

## The North Dakota Personalized, Competency-Based Learning Initiative

**Progress and Outcomes After 5 Years** 

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February 2024

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Suggested citation: Ahigian, R., & Lacireno-Paquet, N. (with Lolashvili, G.). (2024). The North Dakota personalized, competency-based learning initiative: Progress and outcomes after 5 years. WestEd.

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### Acknowledgments

This report would not have been possible without the contributions of many individuals and organizations. First, we would like to thank the educators, learners, families, and administrators from the Marmot School at the North Dakota Youth Correctional Center, Northern Cass School District, Oakes School District, and West Fargo Public Schools for hosting site visits, welcoming visitors to their classrooms, and participating in interviews and focus groups. We would also like to thank the team at KnowledgeWorks for their collaboration, partnership, and support throughout the study; Drake Bryan, Lori Phillips, Gregg Seaton, and Rebecca Wolfe were invaluable partners throughout the evaluation. The leadership of Kirsten Baesler, North Dakota's Superintendent of Public Instruction, was critical in launching the Personalized, Competency-Based Learning initiative and supporting the evaluation. Ann Ellefson and others at the North Dakota Department of Public Instruction provided tireless support to the initiative and leadership to the districts, as well as ongoing support to the evaluation team. Ellie Shockley from the North Dakota University System supported our access and use of the quantitative data for the quantitative analyses. Sam Unruh from Statewide Longitudinal Data Systems of the North Dakota Information Technology Department provided the analysis and summary of postsecondary data included in this report.

Several staff at WestEd contributed to this evaluation. Robin Ahigian, Natalie Lacireno-Paquet, Morgan Garvey, Lauren Agnew, and Emily Vislosky provided valuable support in all aspects of our interview, focus group, and survey efforts with the North Dakota districts. Natalie Lacireno-Paquet led the methodological approaches, and the quantitative analyses were carried out with support from George Lolashvili, with guidance from Noman Khanani. Shannon Stackhouse and Lilla Pivnick contributed graphics. Julie Colton provided administrative and formatting support. Andrea Browning provided peer review.



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## The North Dakota Personalized, Competency-Based Learning Initiative

Imagine you are a second semester high school junior, disengaged and unmotivated. School is boring because you don't see the relevance, so you don't do the homework and have stopped going to class. You are in danger of not graduating, but you don't see the point of school anyway. Then one day, the educators in your school introduce something called "studios," a type of guided-independent study that allows you to choose what you want to learn, how you learn it, and with whom you learn it. All this is aligned with the state standards, so you're being prepared for what comes after high school, just in a more meaningful way. Now, to learn all the parts to cars, you're making 3D printer models. This reminds you how much you love cars and how much you know about them! Then you're meeting with auto body workers and learning about career opportunities in the field. Suddenly, school is worth getting up for; you're going to class and doing the work. Not only that, but you're also going to graduate and have two internships lined up for the spring and summer after senior year. This is a real-world example of how personalized, competency-based learning positively impacted the life of a learner in North Dakota.



#### **Overview**

In 2018, The North Dakota Department of Public Instruction (NDDPI), in partnership with KnowledgeWorks, launched the North Dakota Personalized, Competency-Based Learning Initiative to create equitable outcomes for learners by transforming conventional education systems to personalized, competency-based learning. In 2019, KnowledgeWorks engaged WestEd to conduct a formative and summative evaluation of the initiative. This report provides a summary of implementation outcomes for the individual participating districts and the cohort of participants as a group. It also provides an analysis of the impact of district participation in the initiative on learner outcomes to date. Implications for future personalized, competency-based learning work in North Dakota, as well as other states, are provided.

KnowledgeWorks defines personalized, competency-based learning as an approach that centers each learner's strengths, needs, and interests by providing differentiated supports and ways to demonstrate what they know, ensuring each learner graduates ready for what's next.

#### **Background and Policy**

The initiative is supported primarily by the NDDPI and KnowledgeWorks through a 5-year grant from the Bush Family Foundation. The initiative aligns with the **North Dakota PK–12 Strategic Vision Framework** (North Dakota Department of Public Instruction, 2019), which aspires for all learners to graduate Choice Ready with the knowledge, skills, and dispositions they need to be successful. In North Dakota, Choice Ready is an element of the accountability system intended to measure the extent to which schools and districts are producing learners who are ready for success after graduation. For the districts in the North Dakota Personalized, Competency-Based Learning cohort, personalized, competency-based learning is a major lever in moving learners toward that vision. Quality implementation of personalized, competency-based learning requires systemic, structural, and behavioral changes at the district and school levels.

Finding Your Path: A Navigation Tool for Scaling Personalized, Competency-Based Learning (KnowledgeWorks, 2021), hereinafter called Finding Your Path, provides guidance about what districts can do to develop personalized, competency-based learning systems. Finding Your Path outlines 12 enabling conditions (see Figure 1) that undergird the development and implementation of personalized, competency-based learning. To support the districts in their journey to meet the expectations of personalized, competency-based learning, KnowledgeWorks and NDDPI provided technical assistance at the cohort level, and directly to districts to help implement personalized, competency-based learning.



Shared Vision

Culture

Instruction

Comprehensive Assessment Systems

Flexible Learning Environments

Learner Supports

Professional Development and Learning

Leadership Development

Figure 1. Conditions for Personalized, Competency-Based Learning Implementation

Cohort activities are those designed to support the group of participating districts. These activities included four convenings annually, providing cohort members with professional learning, facilitated work time, and networking and collaborative opportunities to share implementation successes and challenges. Each district had a designated design team that participated in the convenings and played a leadership role in their districts to advance personalized, competency-based learning. Districts within the cohort were also able to visit and observe one another as they planned for and implemented personalized, competency-based learning.

District-specific support included personalized leadership coaching by KnowledgeWorks and NDDPI staff, targeted professional learning tailored to district needs, and monthly check-ins. The project supports were specifically aimed at helping districts

- refine their local vision for teaching and learning,
- provide educators with practices to empower learners with ownership and choice,
- build capacity for educators and leaders to sustain long-term progress in their districts and across the state, and
- connect with and learn from other districts along their journey.



#### **District Participation**

Initially, four school districts and the Marmot High School at the North Dakota Youth Correctional Center made a commitment to participate in the initiative; one of those districts dropped out of the cohort at the end of year 1. Changes to the Marmot High School prevented their full engagement in the research efforts, but they were fully engaged in the initiative. Districts were selected by responding to a statewide request for proposals and participating in a selection process during February–April of 2018. Selection was based on reviewer feedback using a scoring guide focused on three broad areas: commitment, readiness, and capacity.

Districts participating in the initiative throughout the duration of the grant included Northern Cass School District 97, Oakes School District No. 41, and West Fargo Public Schools. This report focuses on the three traditional school districts. A brief overview of each district as of the 2022–23 school year is below and in Table 1.

**Northern Cass** is a suburban district with three schools located about 30 miles northwest of Fargo. In the 2022–23 school year, Northern Cass enrolled 689 learners—97 percent White, 2 percent Black, about 1 percent Hispanic, and less than 1 percent Native American and Asian American—across its three schools. In that same school year, the attendance rate was 96 percent, and the graduation rate was 92 percent, compared to the state attendance rate of 93 percent and graduation rate of 83 percent. Overall district proficiency was 54 percent in mathematics and 53 percent in English language arts (ELA), compared to the state proficiency rates of 39 percent and 44 percent, respectively.

**Oakes** is a rural district, with two schools located about 115 miles southwest of Fargo. In the 2022–23 school year, Oakes enrolled 591 learners: 86 percent White, 9 percent Hispanic, 2 percent Black, 2 percent Native American, and 1 percent Asian American. In that same year, the attendance rate was 95.4 percent, and the graduation rate was 94.9 percent, compared to the state attendance rate of 93 percent and graduation rate of 83 percent. Overall proficiency was 48 percent in mathematics and 53 percent in ELA, compared to the state proficiency rates of 39 percent and 44 percent, respectively.

West Fargo is an urban district located about 5 miles due west of Fargo. In the 2022–23 school year, West Fargo enrolled 11,431 learners across its 25 schools. The enrollment groups, by race, were as follows: 68 percent White, 17 percent Black, 6 percent Hispanic, 4 percent Asian American, and 4 percent Native American. In that same year, the attendance rate was 91.8 percent, and the graduation rate was 81 percent, compared to the state attendance rate of 93 percent and graduation rate of 83 percent. Overall proficiency was 41 percent in mathematics and 45 percent in ELA, compared to the state proficiency rates of 39 percent and 44 percent, respectively.



