As with change in understanding of PBLWorks' *Gold Standard Project Based Teaching Practices* (see figure 4), more pre-service teachers than cooperating teachers or university faculty members attributed a change in their confidence to participation in *Out of the Gate*. Over 80 percent of pre-service teachers in Cohort 3 attributed *Out of the Gate* to some or a lot of change in their confidence with implementing PBL using PBLWorks' *Gold Standard Project Based Teaching Practices*. Again, this could be due to the number of faculty members and cooperating teachers who have participated in *Out of the Gate* for more than one year. Faculty members and cooperating teachers noted the most change in their confidence in managing activities and engaging and coaching, and they noted the least change in their confidence in aligning projects to standards, building the culture, and scaffolding student learning.

Figure 5. Percentage of participants attributing an increase in their confidence with implementing PBL using PBLWorks' Gold Standard Project Based Teaching Practices to their participation in Out of the Gate



Note: Percentages may not total 100 due to rounding.

Source: Education Northwest analysis of participant survey data.

Faculty members and cooperating teachers continued to report positive attitudes toward PBL, but pre-service teachers' reported attitudes were substantially lower than in prior years

Most participants agreed with statements that align with the philosophy of *Out of the Gate*: Incorporating PBL can improve teacher instruction and student learning (table 7). Most participants agreed that the training they received was high quality and that they will incorporate PBL into their future work. Additionally, fewer pre-service teachers in Cohort 3 agreed that they were well situated to learn how to use PBL. As with the findings discussed previously, this could be due to the change in participants, particularly with the addition of Wichita State University and the challenges it faced with implementation.

Table 7. Percentage of participants who agreed or strongly agreed with positive statements about PBL and statements about challenges to PBL

	University faculty members			Cooperating teachers			Pre-service teachers		
	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20
	(N = 26)	(N = 25)	(N = 27)	(N = 54)	(N = 36)	(N = 37)	Cohort 1 (N = 41)	Cohort 2 (N = 33)	Cohort 3 (N = 39)
<i>Positive statements about PBL</i>									
Incorporating PBL into pre-service programs will improve teacher instruction	100	100	96	98	100	97	100	100	85
Incorporating PBL into K–12 education will improve student learning	100	100	96	98	100	100	100	97	95
I consider the PBL training I received from PBLWorks to be high quality	96	96	96	93	100	100	100	97	85
I plan to incorporate PBL into my future work	100	96	96	100	100	100	96	97	92
Pre-service teachers are especially well situated to learn how to use PBL	96	84	81	85	97	94	93	91	74
All teachers could benefit from using PBL	86	96	81	94	100	97	91	88	95
<i>Statements about challenges to PBL</i>									
I need additional support to incorporate PBL into my future work	68	54	48	59	36	37	67	61	67
Fitting PBL into existing curricula is challenging	39	52	44	59	42	60	64	55	62
Adding PBL to pre-service teaching is just too much for pre-service teachers to learn without more teaching experience	11	48	15	19	14	25	16	15	21
Adding PBL to pre-service teaching is too much work for university faculty members	0	0	15	6	9	14	9	-	-
I am NOT able to apply what I've learned about PBL to my current work	4	13	7	4	3	14	7	3	18

Note: “-” indicates no data are available for this item.

Source: Education Northwest analysis of participant survey data.

In interviews, faculty members, cooperating teachers, and pre-service teachers expressed mostly positive attitudes about PBL.

I think it's changed my approach in teaching. Based on my philosophy in teaching, I think it really helped me figure out what kind of teacher I want to be, the benefits of PBL use in the classroom, and just aspects of PBL being used in the classroom on a daily basis. I think it's made me a more well-rounded teacher and a teacher that really wants something that's beneficial to the students that makes them want to do something and want to learn, as well as helping me think in the students' perspective a lot more than I did before. (Pre-service teacher)

The exception was Wichita State University, where participants indicated that their struggles with the program affected their attitudes toward PBL. These struggles included feeling as if faculty members, cooperating teachers, and other district partners were not communicating about the expectations of *Out of the Gate* participation and PBL not aligning with district curriculum mandates. These struggles meant that pre-service teachers at Wichita State University did not feel supported by the university or district in their efforts to implement PBL in their classrooms, which “kind of left a bitter taste in [their] mouth for PBL” according to one pre-service teacher.

Attitudes toward using PBL with all students

Participants reported the extent to which they agreed that PBL is effective for different student groups (table 8). Most participants agreed PBL is effective for students who have different circumstances and are performing at a variety of levels. Overall, pre-service teachers were relatively more skeptical of PBL's efficacy for students who have unique learning needs (including students performing below grade level, English learner students, and students enrolled in special education). University faculty members increased their belief in PBL's efficacy from Year 1 to 100 percent across all student groups in Year 2 and Year 3.

Table 8. Percentage of participants who agreed or strongly agreed that PBL is effective for different student groups

	University faculty members			Cooperating teachers			Pre-service teachers		
	2018–17	2018–19	2019–20	2018–17	2018–19	2019–20	2017–18	2018–19	2019–20
	(N = 26)	(N = 25)	(N = 27)	(N = 54)	(N = 36)	(N = 37)	Cohort 1 (N = 41)	Cohort 2 (N = 33)	Cohort 3 (N = 39)
PBL using PBLWorks' <i>Gold Standard Design Elements and Teaching Practices</i> will improve teaching and learning for students who are...									
Average students	100	100	100	100	100	100	100	97	95
Performing below grade level	93	100	100	93	97	92	84	97	87
English learners	93	100	100	91	100	89	87	91	88
In special education	96	100	100	96	97	92	87	91	79
Eligible for free or reduced-price lunch	92	100	100	98	100	98	93	97	95

Source: Education Northwest analysis of participant survey data.

In interviews, both cooperating teachers and pre-service teachers described the benefits they saw for students when implementing PBL in the classroom, especially regarding engagement. A few noted increased mastery of content among students.

I think [PBL] brings lessons and concepts and content to life. I think students are very engaged in what they're doing. I think that they remember it. Just looking at my experience with the second-graders that I did it with—they will take those math skills that they learned in mastery during our project in two weeks and use them for the rest of their life in math ... It takes planning, it takes organization and really thinking through the process. But I think, in the end, it's worth the work and it's worth the time that you put in because the students—you see progress in areas that are crucial to student academic development. (Pre-service teacher)



Evaluation questions:

How and to what extent do Out of the Gate faculty members promote PBL among pre-service teachers? How does their implementation of PBL change over time?

How do TEPs change how they prepare pre-service teachers with PBL over the course of Out of the Gate?

Faculty members promote PBL among pre-service teachers by facilitating, teaching, and encouraging the use of PBL

In both surveys and interviews, about two-thirds of faculty members said they facilitate projects with their pre-service teachers. Most faculty members who do not do so said in interviews that they taught PBL in at least one of their courses. Pre-service teachers from Grand Valley State University, Otterbein University, and University of Mary said most faculty members promoted PBL in their TEPs and were “enthusiastic” about PBL. About half of the pre-service teachers from these universities said that experiencing and learning about PBL in their university courses was useful as they began to facilitate PBL in K–12 classrooms.

Faculty members’ *confidence* in implementing PBL to prepare pre-service teachers increased over time. Faculty members’ reported confidence in supporting pre-service teachers in implementing PBL increased from 2017–18 to 2019–20 (table 9). In 2017–18, 37 to 59 percent of faculty members felt confident in supporting pre-service teachers in *Gold Standard Project Based Teaching Practices*. In 2019–20, 65 to 78 percent felt confident in supporting pre-service teachers’ use of these practices. Cooperating teachers’ confidence in supporting pre-service teachers in implementing PBL varied from year to year, but it dropped below 60 percent for the first time in scaffolding student learning (54 percent) and engaging and coaching (57 percent).

Table 9. Percentage of participants who were confident or very confident in supporting pre-service teachers in implementing PBLWorks’ Gold Standard Project Based Teaching Practices

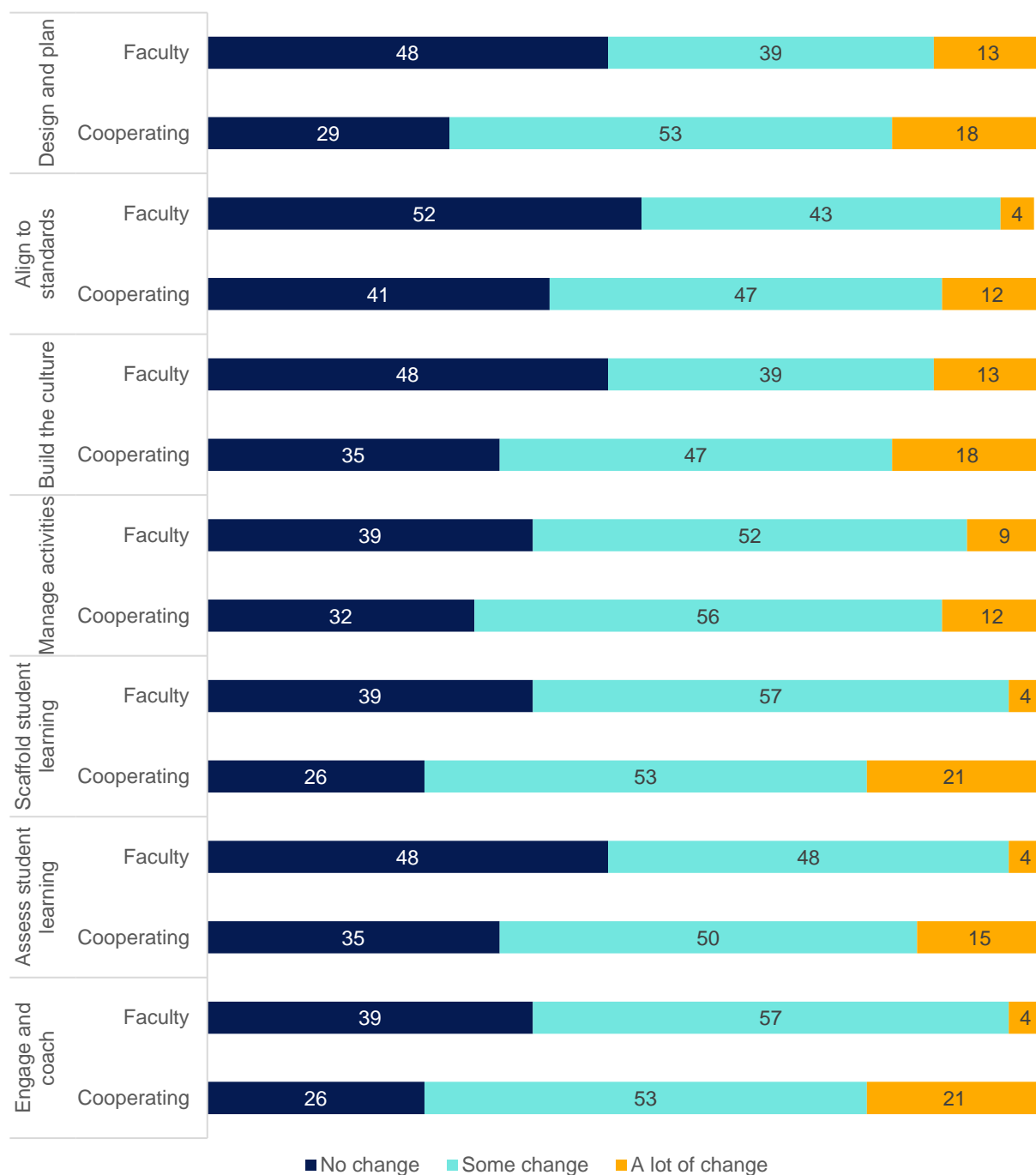
	University faculty members			Cooperating teachers		
	2017–18	2018–19	2019–20	2017–18	2018–19	2019–20
Gold Standard Project Based Teaching Practices	(N = 26)	(N = 25)	(N = 23)	(N = 50)	(N = 35)	(N = 35)
Design and plan	37	52	65	78	85	78
Align to standards	56	56	73	82	88	77
Build the culture	56	52	78	82	82	69
Manage activities	48	56	78	66	76	63
Scaffold student learning	52	52	65	72	68	54
Assess student learning	59	56	69	76	79	69
Engage and coach	59	60	73	68	83	57

Source: Education Northwest analysis of participant survey data.

In interviews, pre-service teachers said support from faculty members and cooperating teachers was key to participation in *Out of the Gate*. They also said regular communication between faculty members and district employees was key to ensuring they received the support they needed.

About a half to three-quarters of faculty members and cooperating teachers felt that their confidence in supporting pre-service teachers in implementing PBLWorks' *Gold Standard Project Based Teaching Practices* had increased due to participation in *Out of the Gate* (figure 6).

Figure 6. Percentage of participants who attributed an increase in their confidence with supporting pre-service teachers in implementing PBLWorks' Gold Standard Project Based Teaching Practices to their participation in Out of the Gate



Source: Education Northwest analysis of participant survey data.

Although the practices of individual faculty members changed, few structural changes in TEP practices occurred

Interviews with faculty members provided an opportunity to examine whether and how these increases in confidence may be translating to shifts in TEPs. However, faculty members described changes in their TEP's approach to teacher preparation as primarily taking place at the instructor level, such as changes to syllabi. Although faculty members described TEP leadership as supportive of PBL—and at times, champions of PBL—most could not identify structural changes (e.g., policies, course requirements, course sequencing) occurring at the TEP to support PBL. The exception was a University of Mary professor who said their teacher leadership master's program now has a class on PBL.

More generally, a few faculty members at Otterbein University and University of Mary said they hoped relationships between their TEP and cooperating district would continue. They also said they hoped they could continue to train cooperating teachers in PBL and to pair them with pre-service teachers interested in PBL. However, it was unclear whether any plans had been made to this effect.¹

¹ Interviews with faculty members from Grand Valley State University, Otterbein University, and University of Mary occurred in fall 2019. Therefore, structural changes may have been planned or solidified between that time and the writing of this report.



Evaluation question:

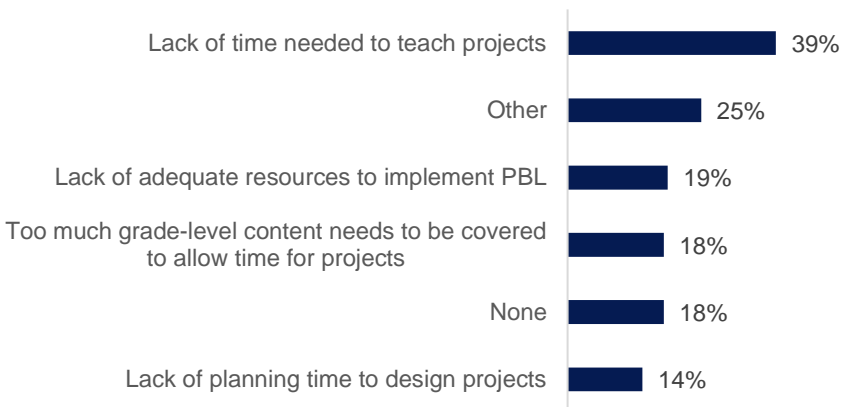
What supports and challenges do TEP participants (faculty members, as well as pre-service and cooperating teachers) experience related to the implementation of Out of the Gate? How can these supports be sustained and these challenges overcome?