Table 1. The Cohort in the 2022–23 School Year

	Northern Cass	Oakes	West Fargo	Statewide
Setting	Suburban	Rural	Urban	
Location in relation to Fargo	30 miles NW	115 miles SW	5 miles due West	
Number of schools	3	2	25	484
White students	97%	86%	68%	74%
Black students	2%	2%	17%	7%
Hispanic students	1%	9%	6%	7%
Native American students	<1%	2%	4%	10%
Asian American students	<1%	1%	4%	2%
All others	<1%	<1%	<1%	<1%
Low-income students	9.6%	23.9%	29.0%	30%
English Learner students	<1%	3.6%	7.7%	4%
Students with individualized education programs	15.2%	10.3%	17.1%	15%
Attendance rate	96%	95.4%	91.8%	93%
Graduation rate	92%	94.9%	81%	83%
Overall proficiency in mathematics	54%	48%	41%	39%
Overall proficiency in ELA	53%	53%	45%	44%

Source: Publicly available information from <a href="https://insights.nd.gov/">https://insights.nd.gov/</a>



#### **Action Plan for Change**

The North Dakota personalized, competency-based learning work has been guided by a cycle of continuous improvement. In this approach, the work begins with setting a shared, community-wide vision; then engaging with learners, educators, and other community members; setting goals through the development of strategic plans with targets; and then measuring progress. This cycle repeats, and with on-the-ground support from KnowledgeWorks, teams make progress toward implementing and scaling personalized, competency-based learning in their districts. As an organization that lives its values of continuous improvement, KnowledgeWorks continually reflected on its work and articulated what supports it was providing and why.

KnowledgeWorks and its partners developed a logic model for their work that identified four specific areas of focus: building capacity, cultivating systems change, ensuring quality, and empowering learning (Duffy & Eddins, 2022). The logic model described expected outputs and the anticipated outcomes and impacts. The short-term (less than 5 years) results articulated in the impact assessment for districts include the following:

- Engagement in professional learning by educators at all levels
- Increased knowledge of personalized, competency-based learning
- District ownership for personalized, competency-based learning implementation
- Integration of performance assessment and expectations in a *Profile of a Graduate*
- District-level policy and practice developed to support personalized, competency-based learning and create positive and equitable learning environments
- Implementation of district action plans
- Integration of best practices based on KnowledgeWorks materials
- Classroom practices that use a student-centered approach
- Increased learner voice and choice

The logic model clarified what KnowledgeWorks, its partners, and the participating districts were doing. In 2022, KnowledgeWorks developed the State Impact Assessment for North Dakota's Personalized, Competency-Based Learning Initiative (see Figure 2) to identify specific structures, practices, and progress measures expected in the short term and the mid-term (5 years), as well as the impacts on quantitative measures of learner achievement in the long-term (10-year horizon). This State Impact Assessment reflects ongoing thinking and analysis about the implementation of personalized, competency-based learning at scale and specific assumptions about what to expect and when. This aligns with the literature on implementation (e.g., Fixsen et al., 2005; Fullan, 2007) that suggests it takes 2 to 5 years to get to full implementation of an initiative and even longer for complex systems change efforts. This report reflects on and assesses the progress of implementation and begins to examine outcomes for learners after 5 years of implementation.



Figure 2. State Impact Assessment for North Dakota's Personalized, Competency-Based Learning Initiative

**Short-Term Goals** 



#### **OUTPUT MEASURES**

1- to 2-Year Horizon

#### **District Goals:**

District-specific goals toward transformation outlined in action plans and achieved over the course of a school year or multiple school years (measured through coaching conversations, surveys, focus groups, interviews, and classroom walkthroughs)

#### **Cohort Goals:**

Cohort-specific goals achieved over the course of a school year or multiple school years (measured through focus groups, interviews, and convening observations) **Mid-Term Goals** 



#### **OUTCOME MEASURES**

5-Year Horizon
District Scaling of Personalized,

Competency-Based Learning: Implementation of learnercentered structures, policies, and practices associated with PCBL (measured by the district conditions through surveys, focus groups, interviews, and classroom walkthroughs)

#### Cohort Development:

Progress on the structural model of implementation, including leadership development and steering committee participation (measured through focus groups, interviews, and convening observations)

**Long-Term Goals** 



#### **IMPACT MEASURES**

10-Year Horizon

#### Learner Achievement:

The degree of significant and meaningful movement of student impact dimensions (measured through a quasi-experimental design research study using data from North Dakota's Statewide Longitudinal Data System [SLDS])

#### State Sustainability:

The extent to which the state has structures and capability to sustain and grow PCBL (measured through focus groups and interviews)

#### **Timeline of Initiative**

In 2017, North Dakota legislators passed Senate Bill 2186, which officially authorized North Dakota schools and school districts to take advantage of state waiver options and develop Innovative Education Program proposals. These proposals allowed schools and districts to take a more creative approach to the delivery and administration of education and provide increased educational opportunities, with the goal of improved academic success. This legislation provided State Superintendent of Public Instruction Kirsten Baesler with the leverage to make change at the district level. In 2018, the North Dakota Personalized, Competency-Based Learning Initiative was launched with the support of KnowledgeWorks, the NDDPI, and their partners through a grant from the Bush Family Foundation. The funding was proposed as a grant to five districts, initially, and the first convening of the cohort was launched in the fall of 2018 to kick off the 5-year project (see Appendix C for a detailed timeline).

The first convening, held in Jamestown, was designed to introduce the personalized, competency-based learning work and begin to shape the cohort as a whole. In the 1st year, KnowledgeWorks and NDDPI planned and facilitated four convenings focused on professional learning, collaboration, and planning. There were plenary sessions provided by KnowledgeWorks and its partners, the Center for Collaborative Education and Battelle for Kids.



There were also breakout sessions for role-alike groups, such as school and district leaders and educators, and content focused sessions on communication and leadership. A steering committee comprised of a few NDDPI staff and representatives from the districts and regional partners helped provide feedback on the convening planning.

In 2019, KnowledgeWorks contracted WestEd to serve as the project evaluator. WestEd staff joined the fall 2019 convening and shared the evaluation plan with the participants. WestEd conducted one visit to each district before the COVID-19 pandemic brought everything to a stop in March 2020. That spring, NDDPI and KnowledgeWorks regrouped to determine how best to support the districts during this crisis. No site visits or convenings were held in the spring of 2020.

In 2020, North Dakota's <u>Portrait of a Graduate</u> identified a set of attributes that all North Dakota graduates should have in order to be Choice Ready by graduation. Each district created their version of a Portrait of a Graduate based on the local context. In March 2021, Senate Bill 2196 was signed, providing all school districts with the opportunity to propose and adopt a mastery learning framework policy that awards learners the credits necessary to graduate from high school through demonstrated mastery of learning continuum competencies. State-level work (facilitated by KnowledgeWorks, the NDDPI, and representatives from districts) began to develop a learning continuum for ELA, social studies, science, and math that outlines the progression of knowledge as well as the academic and durable skills for learners to be college and career ready. This provided districts with the flexibility to design learning experiences that were tailored to learner need and interest.

KnowledgeWorks and the NDDPI planned and facilitated two virtual convenings in the 2020–21 school year. Virtual convenings were held over a 2-day period, with plenary sessions and interactive breakout sessions on varied topics. KnowledgeWorks and its partners planned and facilitated the sessions. Throughout the year, KnowledgeWorks also offered personalized coaching for each district that focused on the area of personalized, competency-based learning implementation for which they needed additional support. For example, one KnowledgeWorks staff member coached Northern Cass around proficiency scales, and another worked with districts on continuous improvement cycles. In addition, KnowledgeWorks launched professional learning cycles, where cohort members chose areas of learning on which to focus and followed a trajectory of online learning and continuing education credit.

In the 2021–22 school year, the districts had fully restored in-person learning but were dealing with significant social and emotional needs, as well as learning loss in the aftereffects of COVID-19. KnowledgeWorks continued to provide district support through coaching and observations. During that year, the steering committee became more involved in planning for convenings. This was intended to support sustainability of the initiative and to begin transferring ownership of the cohort and its activities from the NDDPI and KnowledgeWorks to the participating districts. The steering committee launched cohort site visits for the districts to showcase their work and serve as critical friends, providing feedback on personalized, competency-based



learning implementation and practices. There were three site visits, with each district hosting one time.

In-person convenings returned in the spring of 2022 and, with them, the gradual release of the convening planning from KnowledgeWorks and the NDDPI to the steering committee. Steering committee members took the lead in planning and facilitating the full convening, with KnowledgeWorks on hand to support and provide guidance, marking an important turning point in sustaining the work. There was persistent emphasis on continuous improvement and collecting feedback after each session.

The convenings in the 2022–23 school year included time for cross-district learning and engagement as well as district-specific work time. The convenings were structured to model personalized learning, choice, and risk-taking and often included multiple entry points for participants with different levels of knowledge. Topics addressed at the convenings included systemic transformation, collective efficacy, personalized professional learning, and district-specific problems of practice.

In 2023, KnowledgeWorks, the NDDPI, and the cohort steering committee began forming the Network for Personalized Learning (the Network), aimed at sustaining the work of the cohort as well as expanding the work beyond the four original districts. The Network planned and facilitated cross-site book studies, "Takeaway Tuesdays," in-person events, and a learning hub. The intention was for the members of the Network to sustain the initiative in their own sites through working together as a community of practice. The group has laid the groundwork for the continuation of a professional learning community.



# Systems Change and Personalized Learning

The journey of each of the three districts to personalized, competency-based learning is quite different. While the sample size of the three districts is small, it is useful to consider their similarities and differences through the lens of *Finding Your Path*. It is also useful to examine the literature on systems change and implementation to inform future implementation of such initiatives.

The literature on systems change suggests that having guiding principles and/or a driving vision for the systems change is important for providing coherence and motivation for change (Gonzalez et al., 2021). Shared vision, which is one of the overarching conditions for district change in *Finding Your Path* (2021), was important in each of the three districts. A clear, consistent shared vision from the leadership through to educators and staff and eventually learners and families played a critical role in the success of Northern Cass's personalized, competency-based learning efforts. This through line cultivated systems change because it was used to align district policy and decisions that centered learners. Shared vision at the district level undergirded the work in West Fargo, where it was used to drive personalized, competency-based learning district-wide. It appeared, however, to take more time to disseminate the shared vision so that it was embraced at the school level. Shared vision was also important in Oakes, where leadership changes hampered or interrupted the commitment to the vision and, thus, the implementation of personalized, competency-based learning. With new leadership again in 2022, the commitment to personalized, competency-based learning was renewed and the articulation of the vision again clear.

The literature also suggests that systems change in an education context can be enhanced by having a partner organization—what Gonzalez and colleagues (2021) call a "backbone organization." KnowledgeWorks played that role by facilitating and organizing the human, technical, and resource elements to support implementation. KnowledgeWorks worked closely with the NDDPI and other partners from two ends of the system—working at the state level and with individual schools and districts. Evaluation data indicates that this backbone organization role was critical in North Dakota. At the most basic level, KnowledgeWorks and NDDPI kept the districts accountable to progress with their planning. Their biweekly check-ins with leaders gave time and space for districts to work on planning for personalized,



competency-based learning implementation and sometimes served as coaching sessions to support leaders in driving change. That support also built capacity for the technical elements of the work, such as leading and sustaining change. Through regular coaching and check-ins, KnowledgeWorks was an accountability partner for district leaders. The relationships built between the KnowledgeWorks facilitators, the NDDPI, and the district leaders allowed KnowledgeWorks to challenge, push, and support the districts to take risks.

"KnowledgeWorks has helped us fine tune our work and create action plans. We wouldn't be where we are without their help. The work has helped us realize what we need, such as new hires focused on supporting personalization."

—Elementary principal

A third key area the literature identifies as vital to the success or failure of systems change is organizational strategies and practices. Organizational strategies and practices are the actions taken by organizations to make the change initiative happen (Gonzalez et al., 2021). Some of the strategies and practices identified in the literature as important include using data for continuous improvement and alignment of systems, which were central to the KnowledgeWorks approach outlined in *Finding Your Path* but had mixed levels of success in North Dakota.

KnowledgeWorks urged districts to use data and evidence to reflect on, evaluate, and explain their policies and decisions that would, in turn, inform the cycle of continuous improvement in district implementation. The extent to which districts engaged in data-use strategies varied greatly. For example, only one district engaged with KnowledgeWorks' efforts in formal continuous improvement Plan, Do, Study, Act (PDSA) cycles. The other districts did not engage in a PDSA specifically, though they did engage in data-based continuous improvement activities. Other types of data use, however, were important in the districts. One district shared personalized, competency-based learning survey data with the school community, engaging in reflection on their progress. Another regularly conducted climate surveys of learners, educators, and staff and used the data to provide supports.

All the districts worked on aligning systems—for example, aligning professional learning with their personalized, competency-based learning visions and, in some cases, hiring. Two of the districts employed personalized learning coaches to provide direct support to educators through modeling and planning. The use of coaches was a specific organizational strategy that



aligned with the vision. It demonstrated a commitment of both financial and human resources and provided accountability in setting expectations for personalized learning.

"It's super important that we keep a [personalized, competency-based learning] coach. As superintendent, my plan is that position should stay solid."

—Superintendent



## **Evaluating Progress Among the Districts**

The journeys of each of the districts with personalized, competency-based learning demonstrate that whole systems change, or even the implementation of an initiative, is a nonlinear process. Systems change happens in stages with often predictable challenges (Adelman & Taylor, 2007; Fixsen et al., 2005; Hall & Hord, 2020). Researchers have described these phases in various ways, but they can be summarized as what happens prior to implementation and what happens after implementation begins. The KnowledgeWorks approach outlined in *Finding Your Path* (2021) uses the terms *establishing*, *developing*, and *operationalizing* to describe the phases of implementation (see Figure 3) and describes the practices and competencies for each of the 12 conditions at each phase of implementation. In this section, we take stock of the implementation in the three districts in relation to the literature on implementation and assess the phase of implementation for each district on the 12 conditions for scaling personalized, competency-based learning (see Table 2).

#### Figure 3. Phases of Implementation Description

#### **ESTABLISHING**

Members of the learning community are beginning the learning for the competency by acquiring an awareness level of the knowledge, skills, and/or dispositions required for the competency.

#### **DEVELOPING**

The learning community is working toward mastery of the competency by practicing the more rigorous learning of the knowledge, skills and/or dispositions required for the competency.

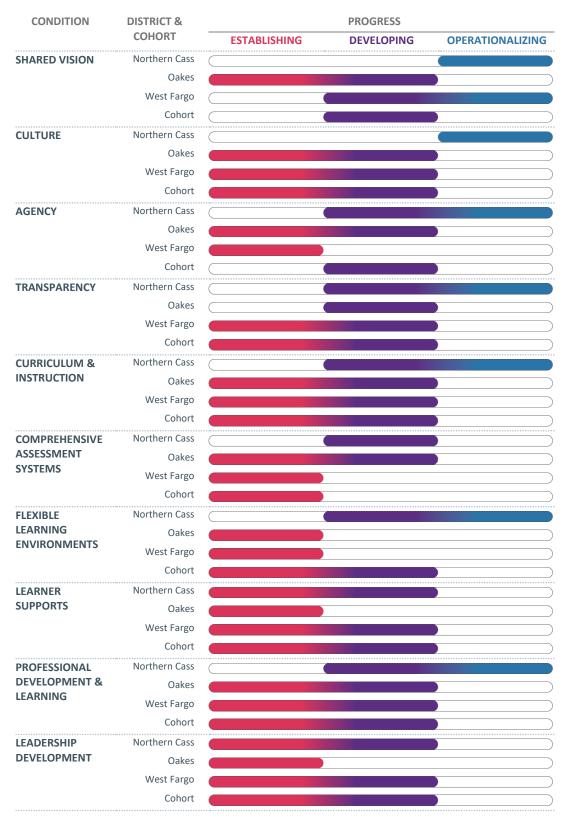
#### **OPERATIONALIZING**

The learning community has systemic evidence that demonstrates mastery of the knowledge, skills and/or dispositions required for the competency.

Aligned with the tenets of personalized learning, each district approached implementation based on local contexts, needs, and priorities. The districts all began their work focused on developing a shared vision and, over the 5 years, all also prioritized three additional conditions that KnowledgeWorks posits are needed for scaling personalized, competency-based learning: culture, agency, and transparency. However, the ways in which these conditions were implemented varied across the districts.



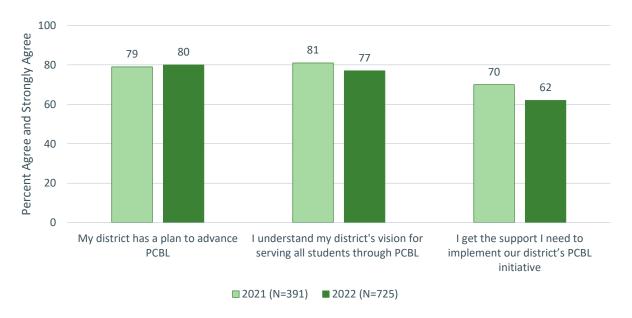
Table 2. Progress of Implementation, by District, After 5 Years of Implementation





The development and use of a shared vision to anchor and drive the personalized, competency-based learning work is evident across the three districts. Survey data from the fall of 2022 demonstrates a continued strong understanding among classroom educators (including special educators, subject matter educators, and specialist educators) of the vision for personalized, competency-based learning in their districts (Figure 4). Strength of understanding has remained high even as the number of educators responding to the survey across the three districts has almost doubled.