Faculty members, cooperating teachers, and pre-service teachers all face challenges with the time needed to implement PBL

Participants reported on the types of challenges they encountered with implementing a project. The most common (which was mentioned by almost half of all survey respondents across all roles) was the time required to execute a project completely in the classroom. Below, we discuss challenges specific to faculty members, cooperating teachers, and pre-service teachers.

Overall, 39 percent of **faculty members** said they lacked the time needed to teach projects, although only 14 percent felt the issue was with planning time (figure 7). In interviews, faculty members said they overcame time-related challenges by implementing more “Project Slice-style” projects, or shorter projects that included many elements of PBL.

Figure 7. Challenges faculty members said they face in implementing projects



Note: Respondents could select all that apply.

Source: Education Northwest analysis of participant survey data.

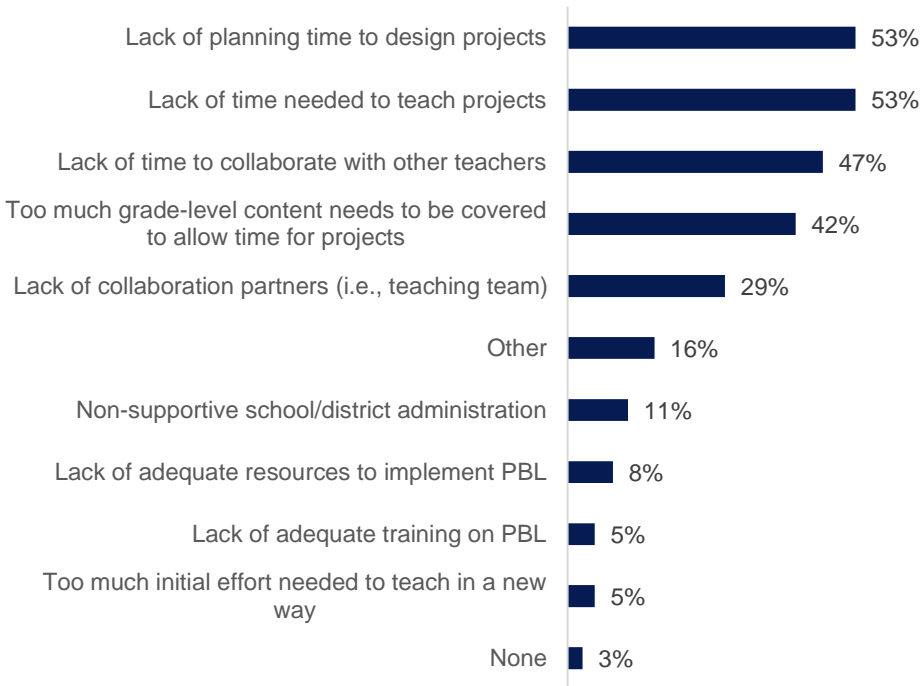
In the survey, faculty members said other challenges include the constraints of a university classroom and feeling like PBL would be redundant based on what other faculty members are teaching. In interviews, they said their greatest challenge to implementing PBL was making it fit in the unique context of the university classroom.

How do you make this doable in the university classroom? Yeah, I could design, and I have done PBL projects where the students have actually done a project, but trying to teach them the parts and pieces so that they can replicate this in their future

classrooms—that was very difficult to do, again, without creating all my own new materials related to it, and I just don't have time for that. (Faculty member)

Cooperating teachers were also asked to indicate which challenges they faced when implementing projects in their classes (figure 8). The top three were lack of planning time (53 percent), lack of teaching time (53 percent), and lack of time to collaborate with other teachers (47 percent).

Figure 8. Challenges cooperating teachers said they face in implementing projects



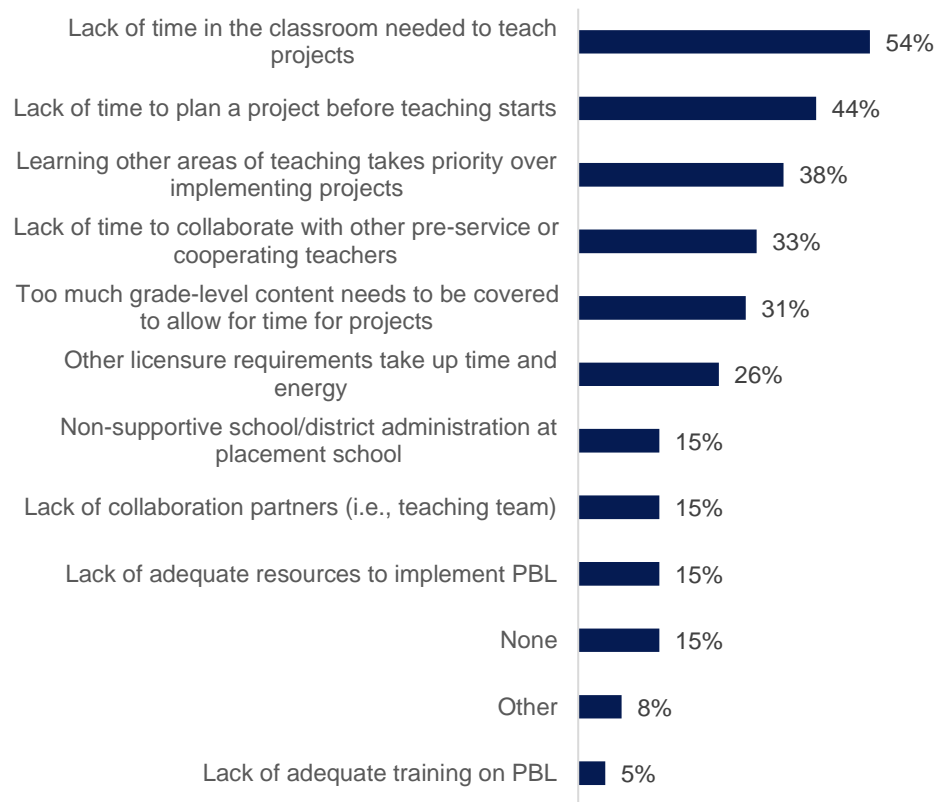
Note: Respondents could select all that apply.

Source: Education Northwest analysis of participant survey data.

Other challenges described in the survey include a difficult schedule, getting students and community partners on board with PBL, and a need to comply with schools' purchased curricula. In interviews, some cooperating teachers with shorter class times (for example fewer than 50 minutes) discussed struggling to fit a project into their class period, especially when projects competed with other standards or frameworks they were mandated to address. Cooperating teachers also said they needed adequate time to plan and collaborate with their pre-service teacher and other teachers. Cooperating teachers at schools with designated collaboration and team time felt this less, and those with less collaboration time or larger, less engaged teams struggled more.

Pre-service teachers also said time was a challenge—specifically, lack of teaching time (54 percent), lack of planning time (44 percent), and lack of time to collaborate (33 percent) (figure 9).

Figure 9. Challenges pre-service teachers said they face in implementing projects



Note: Respondents could select all that apply.

Source: Education Northwest analysis of participant survey data.