Figure 4. Educators' Understanding of Personalized, Competency-Based Learning Vision, 2021 and 2022



Note: Includes all classroom, special education, subject matter, and specialist educators in Northern Cass, West Fargo, and Oakes. PCBL stands for personalized, competency-based learning. See Appendix D for a <u>full description of Figure 4</u>.

Agency was a condition where each district saw early and visible wins even before practices of agency became widespread. In each district, a few educators began experimenting with learner agency, such as choice boards, and were able to experience early success. The successes of individual educators fueled the spread of agency practices among elementary educators in Northern Cass and Oakes, and in some schools in West Fargo. This is evident, for example, in the expansion in choice for learners who reported they have more choice about how they show their learning (see Figure 5). In addition, each of the districts experimented with giving adults—the educators—flexibility and agency with their professional learning, which helped to motivate or reinforce the vision for learner agency.



100 Percent Agree and Strongly Agree 75 80 71 60 60 50 40 20 0 2021 (N=1,673) 2022 (N=1,933) 2021 (N=2,069) 2022 (N=3,184) Elementary Secondary Learners can show their learning in different ways

Figure 5. Learners Can Show Their Learning in Different Ways, 2021 and 2022

Source: Authors' calculations from annual survey data.

Note: See Appendix D for a full description of Figure 5.

Relationship building sustained the districts' efforts during the challenging times of implementation, and culture was also enhanced through participation in this initiative. In some districts, resistance to change and a strong sense of independence created impediments to implementation that needed to be addressed. Districts' efforts with developing and communicating a shared vision were important in shifting or building culture to support personalized, competency-based learning. Transparency was developed through common language, shared decision-making, and accountability in each of the three districts. The use of a common language in each of the districts marked the shift toward ownership of personalized, competency-based learning across the districts—particularly at the elementary level. In West Fargo, the largest of the three districts, this shift occurred at the district level, though it has not yet permeated to all schools. In the other districts, these shifts have not yet fully rooted in the secondary level, but there has been progress. These uneven, and sometimes rocky, paths to personalized, competency-based learning are not surprising; the literature has long established that implementation is not a linear process (Fixsen et al., 2005; Hall & Hord, 2020). Implementation science research suggests that getting to full implementation takes 2 to 5 years, depending on the complexity of the change (Fixsen et al., 2005). Personalized, competency-based learning requires a complex, whole-systems change, and, according to the State Impact Assessment (see Figure 2), the time frame for beginning to see short-term results is under 5 years, but it can take twice that time for sustained impacts and change.

Northern Cass began their participation in the initiative already exploring some personalized, competency-based learning practices. Five years later, there is evidence that they are



operationalizing practices with some of the conditions for scaling personalized, competency-based learning articulated in *Finding your Path*. With a unified shared vision, a collaborative decision-making process, and aligned systems within a district culture of innovation, risk-taking, and resilience, Northern Cass is at the level of operationalizing in the culture and shared vision conditions. They are approaching operationalization in the areas of agency, transparency, curriculum and instruction, flexible learning environments, and professional learning and development.

After a slow start, Oakes has moved quickly to deepen implementation in several areas, such as shared vision, culture, agency for learners and educators, and transparency. The early foundation that was built before the COVID-19 pandemic perhaps allowed the district to accelerate implementation once the new leadership signaled district commitment. Oakes is approaching full implementation, with increased understanding and ownership of the shared vision; increased transparency; and deepening practices with instruction, assessment, and professional learning. The overall implementation of personalized, competency-based learning practices is currently deeper at the elementary level than the secondary level.

West Fargo's implementation must be assessed at two levels—the district level and the school level. There is strong commitment to shared vision across the district and school leadership, though that hasn't yet permeated to the school and community levels. The district has focused on a commitment to transparency and equity, for example, through the development of a guaranteed and viable curriculum for all learners. Educators have experienced their own increased agency through personalized professional learning, but most learners do not experience agency or choice in their learning. The personalized, competency-based learning conditions of culture, transparency, curriculum and instruction, learner supports, and professional development and leadership development are approaching the developing phase at the district level. At the school level, most learners do not experience agency or flexible learning environments.

#### **District Implementation and Outcomes**

WestEd staff have had the opportunity to observe and document the implementation process in each district since 2019, through COVID-19, the nation's political and racial unrest of 2020–21, and changes in staffing in all three districts, all of which have proven that leadership and context play significant roles in any systems-change initiative. These conditions and factors can significantly slow or accelerate implementation. Each district was on its own journey and has its own story.

While the cohort implementation activities were the same for all districts, each district had its own personalized, competency-based learning implementation timeline and priorities based on the local context. This section reflects the implementation activities of the three districts and is based on WestEd's site visits and survey data from 2019 to 2023.



#### **Northern Cass**

Under the leadership of the administration and teacher leaders, Northern Cass School District was already engaged in aspects of both personalized learning and competency-based learning before it joined the North Dakota Personalized, Competency-Based Learning cohort in 2018. Educators, for example, had been engaging in book studies focused on learner agency, performance assessments, and proficiency scales. When the WestEd research team first visited Northern Cass in the fall of 2019, it was clear that there was a shared commitment to achieving the conditions of personalized, competency-based learning. Vision, transparency, and agency were the focus of early implementation in Northern Cass. Researchers observed use of common terminology, such as "proficiency," and visible artifacts displaying common language, such as Portrait of a Learner, throughout the district. There were aspects of a flexible learning environment in many classrooms at both the elementary and secondary levels, where learners had choice in where they sat and with whom they worked. Learners at the elementary level also had choice around pacing and order of activities and assignments. At that time, learners and parents mostly perceived personalized, competency-based learning as a way for accelerated learners to push ahead; this perception wasn't completely aligned with the vision of the district design team.

The spring of 2020 brought COVID-19, and WestEd's visit in the fall of 2020 was conducted virtually. While the vision for personalized, competency-based learning remained a priority during this time, the Northern Cass leadership team narrowed its focus to strengthening the goal-setting aspect of agency. Online learning in the spring had expedited the implementation of Empower, the school's learning management system, which had been adopted but not yet widely used until the pandemic. Learners noted they appreciated that online learning allowed them to move at their own pace and set their own goals. When the district returned to inperson learning in the fall of 2020, it continued the use of the online system and self-paced learning. The district implemented a 4-day instructional week with "Virtual Fridays," which enabled learners to check in with educators for extra help. It also provided educators with the opportunity to receive coaching from the Personalized Learning Coach, Director of Personalized Learning, and the Dean of Culture. This provided a space to focus on instructional goals and engage in collaborative reflection about their progress.

Beyond the obvious challenges COVID-19 still presented, such as learner absentee rates, moving in and out of quarantine, and the mask mandate, designing learning environments that were collaborative and focused on grouping learners by progression of mastery was limited. There were instances of learners mastering grade-level content, for example, a 4th grade math standard, and instances of moving into the next grade-level classroom for instruction around the next standard. There was a strong focus on the emotional health and well-being of the



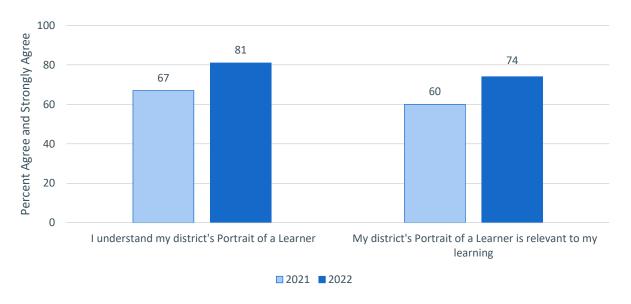
learners and the educators. At that time, Northern Cass leadership shared that growth mindset was an area of focus and development for the district.

January 2021 was described as a turning point in the district by educators and leaders, with an increased focus on personalization with learners. Virtual Fridays were still in operation, and educators took advantage of the time for professional development and coaching. There was a monthly focus for professional development and regular check-in meetings to keep a pulse on the health and well-being of the community, as well as a focus on personalized, competency-based learning implementation. During the virtual site visit in the spring of 2021, leadership and staff expressed that there was a strong commitment to personalized, competency-based learning after the worst of the pandemic was over. The loosening of some of the COVID-19 restrictions revealed a renewed commitment to the personalized, competency-based learning initiative and a shift in focus to sustaining it in the face of potential leadership changes. Leadership described a need for capacity building and began to build a cohort of educators with strong personalized, competency-based learning knowledge to begin developing a system of shared knowledge and institutionalization of practices.

By the fall of 2021, the Portrait of a Graduate was fully adopted in Northern Cass and became known as the Portrait of a Learner, consistent with the district's vision for personalized, competency-based learning. Indeed, learner survey data shows that understanding the district's Portrait of a Learner grew between the fall of 2021 and fall of 2022 (see Figure 6). By now, the terminology of personalized, competency-based learning like *learner*, *educator*, and *proficiency* had taken hold, and the conditions of transparency and agency were well developed across the district. With the effects of COVID-19 still very much being felt, the focus shifted to improving culture, in part by increasing celebrations and connection. Learners spoke of educators who knew their names and lined up daily to greet them. The elementary district implemented a word of the month focused on character, such as integrity or kindness, and mailed home greatness cards to staff, educators, and learners. Learner agency was demonstrated at the elementary level through a "must do" and "may do" list of learning activities. At the secondary level, some learners began working with a Director of College, Career, and Life Readiness to secure internships and work-based learning opportunities. At all levels, learners began having more choice in how they demonstrated learning in terms of assessments. Educators began to focus on proficiency scales and participated in professional learning to improve their understanding of them. The fall of 2021 also brought a renewed focus on the Marzano High Reliability Schools framework. This approach to improving learner outcomes focuses on bringing cohesion to initiatives and evidence-based practices to teaching, with the goal of a full competency-based system.



Figure 6. Northern Cass Learners' Understanding of Their District's Portrait of a Learner, 2021 and 2022



Note: See Appendix D for a full description of Figure 6.

With the fall of 2022 came the full return of in-person teaching and learning, including educators collaborating in person, eating lunch together, and returning to 5-day workweeks. Educators expressed missing the flexibility of Virtual Fridays, and the sick time granted to them under COVID-19 was now a thing of the past. Though some sense of normalcy returned, learners were still demonstrating great social and emotional need. To address the social and emotional needs of learners, leadership responded by providing many opportunities for learner leadership, including involvement in clubs, peer mentoring, student ambassadors, and launching learning studios to support learners who were falling behind academically and those who needed additional mental health support. Initially, studios were designed as personalized systems for learners to work with the Personalized Learning Coach and Director of Personalized Learning to "catch up," as well as an opportunity for learners to design a more individualized learning experience. Leadership had identified a handful of learners who were in jeopardy of not graduating, and worked with educators to design a personalized learning studio that was engaging for learners and would allow them to meet competencies and earn the credits needed to graduate.

In the 2022–23 school year, WestEd visited Northern Cass for the last time in February–March of 2023. By this time, the conditions of vision and culture were solid and strong. Learners spoke of feeling welcomed and a sense of belonging.



Parents described kids as "being embraced' and "met where they are" socially and academically. Educators and learners spoke of looking forward to coming to school and spoke of the community as a family. Celebrations of learning were a regular part of the week, and focus group participants and interviewees approached the conversation through a strengths-based lens.

The Northern Cass team never lost sight of where they needed to go next in their PCBL work. In the year since the researchers had visited, studios had grown from a "catch up" time for a handful of kids at risk of not graduating to several classes full of learners pursuing interests from autobody work to world languages in personalized ways that were learner-centered and learner-designed. Learners talked about "working towards that 4" on their proficiency scales (4 being the highest score), not for the grade but for the growth and the engagement. Educators believe they can experiment and try out new ways of teaching and working with learners, as is evidenced in the studios and in the district survey data (see Figure 7).

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Figure 7. Northern Cass Educators' Understanding of Risk-Taking, 2021 and 2022

I feel it's okay for me to try different instructional strategies and approaches in the classroom even if they don't work out.

During this last visit, it was clear from being in the district—talking with educators, learners, and parents and walking through classrooms—that there is a shared sense of collective efficacy

2021



created by a shared vision and mission and a commitment to equity and transparency. Educators and learners feel respected and supported, and parents feel included. Northern Cass's personalized, competency-based learning implementation represents a true cycle of continuous improvement. All members of the community believe in their collective impact and are willing to solicit and provide feedback toward that end. Their ongoing challenge, as with the initiative overall, will be sustainability. Toward that end, they spoke of onboarding new staff to the personalized, competency-based learning initiative as not only a challenge but also an opportunity to move toward sustainability.

#### **Oakes**

Oakes is a small town with a strong community, of which the school is the center. During the 5 years of the personalized, competency-based learning initiative, the Oakes School District had three superintendents. Consequently, its implementation progress was more sporadic than the other districts, with starts and stops based on the vision set by the leadership and their influence on culture.

When Oakes joined the personalized, competency-based learning initiative, it was under the leadership of Kraig Steinhoff, EdD, who had been superintendent in the district since the 2016-17 academic year. At that time, the community did not have a unified vision of personalized, competency-based learning. There was some commonly used language but, overall, an inconsistent understanding of the philosophy and practices of personalized, competency-based learning. During that time, educators and parents described learners as "low" or "high" and described personalized, competency-based learning as a vehicle for "moving up" or "moving down" in their learning at the elementary level. At the secondary level, a "flex-mod" schedule was in place, allowing for a flexible period each day to be used to meet learner needs. Many learners would use the time to finish work, meet with an educator, or expand a project. Learner agency at both levels was exhibited mostly by learners choosing where to sit in class, with very little choice around content or assessments. Most instruction observed was educator-centered. At this point, educators' implementation of personalized, competency-based learning was mostly operational and technical, such as posting standard operating procedures in classrooms, posting learning targets, and facilitating regular celebrations of learning. The adaptive aspects of personalized, competency-based learning, such as instructional delivery, flexible pacing, and learner agency and engagement, would require a shift in attitude and practice.

In the spring of 2020, Oakes's educators were able to pivot quickly to virtual learning because they had been exposed to the technology platform that had been used earlier through their personalized, competency-based learning work. The educators spoke of their use of technology to support learning—in particular, Schoology—to have learners track their own progress and learning. This took a bit of the onus off the educators to track everything and provided a sense of agency for the learners. During the virtual visits in the fall of 2020, the elementary level was focused on learning targets, which were posted and discussed during class. As a result, learners



were beginning to advance based on mastery of standards. There was a clear focus on a growth mindset, with regular celebrations where students would "cheer on their peers" after they met learning targets.

Progress was slower at the secondary level, with less clarity about "how to do" personalized, competency-based learning and how it translated to grading practices. COVID-19 challenged the pace of learning with frequent learner and educator absences and quarantines. District approaches to COVID-19 management, such as mask-wearing requirements, also divided the staff. The addition of a full-time personalized, competency-based learning coach in this academic year served to unite the staff; they unanimously agreed that his support was invaluable. The coach helped develop the five professional learning groups that focused on the five areas of their action plan: Growth Mindset, Learner Agency, Learning Environments, Family Engagement, and Portrait of a Graduate. All staff were on one of the five teams and met during professional development days, known as "early outs," to work on their area of the action plan. This work helped to provide additional clarity and transparency around their personalized, competency-based learning implementation plan.

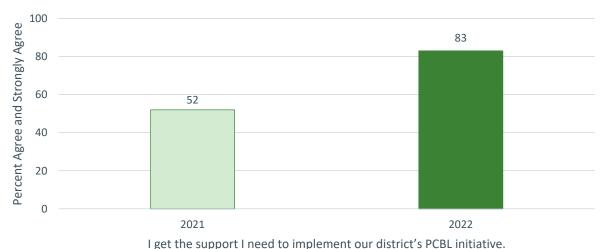
A new superintendent in the fall of 2021 brought a greater push for accountability from the school board and more uncertainty to the staff. For educators, this increased accountability translated to fewer opportunities for agency and flexibility and led to a fractured sense of trust between educators and leadership. There was a greater understanding among both elementary and secondary educators that personalization meant "meeting students where they are," and that meant adopting a growth mindset. However, there was still a lack of clarity among staff about what personalized, competency-based learning should look like. During WestEd's site visit in the spring of 2021, many educators shared that they were not yet comfortable talking about personalized, competency-based learning with parents. Parents, especially of secondary learners, expressed hesitation about implementation of personalized, competency-based learning due to what they perceived as a lack of information. There was significant trepidation on the part of parents about changes in grading and what competency-based grading would mean for college admissions.