In addition, pre-service teachers said other demands, such as the need to learn other areas of teaching (38 percent) and the demands of grade-level content (31 percent) and licensure (26 percent), presented challenges to implementing PBL. Although less than half of survey respondents noted these demands, both faculty members and cooperating teachers expressed concern that pre-service teachers’ engagement with PBL was being limited by their busyness and the demands of the program. However, despite feeling overwhelmed by participating in *Out of the Gate*, pre-service teachers remained positive about their experience.

It was definitely overwhelming, but I really enjoy[ed] the experience, and I feel like I’ve gained a lot that I can pass on to other pre-service teachers or implement in my new position as a teacher. (Pre-service teacher)

Opportunities for improving *Out of the Gate*

Interviewees were asked how *Out of the Gate* activities could be improved, if at all. Although the majority were satisfied with *Out of the Gate* activities, a few cooperating teachers and pre-service teachers said training sessions felt a bit impersonal and that they wished they could have had customized guidance on their own projects during trainings. A few faculty members,

cooperating teachers, and pre-service teachers were interested in extended training, including in-class observation of projects or other sustained follow-up activities with PBLWorks trainers. A few cooperating teachers said they wished all teachers in their school could have access to a brief training on PBL so that when they suggested a project for their team or shared resources, all teachers would have a collective understanding of what it would entail.

In interviews, faculty members said they struggled with system conditions related to grant participation. These issues also varied by university:

- University of Mary faculty members, overall, felt the grant went smoothly but reported that any time being away from their classes for training was a struggle.
- Otterbein University faculty members reported challenges with trying to integrate PBL with the existing demands of both the accreditation process they were going through and with the frameworks and standards they were expected to teach.
- Grand Valley State University faculty members said they struggled with recruitment of cooperating teachers. Some faculty members and cooperating teachers also said they felt that the university was less committed to the program in 2019–20.
- Wichita State University faculty members also struggled with cooperating teacher recruitment due to issues occurring in Wichita Public Schools. Faculty members described the relationship with the district as strained due to existing demands on cooperating teachers' time.

Implementing *Out of the Gate* requires relationships, resources, and learning by doing

TEP-district partnerships are a key systems-level condition necessary for successful implementation

TEP-district partnerships varied considerably across the universities participating in *Out of the Gate*. From both the successes and challenges of these partnerships, faculty members, cooperating teachers, and pre-service teachers emphasized the importance of strong district leadership, regular and enthusiastic communication, and system support for implementing PBL.

Relationships between cooperating teachers and pre-service teachers support the program

Most participants said pre-service teachers participating in *Out of the Gate* benefited substantially from the relationship they developed with their cooperating teacher. In most cases, before *Out of the Gate*, pre-service teachers met their cooperating teacher their first day in the classroom. By participating in *Out of the Gate*, pre-service teachers were able to meet their cooperating teacher sometimes six months before their first day in the classroom. As a result, pre-service teachers were able to form stronger relationships with their cooperating teachers. This was partly due to the additional time they spent together, as well as the shared goal of learning about PBL and designing a project together. This relationship increased the confidence

of pre-service teachers and helped eliminate anxiety and nervousness before they began their student teaching.

Educators need time to participate in *Out of the Gate*, as well as to plan and implement PBL

Some faculty members, cooperating teachers, and pre-service teachers indicated in both surveys and interviews that time was a key challenge to participating in *Out of the Gate*, as well as planning and implementing a project. A few participants said supportive system conditions at the TEP, school, and district level—such as leadership dedicated to PBL, designated time for cooperating teachers and pre-service teachers to plan and collaborate, and adequate instructional time—can help alleviate these challenges.

Pre-service teachers need scaffolded support to engage in PBL

Some pre-service teachers said they felt overwhelmed by *Out of the Gate*, especially the requirements of their degree program. Faculty members and cooperating teachers also described the pre-service teacher experience with *Out of the Gate* as somewhat overwhelming. A few faculty members and cooperating teachers said introducing PBL earlier and more regularly throughout the curriculum may help pre-service teachers ease into their PBL experience with *Out of the Gate* more smoothly and make the whole experience less overwhelming.

Access to PBL tools, resources, and examples is needed for both K–12 and university settings

All participants said PBLWorks' tools, resources, and examples were helpful in developing their knowledge of and engagement with PBL. They also suggested a few areas where these supports could be strengthened. For example, faculty members requested examples of projects being implemented in the unique university setting to help them better understand how to incorporate PBL into their practice. Additionally, a few pre-service teachers said faculty members could use resources on assessing the unique aspects of teaching experiences that include PBL. In the K–12 setting, a few cooperating teachers and pre-service teachers suggested adding resources to support aligning projects to content standards and creating relevant assessments.

Participants were supported in the program by having space to learn by doing

PBL facilitation was described as an iterative process, where participants grew their projects through trial and error. Some faculty members and cooperating teachers emphasized the importance of being able to start with a smaller project, or a “slice,” that would help them get to understand the process and then expanding their projects and building high-quality elements into their practice over time. The support to learn by doing needs to extend beyond *Out of the Gate*. A few pre-service teachers and cooperating teachers reported building *Gold Standard Project Based Teaching Practices* into their everyday teaching. These supports, then, can improve the quality of teaching across all student experiences—even beyond dedicated PBL.

Sustaining the progress made through *Out of the Gate* requires continued support and engagement

Sustaining pre-service teachers' progress requires *follow-up*

Most pre-service teachers from Grand Valley State University, Otterbein University, and University of Mary said they would like to use PBL in their own practice, but about half of these pre-service teachers said they may not feel comfortable facilitating a project right away (depending on factors such as administrative support, their comfort with classroom management, and their ability to integrate PBL into the curriculum). A few pre-service teachers suggested that providing follow-up support would ensure this work happens as intended.

Sustaining faculty members' progress requires *collaboration*

Most faculty members we spoke with who were facilitating projects said they would like to continue doing so. However, they also said they wished they had more opportunities to collaborate with other faculty members on implementing projects in the university setting. A few faculty members said creating opportunities for sharing and collaboration across universities could support these efforts.

Sustaining TEPs' progress requires *financial support*

A few faculty members said that for their TEP to continue with PBL, they need money for trainings and projects—and maybe to incentivize cooperating teacher participation.

Sustaining cooperating teachers' progress requires *leadership support*

All cooperating teachers we spoke with said they want to continue PBL but that they need leadership support at the school and district level to do so.

Many participants would appreciate support from PBLWorks as they transition out of *Out of the Gate*

Most faculty members and cooperating teachers said it would be useful to stay connected to PBLWorks (for example, through check-ins and resource emails) as they transition out of the *Out of the Gate* grant period. A few participants said they would participate in additional or more in-depth training, and others expressed more interest in access to different types of resources. Some participants said they were interested in having PBLWorks observe PBL in their classroom or provide feedback on individual projects. Others said they were looking forward to having time to dive into PBLWorks' online resources and trying new projects before receiving more professional development.

Appendix A: Data Sources and Methods

This evaluation examines the extent to which *Out of the Gate: Preparing Pre-service Teachers to Use Project Based Learning (PBL) Through PBL* is making progress toward the program's goals: to provide teacher education programs (TEPs) with effective instructional methods to train pre-service teachers in PBL and to ensure new teachers employ high-quality PBL in their classroom during pre-service teaching. This evaluation is guided by the evaluation questions outlined in Box A-1. To address these questions, we use a mixed-methods approach, including surveys, interviews, and focus groups with university faculty members, cooperating teachers, and pre-service teachers. We also use observations of faculty members at each TEP.