These findings continued in the fall 2021 and spring 2022 site visits; the focus on accountability continued, and with it came the perception of less choice and flexibility for educators. The earlier decision to remove flex-mod from the schedule was playing out, creating additional tension among educators and leadership and adding to the feeling that educators were losing their autonomy. Despite the tension, the vision of personalized, competency-based learning seemed to be clear among educators, although there was wide variation in implementation between the elementary and secondary educators. Elementary educators continued implementation in the classroom by providing learners with choice in how they learned content and in what order. Educators spoke of elementary learners being motivated to "get that 4," which was something new. The junior high was beginning to transition to standards-based grading. This resulted in pushback from learners and parents.



Educators continued to be unanimous about the personalized, competency-based learning coach's critical role in the work. Under the coach's leadership and based on educator feedback the previous year, the number of professional learning "early outs"—that is, the early release days to allow for teacher professional learning—was reduced, and each session was lengthened to allow for a deeper dive into each of the five areas of the action plan. Other professional learning was added to include learning walks, instructional rounds, and visits to other districts engaged in personalized, competency-based learning. A growth in this sense of support for implementing personalized, competency-based learning was evident in educators' survey data (see Figure 8), which showed a large increase over the past year. Goal setting for educators became more common, and the professional learning opportunities provided the space and time for reflection and continuous improvement related to their instructional goals.

Figure 8. Oakes Educators' Perception of Support for Implementing Personalized, Competency-Based Learning, 2021 and 2022



i get tile support i fleed to implement our district's PCBL initiative.

Note: Includes all classroom, special education, subject matter, and specialist educators.

In the spring of 2022, the superintendent announced his resignation, and the elementary principal was named interim superintendent for the 2022–23 school year. Given her history and reputation in the district, educators were relieved and felt that trust was restored. The site visit in the winter of 2023 revealed that the vision and culture were much improved; many educators and staff said they felt "like a family again." There was a focus on a growth mindset, celebrations of learning, and support for risk-taking in the classroom. The superintendent spoke of deliberately providing educators with more opportunities to have agency and autonomy in their instructional practice. Learning was still largely educator-centered, but the focus was on where learners were going and how they would get there on their own path. Learning targets



were commonly posted in classrooms, and the focus on engagement and mastery was palpable. Learners were given the choice to determine when they would be assessed based on when they were ready. Educators spoke of the choices they had in their professional learning, including continued learning walks and instructional rounds. They spoke of the value of the cohort and their relationship with Northern Cass in particular. Several educators discussed the "aha moment" they had when educators from Northern Cass visited and suggested they offer choice not only in the order of activities but in the activities themselves. Northern Cass and Oakes aligned their professional learning days so they could collaborate and continue peer site visits.

[The culture is] much improved; happier; we work together—all over better environment. Teacher PD is more personalized. . . . We have 14 hours required for PD, [we] can come to PD and/or choose activities on the choice board; can do a book study, a walk to learn, visit another district or have them visit here.

—Oakes educator

By the time of WestEd's visit in March 2023, the elementary principal had committed to the role of superintendent, and the personalized, competency-based learning coach moved into the elementary principal role, while simultaneously holding the coaching position. Educators and leaders highly valued the work of the personalized, competency-based learning coach in both leading professional learning and supporting implementation of personalized, competencybased learning practice at the elementary and secondary levels. There was wide agreement that the current dual position of personalized, competency-based learning coach and elementary principal was unsustainable and that they would need an instructional coach to continue the personalized, competency-based learning work. The educators and leaders spoke of a need for a structured personalized, competency-based learning onboarding process for educators new to Oakes. They were beginning to think about how to balance supporting new educators, particularly those new to the field, with an appropriate amount of information about personalized, competency-based learning in their first years. This reflection represents a shift in their thinking from how they oriented themselves to personalized, competency-based learning implementation in 2019–20 to how they planned to integrate it into the way they do business today.



#### **West Fargo**

West Fargo applied to be part of the North Dakota Personalized, Competency-Based Learning cohort in 2018 under the former superintendent. When Beth Slette took over in 2018 after serving as the assistant superintendent for West Fargo's elementary schools, she continued leading the district in its strategic focus on personalized, competency-based learning, with a specific focus on personalized learning through building the knowledge and capacity of district and school leaders.

The district design team developed a clear mission and vision based on a set of belief statements addressing self-efficacy and agency, relationships, a guaranteed and viable curriculum, assessment and feedback, goal setting and reflection, and pathways and pacing. The district also worked with Battelle for Kids to develop a profile of a graduate that outlined their learning community's vision for learner skills and dispositions. The district's approach to personalized, competency-based learning was deliberative, with an initial focus of building understanding at the district level. The district's design team was comprised of over 20 members, including district leaders, instructional coaches, and principals, who initially led the planning work. The district's approach was focused on alignment of initiatives, practices, and language to support personalized, competency-based learning. While the district leadership was focused on personalized, competency-based learning, implementation was slow to reach the classroom.

In the fall of 2019, the district design team was still in the early phase of planning for personalized, competency-based learning—what they called *visioning*. The members of the design team and district leadership all had a consistent vision for personalized, competency-based learning that was focused on enhancing learner agency through voice and choice. With equity as a goal, the leadership was committed to providing all learners with access to a rigorous, high-quality curriculum and instructional experience while also addressing social and emotional well-being. Members of the design team and district leaders were strategic in their communication about personalized learning—intent for the rollout to be well received rather than seen as "another thing" to manage. Hence, they began the year with a focus on building positive relationships, moving all learners toward Choice Ready, and building their guaranteed and viable curriculum. Evaluators saw no evidence of personalized learning practices in the schools they visited that fall.

The district, like all districts, faced massive disruptions due to the global COVID-19 pandemic in March 2020. District leaders told evaluators that the work the district was doing to develop a *Profile of a Graduate* proved to be helpful in the crisis and for what lay ahead. The district prioritized equity during this time, hiring an equity and diversity coordinator who engaged principals and educators to explore and reflect on equity issues, such as potential inequities in distance-learning practices.



"We were working on the Profile of a Graduate before the [personalized competency-based learning] initiative, but, with KnowledgeWorks, we leveraged that work to make it a living document. Then with COVID, we were able to take those proficiencies and see what each piece means for students, teachers, and families with distance learning. Having that Profile of a Graduate as an anchor, and sharing with families, has really helped focus us on SEL [social and emotional learning] to make sure we had that in mind with distance learning."

—West Fargo district leader

The beginning of the 2020–21 school year, with either a hybrid or a fully remote option for learners, was a turning point for personalized, competency-based learning in West Fargo. District leaders credited KnowledgeWorks' approach outlined in *Finding Your Path* and the support it provided the district with allowing their educators time to focus more on learning and less on tasks, such as worksheets, that is common in schools. The superintendent saw this as a key shift in the mindsets of educators in terms of understanding "the why" behind personalized, competency-based learning. This enhanced educators' understanding of personalized, competency-based learning and propelled educators' willingness to expand learner voice and choice to support learning. During that visit, evaluators observed personalized learning practices in classrooms only in pockets. However, several school leaders among those on the district design team were working to develop conditions and foster environments that could support personalized, competency-based learning in the future. The district design team had to shift much of their time and focus to crisis management during the pandemic and, consequently, had little time to move the personalized, competency-based learning work forward.

In the spring of 2021, with transparency in mind, the district engaged with members of the learning community through forums held by the "Return to Learning" committee. The committee included representatives from the learning community, including families, health professionals, educators, and school and district leaders, involved in an inclusive process of decision-making and communication. These forums were held remotely during the pandemic to share information and invite community input into district decisions. The forums provided the opportunity to raise issues and concerns, such as inequities experienced by some groups of learners. They informed district decisions, such as having both the remote and hybrid learning



options for the fall of 2020. The committee and forum represented a shift away from centralized decision-making to an enactment of key principles of personalized learning.

Also in the 2020–21 school year, the district implemented increased educator choice and voice for professional learning by offering a two-tiered approach to professional learning. Tier 1 was required professional learning, such as training related to health and safety, while Tier 2 professional learning was coordinated at the school level, differentiated by topic and time, allowing educators to choose when and where to engage. Leaders also hoped that modeling agency in professional learning would inspire educators to practice it in their classrooms. At the end of the 2020–21 school year, personalized, competency-based learning in West Fargo was still primarily focused at the district level, with many school leaders beginning to foster environments in their schools to support personalized, competency-based learning practices in the future.

School leaders recognized the stress and exhaustion of educators and made efforts to support them, such as administering the Panorama survey for learners and educators to assess and support social—emotional health. The survey data revealed that educators felt the district leadership relayed decisions to them rather than involving them in decision-making. Educators described high levels of stress in response to the instructional model shifts presented by the COVID-19 pandemic. Both school leaders and educators believed that educators did not have the capacity to "take on any additional initiatives." The district worked to communicate that personalized learning wasn't something additional but was part of what educators do every day. However, to lower stress, they eased the expectations for personalized, competency-based learning implementation. For example, the district had completed proficiency scales for K–8 by 2022 but delayed considering a shift in grading practices until the proficiency scales were completed for all high school courses and professional learning for educators on assessment and feedback practices was complete.

Despite the impact of the pandemic, evaluators saw pockets of innovation and personalization occurring in classrooms across the district. For example, some educators were taking the initiative on their own to transform their curriculum into more meaningful, relevant, and authentic experiences for their learners. District leaders continued to frame personalized, competency-based learning as a systems approach to teaching and learning that did not add work but that brought coherence to the way teaching and learning happened at all levels of the district. For example, when the district interviewed finalists for an assistant superintendent position, they required a performance task related to personalized, competency-based learning implementation. This signaled the expectation of a personalized, competency-based learning culture.

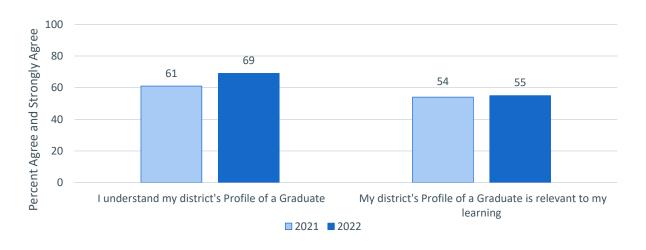
The 2021–22 school year brought both more changes and a cementing of the district's clear and intentional shared vision grounded in their strategic plan. The district vision spread to educators, nonclassroom staff, and parents, who were now able to describe the district's commitment to preparing learners to be "life ready." Educators' awareness of the *Profile of a Graduate* grew, though few incorporated it into their instruction or their work with learners. In



the fall of 2021, the district was transitioning to the Marzano Instructional Framework and continued to provide more flexibility and choice for educator professional development opportunities. Learner agency remained limited, primarily in the form of choice boards, where they chose their learning activity or assessment format. While there were a few schools that were heavily involved in the personalized, competency-based learning work, the district was still working on developing common language around personalized, competency-based learning and rolling that language out to all schools. Though the pace was slow, the district's commitment to expanding personalized, competency-based learning to all schools did not waiver.

In the 2022–23 school year, the district's personalized, competency-based learning vision was more visible across the schools visited by the WestEd team. Posters with the district mission, *Profile of a Graduate*, learner dispositions, and the district's pillars, as well as learning targets, were visible in most classrooms. School and district leadership at all levels commonly spoke about their work and progress toward the district's goals and pillars, highlighting that goal setting for learners and educators is a key part of personalizing learning. Strong coherence in the language and alignment of the district's efforts centered around the six pillars. While the district focused professional learning on personalized learning and its six pillars, there were choices for educators to implement personalized learning practices at their own pace and in their own way. At this point, instruction remained largely educator-focused, with pockets of learner-centered instruction throughout the district. The common language, vision, and agency were beginning to take hold, but the teaching and learning practices of personalized, competency-based learning were still being established. While most secondary learners understood the district's *Profile of a Graduate*, there is room for growth in helping learners to make it relevant to them (see Figure 9).

Figure 9. West Fargo Learners' Understanding of the District's *Profile of a Graduate*, 2021 and 2022



Note: See Appendix D for a <u>full description of Figure 9</u>.



After 5 years of the initiative, West Fargo continues to have a strong district commitment to personalized, competency-based learning with a clear vision and alignment of efforts at the district level (see Figure 10). The district continues to center equity with a commitment to ensuring that all learners have access to high-quality educational experiences regardless of race or income. Educators have more opportunities for voice and agency (see Figure 10). Learners' experiences with personalized, competency-based learning, however, remain limited and uneven across the district. District leadership remains committed to the long-term plan that all learners will have personalized learning experiences and continue to take actions to allow that to happen.

Figure 10. West Fargo Educators' Experiences With Personalized, Competency-Based Learning, 2021 and 2022



Note: See Appendix D for a full description of Figure 10.

#### **Cohort Activities**

The purpose of the district cohort was to serve as an incubator for personalized, competency-based learning work in North Dakota. At the cohort level, the 5-year grant was intended to provide the districts with a professional learning community of practitioners with whom to share problems of practice and learning as they implemented personalized, competency-based learning. For NDDPI and KnowledgeWorks, the goal in forming the cohort was twofold: one, to build capacity for leading change in individual districts and, two, to provide the groundwork to scale personalized, competency-based learning statewide. While each district was on its own personalized, competency-based learning journey, the cohort had shared experiences that



pushed their thinking, expanded their learning, and exposed them to alternative ways of pursuing personalized, competency-based learning. This occurred through convenings, peer site visits, and the development of a professional network.

KnowledgeWorks and the NDDPI, along with their partners, the Center for Collaborative Education and Batelle for Kids, planned and facilitated the convenings from 2018 to 2022, usually holding two to four cohort convenings a year. Convenings were structured to model personalized learning, choice, and risk-taking and often included multiple entry points for participants with different levels of knowledge. Convening agendas included plenary sessions, breakout sessions for role-alike groups, and roundtable discussions focused on specific topics. The gatherings were energetic and interactive, with opportunities for both district team time and sharing across districts.

KnowledgeWorks and NDDPI pivoted to virtual convenings in the 2020–21 school year to continue professional learning and planning to support district implementation of personalized, competency-based learning. They continued to differentiate the convening offerings and support to meet districts' localized needs. During this time, KnowledgeWorks launched professional learning cycles, where cohort members chose learning pathways focused on aspects of personalized, competency-based learning and followed a trajectory of online learning that offered continuing education credit. While participation in these learning opportunities varied across the districts, the personalized pathways served as an example of modeling personalized learning for the cohort participants.

In the 2021–22 school year, the cohort steering committee continued to be led by KnowledgeWorks and the NDDPI, and it was broadened to include volunteers from the districts. The intent was to build sustainability of the initiative beyond the grant funding by gradually shifting ownership of the planning from NDDPI and KnowledgeWorks to the districts. The cohort site visits mentioned in the earlier implementation timeline strengthened the cohort's sense of collective efficacy, as well as facilitating the creation of a community of critical friends. These visits usually included more educators and, in the case of Northern Cass, more learners than the convenings did, leading to increased exposure to examples of personalized learning in classrooms.

In-person convenings returned in the spring of 2022 and, with them, the gradual release of the convening planning from KnowledgeWorks to the steering committee. The steering committee members took the lead in planning and facilitating each full convening, with an eye toward continuous improvement with feedback collected after each session. In 2023, the steering committee helped to form the North Dakota Network for Personalized Learning (the Network) to build sustainability for the initiative in the last year of the project. The hope was that this would help enable the cohort to continue working together as a community of practice. The Network became the new name of the North Dakota Personalized, Competency-Based Learning cohort, establishing the group in a way that would extend beyond the life of the grant. Topics addressed at the convening in the 2022–23 school year included systemic transformation,



collective efficacy, personalized professional learning, and district-specific problems of practice. Peer site visits continued throughout the 2022–23 school year, often coordinated with convenings when the cohort was already gathered. The first convening of the 2023–24 school year took place in September, and the steering committee has planned continued site visits and virtual learning opportunities for educators for the remainder of the 2023–24 academic year.

### **Cohort Impact**

A key value of the cohort was in the collaboration—the learning and sharing across districts. The opportunity to meet outside of one's school and district provided space and time for reflection and collaboration both within and across district teams. The convenings provided a structure for KnowledgeWorks and its partners to model personalized learning through offering choice and voice in the convenings, being transparent in their communication, and building a strong culture for collaboration. The peer site visits gave the districts the agency and accountability to take stock of their personalized, competency-based learning practices and determine what to share and where to ask for feedback. Peer visits also served to help educators see what personalized learning could look like. Educators spoke of changing their practices because of feedback received on their instruction during a peer visit. The cohort facilitated district collaboration and shared experiences that would have been highly unlikely without it. Two of the districts aligned their schedules to share professional development days, offering the opportunity to visit one another and/or collaborate virtually on professional learning days despite their geographic distance.

"There is more voice and choice as a result of the feedback from the site visits with West Fargo and Northern Cass. We saw that choice boards weren't enough."

-Secondary educator

The role of the steering committee provided additional agency and accountability for the cohort itself and its members. NDDPI's and KnowledgeWorks' deliberate release of responsibility was key to the steering committee's taking the lead and supporting the transfer of ownership for the work. Ideally, that transition would have begun sooner, but the pandemic and its aftereffects made that difficult. Steering committee members discussed the challenge of scaling up, especially in the absence of continued state support and a funded partner to shepherd the work. Structures, protocols, and procedures are in place to continue the collaborative professional learning activities, such as peer site visits and sharing of practices, thanks to the work of the cohort and its members. However, it takes people, time, and money



to keep the work alive. Whether they will have the capacity to sustain the cohort activities beyond the cycle of the grant depends on continued support from the state and its partners.