Box A-1. 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 pre-service 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 pre-service teachers? How does their implementation of PBL change over time?
5. What supports and challenges do TEP participants (faculty members, as well as pre-service and cooperating teachers) 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 pre-service teachers' knowledge, classroom practice, confidence, and attitudes related to PBL change over time?

*This question will be addressed in the Year 4 case study report.

The following is a description of the data collection process, response rate, and participants, organized by data source. It is important to note that surveys, interviews, and observations are all susceptible to response bias; participants who are more involved and interested in *Out of the Gate* and/or PBL may also be more likely to participate in surveys, interviews, and observations.

Participant survey

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*. We administered the survey to 185 university faculty members, cooperating teachers, and pre-service teachers. A total of 105 participants responded to the survey, for a 57 percent response rate (table A-1).

Table A-1. Survey response rates, by TEP and role

TEP	Response rate
Grand Valley State University	53%
University of Mary	50%
Wichita State University	48%
Otterbein University	33%
Role	Response rate
Cooperating teacher	76%
Pre-service teacher, Cohort 3	52%
University faculty member	47%

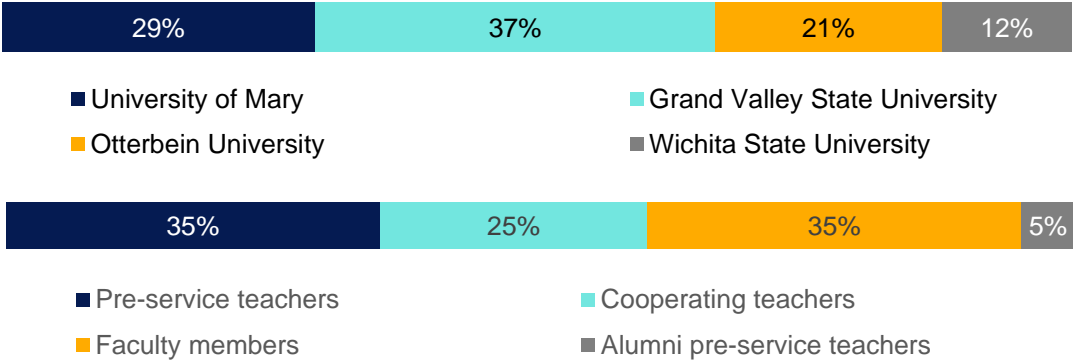
Source: Education Northwest analysis of participant survey data.

We anticipated a drop in response rates due to the COVID-19 pandemic. Faculty members and cooperating teachers were moving their courses online during our survey administration, and pre-service teachers were also adjusting to that change. However, the overall response rate of 57 percent was comparable to the 2018–19 response rate (61 percent) for faculty members, cooperating teachers, and current pre-service teachers.

We also invited 57 alumni from Grand Valley State University, Otterbein University, and University of Mary to participate in our survey. Only five alumni responded, which may be due, in part, to the COVID-19 pandemic. As fewer than 10 alumni responded, we are unable to report on the specifics of their survey responses. However, the combined responses of 2018–19 alumni and 2019–20 alumni will be reported in the 2020–21 final report.

This is Wichita State University’s first year of participation in *Out of the Gate*. As with prior years, the survey sample included more respondents from Grand Valley State University and University of Mary than Otterbein University. Additionally, more cooperating teachers responded to the survey than pre-service teachers or faculty members (figure A-1).

Figure A-1. Percentage of survey respondents from each TEP and role



Source: Education Northwest analysis of participant survey data.

Participant interviews and focus groups

Education Northwest emailed all faculty members participating in *Out of the Gate* to invite them to take part in a 60-minute interview. We interviewed faculty members from Grand Valley State University, Otterbein University, and University of Mary in October and November 2019. Due to their recent inclusion in the program, Wichita State University faculty members were interviewed in spring 2020. 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 is needed for their university to sustain the progress it has made with *Out of the Gate*. We recorded, transcribed, and analyzed each of the interviews. We also conducted a mix of interviews and focus groups with cooperating teachers and pre-service teachers from each TEP.

Table A-2. Interview and focus group participants at each TEP

School	Faculty Members	Cooperating Teachers	Pre-service Teachers
Grand Valley State University	6 interviews	6 interviews	5 interviews
Otterbein University	7 interviews	3 interviews	4 interviews
University of Mary	4 interviews	1 focus group	1 interview
Wichita State University	3 interviews	-*	1 focus group

*As Wichita State University joined the program this year, focus groups and interviews with cooperating teachers and pre-service teachers were expected to take place in Year 4 of the grant. However, we were able to conduct a focus group with pre-service teachers, and information from this focus group is included where applicable.

TEP site visits

Education Northwest visited University of Mary and Wichita State University in February and March 2020. Site visits to Grand Valley State University and Otterbein University were scheduled for March and April 2020, but they were canceled due to the COVID-19 pandemic. We contacted the chair of the department at each TEP to identify an ideal week for a site visit and to help us identify faculty members who would be facilitating a project during our visit. We then emailed faculty members participating in *Out of the Gate* to request that we observe their classroom during the given week. During the site visits, evaluators talked to faculty members and pre-service teachers about the project and then observed their classrooms. Two researchers attended each interview and classroom observation. Together, we reviewed and analyzed all classroom observations as they related to PBLWorks' *Gold Standard Project Based Teaching Practices*. We also collected and analyzed artifacts, including syllabi, unit plans, and teaching aids (e.g., slide decks), when provided.

Contact information for the Education Northwest evaluation team

Dr. Ashlie Denton, ashlie.denton@ednw.org

Dr. Rebecca Merrill, rebecca.merrill@ednw.org

Sara Taylor, sara.taylor@ednw.org

Zoe Velie, zoe.velie@ednw.org

Dr. Julie Petrokubi, julie.petrokubi@ednw.org

Appendix B: Faculty Member Project Examples

Project title: <i>Culturally Responsive Field Trip Project</i>	Driving question: <i>What preparation and strategies employed will assist in making the field trip experience culturally responsive?</i>
Preservice teacher subject areas: <i>History and social studies, math, English</i>	Number of students: 26 Duration of class: 50 minutes
PBL Design Principals: <ul style="list-style-type: none"> • Sustained inquiry * • Authenticity * • Student voice & choice* • Reflection* • Critique & revision* • Public product* 	PBL Teaching Practices: <ul style="list-style-type: none"> • Manage activities* • Align to standards* • Build the culture* • Scaffolding student learning • Assess student learning* • Engage and Coach*
<p>Project Description: This professor designed their PBL project with the intention of aligning a requirement for licensure on Native American culture and history with teaching local cultural competency skills for pre-service teachers. The project is described as a field trip for grade 4 students to a local historical learning site where <i>Out of the Gate</i> preservice teachers will plan activities for students to be a part of a PBL learning experience. This is the professor’s third year implementing this PBL project.</p> <p>Final Product: Preservice teachers work as a team throughout the semester-long course to develop short PBL units that will engage up to 125 students grade 4 students at the outdoor learning site.</p> <p>Classroom experience: During the observation students sat in groups of 4 and enacted their planned projects using a PowerPoint presentation. During the post-observation classroom discussion, preservice teachers said the PBL project is thought provoking, expands their thinking, is challenging, and requires them to gain a deeper knowledge on the topic. Students appreciate the opportunity to work with different grade bands as well as learning how to adapt their lessons depending on the teaching setting. Several students are excited to apply what they have learned to subjects they say are “known to be boring,” noting PBL projects are more engaging for students than a typical worksheet.</p> <p><i>"[I]t ties everything together and it's relating everything back to the real world, which is so important in math because [students] are like, "Oh, when are we going to use this?" And I'm like, "This is exactly what we're using it for." So I think that's really great" –School D Preservice Teacher</i></p> <p><i>"We're trying to teach various aspects of cultural competency to students who are going to be teachers, because their classrooms are rapidly changing, especially from who they are, which is going to be mainly white middle-class folks. So we're trying to teach that. But also, in this state, there's a heavy requirement for licensure on Native American culture and history. We're trying to do it in one class, [where] most institutions offer both classes." –School D Professor</i></p>	
Data: <i>Pre-observation instructor interview, observation rubric and notes, post-observation classroom discussion with pre-service teachers</i>	

*Noted during in-person classroom observation

Project title: <i>Design a lesson plan</i>	Driving question: <i>unknown</i>
Pre-service teacher subject areas: <i>Elementary education, with a focus on math and science</i>	Number of students: 16 Duration of class: 1 hour
Gold Standard Design Elements: <ul style="list-style-type: none"> • Challenging problem or question* • Sustained inquiry * • Student voice and choice* • Reflection* • Critique and revision* • Authenticity 	Gold Standard Project Based Teaching Practices: <ul style="list-style-type: none"> • Build the culture* • Manage activities* • Scaffold student learning* • Assess student learning* • Engage and coach*
<p>Project description: The purpose of this PBL project is to give pre-service teachers opportunities to practice creating more advanced research-based teaching strategies in math. The semester-long project has strong reflection, critique, and revision components so that pre-service teachers learn to “practice meaningful feedback routines.”</p> <p>Final product: Over the course of the semester, students will create their own math lessons and rubrics, which they will use in their <i>Out of the Gate</i> cooperating teacher classroom.</p> <p>Classroom experience: During this observation, the classroom is set up for groups of four to six to engage with one another and features a mix of individual, teamwork, whole-group, and small-group instruction. Pre-service teachers seem able to work with relatively little instruction, and the professor actively engages the class as a group and individually. During the post-observation discussion, pre-service teachers said like that the project is peer oriented—and more specifically, that they get peer feedback. Pre-service teachers said they appreciate sharing the responsibility of the work and being allowed opportunities to critique, reflect, and revise their work.</p> <p><i>"It allowed us to receive effective and constructive feedback on something we're actually turning in next week. So, the fact that he gave us an opportunity to talk about [our work with] each other and have time to make our own corrections—that was really useful."</i> (School E pre-service teacher)</p> <p><i>"I'm also going to begin introducing project-based rubrics to them, and we don't use those in spite of our own rubrics—we use those in addition to [them]. And so that way, they build a comfortableness with seeing them. And I've also found that the strategy and techniques that we're teaching, or trying to get them to integrate, match very well with ... project-based learning."</i> (School E professor)</p>	
Data: <i>Pre-observation instructor interview, observation rubric and notes, post-observation classroom discussion with pre-service teachers</i>	

Project title: <i>Call for Papers</i>	Driving question: <i>Wow, I wonder about these fourth and fifth graders</i>
Preservice teacher subject areas: <i>Early Childhood across various subjects</i>	Number of students: <i>10</i> Duration of class: <i>50 minutes</i>
PBL Design Principals: <ul style="list-style-type: none"> • Challenging problem or question* • Sustained inquiry* • Reflection* • Student voice and choice* • Critique and revision* • Public product* • Authentic 	PBL Teaching Practices: <ul style="list-style-type: none"> • Build the culture* • Manage activities* • Align to standards* • Scaffold student learning* • Assess student learning*
<p>Project Description: For this PBL project preservice teachers formulate a driving question based on grade 4-5 students' physical, social, emotional, or cognitive development. An example of a preservice teacher's driving question based on this topic is "<i>Wow, I wonder how it's different for tall girls rather than tall boys, and how does that affect their social-emotional learning?</i>" Preservice teachers are embedded in 4th and 5th grade classrooms throughout the semester and use what they learn to write their "manuscript." The professor at this university used the PBLWorks website as a resource for project materials, such as the grade 3-6 presentation rubric used during the presentation of final products.</p> <p>Final Product: At the end of the semester preservice teachers will give an oral presentation to the class and an authentic audience of professionals from around the campus. They will present the "manuscript" they have created as if they are presenting on a conference panel.</p> <p>Classroom experience: During the observation the preservice teachers sat in chairs set in a semi-circle. The professor posted examples of driving questions, and then the students created their own driving questions. Throughout the class time the professor engaged students with questions about the assignment.</p> <p><i>"The authentic assessment and the authentic task is two-fold. They must write a manuscript similar to one that a teacher might submit to a journal, and then we also have what I call an expert panel, so we pretend that we're at an academic conference. It is indeed authentic and a public product because I invite people from across the campus. [...] We're pretending that we're at a conference digging into fourth and fifth grade students, and they present their findings to the audience." –School C Professor</i></p> <p>Data: <i>1-hour phone interview with professor in fall of 2019, observation rubric and notes from 2019 site visits.</i></p>	

*Noted during in-person classroom observation

Project title: <i>unknown</i>	Driving question: <i>unknown</i>
Pre-service teacher subject areas: <i>unknown</i>	Number of students: <i>unknown</i> Duration of class: <i>unknown</i>
Gold Standard Design Elements: <ul style="list-style-type: none"> • Student voice and choice • Sustained inquiry 	Gold Standard Project Based Teaching Practices: <ul style="list-style-type: none"> • Build the culture • Manage activities • Assess student learning
<p>Project description: For this PBL project, the professor is asking pre-service teachers to develop an assessment plan to address a lesson unit taken from the <i>PBLWorks</i> website. The professor has also created a list of fictional students with their own unique traits, learning needs, and demographic information so that the pre-service teachers must consider and address the special needs of the hypothetical students. This is the professor's first time teaching this PBL project, and they are excited to hear feedback about the unit from pre-service teachers to help inform how they can modify the course for next semester.</p> <p>Classroom experience: <i>"The traditional lecture-and-discussion format—and I did lecture a lot—and from my students' evaluation ... Sometimes they feel bored by listening to my lecture; they don't think they have much engagement. They don't think they get involved a lot in my class, so starting from this year, I decided since I learned something about PBL ... I decided to integrate PBL in my class."</i> (School B professor)</p>	
Data: <i>One-hour phone interview with professor in fall 2019</i>	

Appendix C: Data Collection Instruments

2020 *Out of the Gate* survey questions

1. [*Faculty only*] How many years have you taught or worked at the university level, not including the current academic year (2019–20)?
2. [*Faculty and cooperating teachers only*] How many years have you taught as a classroom teacher in preschool through 12th grade?
3. When did you participate in the Out of the Gate project? Select all that apply.
 - a. 2017–18 academic year
 - b. 2018–19 academic year
 - c. 2019–20 academic year (current year)
 - d. Other (please specify):
4. [*Faculty only*] Have you taught a college-level course since participating in the Out of the Gate project?
 - a. Yes
 - b. No
5. [*Pre-service teachers only*] Have you completed your degree and become a certified teacher?
 - a. Yes
 - b. No
6. [*Pre-service teachers only*] Are you employed as a pre-K–12 teacher?
 - a. Yes
 - b. No
7. Please select the response that best describes your experience with implementing PBL using PBLWorks' *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices* prior to participating in the Out of the Gate project.
 - a. No experience
 - b. A little experience
 - c. A moderate amount of experience
 - d. A lot of experience
8. Please indicate the extent to which you agree or disagree with the following statements. (Strongly disagree, Disagree, Agree, Strongly agree)
 - a. Incorporating PBL into pre-service programs will improve teacher instruction.
 - b. Incorporating PBL into K–12 education will improve student learning.
 - c. I plan to incorporate PBL into my future work.
 - d. I need additional support to incorporate PBL into my future work.

- e. All teachers could benefit from using PBL.
 - f. Pre-service teachers are especially well situated to learn how to use PBL.
 - g. I am NOT able to apply what I've learned about PBL to my current work.
 - h. I consider the PBL training I've received from PBLWorks to be high quality.
 - i. Adding PBL to pre-service teaching is just too much for pre-service teachers to learn without more teaching experience.
 - j. Adding PBL to pre-service teaching is too much work for university faculty members.
 - k. Fitting PBL into existing curricula is challenging.
9. PBL that uses PBLWorks' Gold Standard Design Elements and Gold Standard Project Based Teaching Practices will improve teaching and learning for K–12 students who are ... (Strongly disagree, Disagree, Agree, Strongly agree)
- a. Average students
 - b. Performing below grade level
 - c. English learners
 - d. In special education
 - e. Eligible for free or reduced-price lunch
10. Please rate your understanding of each of PBLWorks' *Gold Standard Project Based Teaching Practices*. (No understanding, Little understanding, Moderate understanding, Full understanding) Then rate how you believe your understanding has changed due to your participation in the Out of the Gate project. (No change, Some change, A lot of change)
- a. Design and plan
 - b. Align to standards
 - c. Build the culture
 - d. Manage activities
 - e. Assess student learning
 - f. Scaffold student learning
 - g. Engage and coach
11. Have you designed a project based on PBLWorks' *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices*?
- a. Yes
 - b. No
12. [*Faculty only*] During the current academic year (2019–20), in how many of your courses did you or will you implement a project with pre-service teachers? (Also include courses in which you had planned to implement a project prior to the COVID-19 pandemic.)
- a. None of my courses
 - b. 1 course
 - c. 2 courses

- d. 3 courses
 - e. 4 or more courses
13. [*Cooperating teachers and pre-service teachers only*] During the current school year (2019–20), how many projects did you or will you implement in your classroom? (Also include any projects you had planned to implement prior to the COVID-19 pandemic.)
- a. None
 - b. 1
 - c. 2
 - d. 3
 - e. 4 or more
14. [*Cooperating teachers only*] How many of these projects were or will be implemented in partnership with your assigned pre-service teacher?
- a. None
 - b. 1
 - c. 2
 - d. 3
 - e. 4 or more
15. [*Faculty and cooperating teachers only*] In your courses that include projects, what percentage of your class time is used to implement projects? (Rate from 0 to 100)
16. [*Pre-service teachers only*] Please describe your most recent project.
17. [*Pre-service teachers only*] If you are not implementing a project during the current school year, why not?
18. [*Faculty and cooperating teachers only*] Which resources do you use to support implementation of projects in your own teaching?
- a. Tools provided by the Out of the Gate project
 - b. My own PBL resources (books, websites, etc.)
 - c. None; I do not use PBL while teaching
19. [*Faculty and cooperating teachers only*] How likely are you to suggest that other faculty members / teachers implement projects in their courses?
- a. Not at all likely
 - b. Slightly likely
 - c. Moderately likely
 - d. Very likely
 - e. Extremely likely
20. [*Faculty only*] What challenges do you face in implementing projects in the university classroom? Select all that apply.
- a. Too much initial effort needed to teach in a new way

- b. Lack of planning time to design projects
 - c. Not enough time to implement projects due to the time constraints of the semester system
 - d. Low student buy-in for completing projects as part of university coursework
 - e. Too much standardized content needs to be covered during class time to spend time on projects
 - f. Lack of adequate resources to implement PBL
 - g. Lack of adequate training on PBL
 - h. Other:
 - i. None
21. [*Cooperating teachers only*] What challenges do you face in implementing projects? Select all that apply.
- a. Lack of adequate training on PBL
 - b. Lack of adequate resources to implement PBL
 - c. Too much initial effort needed to teach in a new way
 - d. Lack of planning time to design projects
 - e. Lack of time needed to teach projects
 - f. Too much grade-level content needs to be covered to allow time for projects
 - g. Lack of collaboration partners (i.e., teaching team)
 - h. Lack of time to collaborate with other teachers
 - i. Non-supportive school/district administration
 - j. Other:
 - k. None
22. [*Pre-service teachers only*] What challenges do you face in implementing projects? Select all that apply.
- a. Other licensure requirements take up time and energy
 - b. Non-supportive school/district administration at placement school
 - c. Lack of time to plan a project before teaching begins
 - d. Lack of time in the classroom needed to teach projects
 - e. Lack of time to collaborate with other pre-service or cooperating teachers
 - f. Too much grade-level content needs to be covered to allow for time for projects
 - g. Lack of collaboration partners (i.e., teaching team)
 - h. Learning other areas of teaching takes priority over implementing projects (e.g., new teachers must learn classroom management)
 - i. Lack of adequate resources to implement PBL
 - j. Lack of adequate training on PBL
 - k. Other:

- l. None
23. In your most recent project, did you include any of PBLWorks' *Gold Standard Design Elements*? (No, Yes, but I need more training to implement this well, Yes, and I received adequate training to implement this, N/A: I don't know what this is)
 - a. Key knowledge, understanding, and success skills
 - b. Challenging problems or questions
 - c. Sustained Inquiry
 - d. Authenticity
 - e. Student voice and choice
 - f. Reflection
 - g. Critique and revision
 - h. Public product
24. Please rate your confidence in implementing projects using PBLWorks' *Gold Standard Project Based Teaching Practices*. (Not at all confident, Somewhat confident, Confident, Very confident) Then rate how you believe your confidence has changed over the last year due to your participation in the *Out of the Gate* project. (No change, Some change, A lot of change)
 - a. Design and plan
 - b. Align to standards
 - c. Build the culture
 - d. Manage activities
 - e. Assess student learning
 - f. Scaffold student
 - g. Engage and coach
25. [Faculty and cooperating teachers only] Please rate your confidence in supporting pre-service teachers in implementing projects using PBLWorks' *Gold Standard Teaching Practices*. (Not at all confident, Somewhat confident, Confident, Very confident) Then rate how you believe your confidence has changed over the last year due to your participation in the *Out of the Gate* project. (No change, Some change, A lot of change)
 - a. Design and plan
 - b. Align to standards
 - c. Build the culture
 - d. Manage activities
 - e. Assess student learning
 - f. Scaffold student
 - g. Engage and coach
26. [Faculty and cooperating teachers only] How likely are you to suggest that pre-service teachers use projects as a primary instructional method in their K–12 classrooms?

- a. Not at all likely
 - b. Slightly likely
 - c. Moderately likely
 - d. Very likely
 - e. Extremely likely
27. *[Faculty and cooperating teachers only]* What challenges do you believe pre-service teachers face in using projects as a primary instructional method in their K–12 classrooms? Select all that apply.
- a. Other licensing requirements compete for pre-service teachers’ time and energy during their student teaching year
 - b. Non-supportive school/district administration at placement school
 - c. Lack of time to plan a project before student teaching semester begins
 - d. Lack of time needed to teach projects
 - e. Lack of time to collaborate with other pre-service or cooperating teachers
 - f. Too much grade-level content needs to be covered to allow for time for projects
 - g. Lack of collaboration partners (i.e., teaching team)
 - h. Inexperience with other areas of teaching that take priority over implementing projects (e.g., new teachers must learn classroom management)
 - i. Other:
 - j. None
28. What suggestions do you have for improving how pre-service teachers are prepared to implement projects using PBLWorks’ *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices*?
29. What else would you like to say about the *Out of the Gate* project and implementing projects using PBLWorks’ *Gold Standard Design Elements* and *Gold Standard Project Based Teaching Practices*?
30. *[Faculty and cooperating teachers only]* If you are no longer participating in the *Out of the Gate* project, why?
31. Please select the response that best describes your gender.
- a. Female
 - b. Male
 - c. Prefer not to answer
 - d. Prefer to self-describe:
32. How would you describe your racial/ethnic identity?
- a. Black or African American
 - b. Asian
 - c. Native Hawaiian or Pacific Islander
 - d. Hispanic, Latino/a

- e. Native American or Alaska Native
- f. White
- g. Prefer not to answer
- h. Prefer to self-describe:

Faculty member interview questions

1. [For faculty who have not been previously interviewed] How are you involved in Out of the Gate?
 - a. How did you hear about Out of the Gate?
 - i. *Probe for relationship between Out of Gate leadership and faculty*
 - b. What motivated you to join Out of the Gate?
 - c. What was your experience with PBL prior to joining Out of the Gate?
2. How has your participation in the Out of the Gate project influenced your own teaching?
 - a. What are some examples of how you incorporate PBL into your teaching?
 - i. *Probe for changes in practice since year 1 for returning faculty*
 - b. How do you use projects in your classroom? Tell us about any projects you've designed and how you've implemented them.
 - i. *Probe for ways that they help students see how to apply these concepts in their K-12 teaching*
 - ii. *Probe for syllabi, student work, notes, PowerPoints from any year of the project*
 - c. Do you plan to implement a project in your classes next semester?
 - i. *Probe for whether we can observe their class*
3. How do you support pre-service teachers in using PBL in their own teaching?
 - a. What changes have you seen in pre-service teachers as a result of facilitating PBL?
 - b. What strategies do you find are most effective in supporting pre-service teachers in facilitating PBL?
4. How has your thinking about PBL changed since joining Out of the Gate?
 - a. How did participation influence how you think about PBL in a university context?
 - b. How did participation influence how you think about PBL in a K-12 context?

Section 2: Let's talk about your Teacher Education Program.

5. How has participation in Out of the Gate project influenced your teacher preparation program?
 - a. How have policies and procedures changed to encourage PBL?
 - i. *Probe for course requirements, syllabi, or sequencing*
 - ii. *Probe for recruitment, selection, and training of cooperating teachers*
 - b. What changes do you see in program culture related to PBL?
 - i. *Probe for how PBL is perceived by students and faculty*

- ii. *Probe for leadership support*
 - iii. *Probe for collaboration among faculty*
 - c. What changes do you see in your program's relationship with your district partner(s)?
 - i. *Probe for collaboration with cooperating teachers*
 - ii. *Probe for collaboration with district leadership*
- 6. Reflecting on your experience with *Out of the Gate*, what advice do you have for other teacher education programs that are considering how to prepare teachers to facilitate PBL out of the gate?
 - a. What supports do faculty need?
 - i. *Probe for recruitment, engagement, and incentives*
 - b. What supports do pre-service teachers need?
 - i. *Probe for university and district supports*
 - c. What supports do cooperating teachers need?
 - i. *Probe for university and district supports*
- 7. What suggestions do you have for other faculty at your institution who are interested in PBL?
 - a. Would you recommend that they incorporate projects into their classes? Why or why not?
 - b. Would you recommend that they encourage student teachers to facilitate projects? Why or why not?

Section 3: Next Steps

- 8. What are your next steps related to PBL into your own practice?
 - a. Will you continue to teach with PBL in the future? Why or why not?
 - b. What training or assistance in PBL, if any, do you feel confident offering your colleagues?
 - c. What additional training or assistance in PBL might you need?
- 9. Do you have anything else you'd like to say about *Out of the Gate*, PBL, and/or your Teacher Education Program?

Cooperating teacher interview and focus group questions

- 1. Please tell us your name and what you teach.
- 2. What supports from *Out of the Gate* have been the most useful in helping you learn how to facilitate high quality project based learning?
 - a. *Probe: Events like PBL101 and Project Slice*
 - b. *Probe: PBLWorks resources*
 - c. *Probe: In-class PBL experience*
- 3. How would you say that your approach to project based learning has changed since participation in *Out of the Gate*?
 - a. *Probe: Confidence in facilitating PBL*
 - b. *Probe: Attitudes toward using PBL*

4. Describe how your district's relationship with [*university name*] has changed since participating in *Out of the Gate*.
 - a. *Probe: Collaborations between faculty and cooperating teachers*
 - b. *Probe: The way cooperating teachers are recruited*
5. What are your next steps related to integrating PBL into your own practice?
 - a. Will you continue to teach with PBL in the future? Why or why not?
 - b. What training or assistance in PBL, if any, do you feel confident offering your colleagues?
 - c. What additional training or assistance in PBL might you need or want?
6. What systems and structures are currently in place in your school that support your learning about and facilitation of PBL?
 - a. *Probe: Support for implementation (e.g. culture that supports PBL, administrator support)*
 - b. *Probe: School conditions (e.g. class length, time for collaboration/planning)*
7. What systems, structures and supports do you think are needed for your school to sustain the progress with *Out of the Gate* and facilitating PBL?
 - a. *Prompt: Time for planning or collaboration*
 - b. *Prompt: Additional training*
 - c. *Prompt: Technical assistance (on or off-site)*
 - d. *Prompt: Online access to PBLWorks tools and resources*
8. What challenges have you experienced when participating in *Out of Gate* and facilitating PBL?
 - a. What needs to happen for those challenges to be overcome?

Pre-service teacher interview and focus group questions

1. Please tell us your name, your year, and the grand band and subject you hope to teach.
2. What supports from *Out of the Gate* have been the most useful in helping you learn how to facilitate high quality project based learning?
 - d. *Probe: Events like PBL101 and Project Slice*
 - e. *Probe: PBLWorks resources*
 - f. *Probe: In-course PBL experience (university level)*
 - g. *Probe: In-class PBL experience (K-12 level)*
3. How would you say that your approach to project based learning has changed since participation in *Out of the Gate*?
 - a. *Probe: Confidence in facilitating PBL*
 - b. *Probe: Attitudes toward using PBL*
4. What are your next steps related to implementing PBL into your own practice?
 - a. Will you continue to teach with PBL in the future? Why or why not?
 - b. What training or assistance in PBL, if any, do you feel confident offering your colleagues?
 - c. What additional training or assistance in PBL might you need or want?

5. Describe how your faculty promotes PBL within your TEP and with your district partners.
 - a. *Probe: Facilitating PBL in their own classrooms*
 - b. *Probe: Encouraging cooperating teachers to use PBL*
6. Besides faculty support, what systems and structures are in currently in place in your TEP that support your learning about and facilitation of PBL?
 - a. *Probe: Support for implementation (e.g. district, culture that supports PBL)*
 - b. *Probe: University conditions (e.g. collaboration time for pre-service teachers)*
7. What systems, structures and supports do you think are needed for your school to sustain the progress with *Out of the Gate* and facilitating PBL?
 - a. *Prompt: Time for planning or collaboration*
 - b. *Prompt: Additional training*
 - c. *Prompt: Technical assistance (on or off-site)*
 - d. *Prompt: Online access to PBLWorks tools and resources*
8. What challenges have you experienced when participating in *Out of the Gate* and facilitating PBL?
 - a. What needs to happen for those challenges to be overcome?

I've come to the end of the questions I need to ask. Is there anything else you would like to add about *Out of the Gate*?