The role of a support or "backbone" organization that KnowledgeWorks played was valuable, perhaps even essential to maintaining progress. During the convenings, KnowledgeWorks staff modeled personalized, competency-based learning practices of agency, transparency, and a positive culture of risk-taking. They were not only disseminating personalized, competency-based learning content but also simultaneously modeling the practice. KnowledgeWorks also personalized its coaching and technical assistance to each district's context, needs, and areas of focus. KnowledgeWorks' staff were paired with districts to work with them throughout the duration of the grant, which built relationships and trust to more effectively and efficiently facilitate the implementation of the initiative. Indeed, the support of a neutral, knowledgeable third party is critical to both orienting leaders and educators to personalized, competency-based learning and supporting its implementation.

# Outcomes for Learners in Personalized, Competency-Based Learning Districts

The theory of action for change for the North Dakota Personalized, Competency-Based Learning Initiative posits that centering each learner's strengths, needs, and interests by providing differentiated supports and a variety of ways for learners to demonstrate what they know will result in positive, measurable achievement impacts for learners within 10 years of implementation (see Figure 2). Although this initiative has been underway for only 5 years and has been implemented differently across the three participating districts, we aim to examine differences in learner outcomes in personalized, competency-based learning districts and nonpersonalized, competency-based learning districts across the state to test this hypothesis at the midpoint of that timeline. Specifically, we look at the following outcomes:

- Academic achievement
- Attendance rates
- · Graduation within 4 years
- Choice readiness
- Postsecondary success

The overarching question is whether there are impacts of district participation in the personalized, competency-based learning cohort on learner outcomes and—if so—what the impacts are and how large they are. There are several ways to examine this question, and there are important factors related to implementation that must be considered when analyzing the data. First, although all three districts began participation in the initiative at the same time, the pace and extent of implementation has differed across districts. Second, there is a lack of data



about individual learners' participation in or exposure to personalized, competency-based learning practices. We use an intent-to-treat approach, which assumes that all learners in the three participating districts experienced personalized, competency-based learning practices similarly within a district, and this might mask some differences in individual exposure to practices, such as choice and agency. While there is great interest in understanding whether outcomes differed for learners from historically marginalized populations, the small number of learners from historically marginalized populations in two of the districts prevented this type of disaggregation of findings. Finally, there are only three cohorts of learners for which we can examine academic achievement outcomes both prior to and after personalized, competency-based learning implementation.

Considering these limitations, we conduct two types of inferential analyses to assess whether district participation in personalized, competency-based learning results in the intended outcomes:

- Individual learner-level analyses, where each learner is statistically matched with one
  or two learners from noncohort districts prior to the district involvement in the
  personalized, competency-based learning initiative
- School-level fixed-effects analyses, where grade-by-school-level trends are examined over time, controlling for changes in the school population

These two types of analyses look at learner outcomes from different perspectives. The individual-learner level analyses examine whether each learner's outcomes differ from what would have happened if that learner had not been in a personalized, competency-based learning district. The school-level analyses provide a longitudinal look at whether a school's outcome trajectory changes after the implementation of personalized, competency-based learning. We first describe the data and sample, then provide detailed findings for academic achievement, attendance, and graduation outcomes. We then provide descriptive analyses of the choice readiness and postsecondary success outcomes.

#### **Data and Sample**

The NDDPI provided learner-level data for all analyses presented in this section, except for postsecondary enrollment analyses. The learner-level postsecondary enrollment analyses were conducted by North Dakota Statewide Longitudinal Systems (SLDS) staff and provided to WestEd for use in this report. We list the learner-level variables for which the NDDPI provided data in Appendix B, Tables B1 and B2. Data were provided for all learners enrolled in a North Dakota public school during the school years of 2017–18 through 2022–23, including learner demographic characteristics, attendance, and test scores (except for 2020, when the North Dakota State Assessment [NDSA] was not administered). Table 3 describes the characteristics of districts and learners at baseline (2017–18 school year) and after 5 years of implementation (2022–23 school year).



Table 3. Characteristics of Personalized, Competency-Based Learning and Nonpersonalized, Competency-Based Learning Districts, 2017–18 and 2022–23

School year	Sample characteristics	Personalized, competency- based learning district: Northern Cass	Personalized, competency-based learning district: Oakes	Personalized, competency- based learning district: West Fargo	Nonpersonalized , competency- based learning district: All other districts
2017–18	Total enrollment	646	507	11,021	105,630
	Female (%)	48.0%	45.0%	49.0%	48.0%
	American Indian (%)	-	3.0%	3.3%	11.7%
	Asian (%)	-	-	4.1%	1.8%
	Black (%)	1.5%	-	15.8%	5.6%
	White (%)	97.7%	94.9%	76.4%	80.2%
	English Learners (%)	-	2.2%	8.1%	2.6%
	IEP (%)	6.7%	13.6%	13.5%	14.3%
	Low income (%)	15.8%	29.4%	30.5%	32.3%
	Number of schools	1	2	17	353
2022–23	Total enrollment	695	506	13,148	109,497
	Female (%)	50.0%	45.0%	49.0%	48.4%
	American Indian (%)	-	2.37%	4.0%	12.2%
	Asian (%)	-	-	4.1%	1.9%
	Black (%)	1.60%	-	18.8%	6.4%
	White (%)	97.8%	93.7%	72.7%	78.5%
	English Learners (%)	0	3.6%	7.7%	3.4%
	IEP (%)	15.2%	10.3%	17.1%	17.3%
	Low income (%)	9.6%	23.9%	29.0%	34.6%
	Number of schools	3	2	25	362

Source: Authors' calculations using NDDPI-provided learner-level data.

Note: Hyphens (-) indicate data suppressed due to small cell sizes.



#### **Academic Achievement, Attendance, and Graduation Findings**

#### Learner-Level Analyses

To estimate the effect of being in a personalized, competency-based learning district, we used g-computation (Snowden et al., 2011) and regression estimation (Schafer & Kang, 2008). We matched learners based on their demographic characteristics, location, and test scores, if available, in the year prior to personalized, competency-based learning implementation and looked at their outcomes for the 2022–23 school year (see Appendix B for details on the matching process). Because learners were matched, the assumption is that their outcomes would be similar unless their district's personalized, competency-based learning participation had positive or negative effects. We report effect sizes, or estimated standardized mean differences, which are estimates of the effect of the learner being in a personalized, competency-based learning district compared to learners in nonpersonalized, competencybased learning districts. While we describe effect sizes of +/-0.2 as small, +/-0.5 as medium, and effect sizes of +/-0.8 as large based on Cohen (1988), Kraft (2019) notes that effect sizes should be considered with additional information such as time, type of program, and alignment of outcomes and measures to the intervention or program. He argues that effect sizes of diffuse interventions, characterized as those that result from many cumulative decisions and sustained effort over time, would have smaller effect sizes than those that are short and intensive. Another consideration for interpreting effect sizes is how well the measures are aligned with the intervention or program understudy, where larger effect sizes should be expected for those measures that are more closely aligned. Overall, the results of these analyses suggest mixed effects, with some positive, some negative, and some null effects. Any detectable effects were small or very small and did not necessarily translate into substantive differences.

#### Academic Achievement

Being in a personalized, competency-based learning district is estimated to have a small negative effect on 8th grade ELA NDSA scores (see Table 4). Similarly, the effect of being in a personalized, competency-based learning district is estimated to have small or very small negative effects on 8th grade math scores on the NDSA. In the 6th and 7th grades, being in personalized, competency-based learning districts was related to lower ELA and math scores on the NDSA. It is important to consider that, for the 6th and 7th grade scores—unlike the analyses for 8th grade through high school—the matching process does not include prior academic achievement, leaving out important predictors of academic achievement such as measures of prior achievement. Differences based on limited matching data should be interpreted with

<sup>&</sup>lt;sup>1</sup> Learner-level matching was used for all outcomes examined, except for the 10th grade NDSA scores. Only one of the participating districts administers the NDSA in 10th grade as their accountability measure; the other two use the 11th grade ACT. The matching results for the 10th grade were not balanced, and the overall power of the analyses were low. Instead of matching, we estimated the models without matching, controlling for whether the school participating in the personalized, competency-based learning initiative, and with standard errors clustered at the school level.



caution because poor or limited matches might lead to unreliable or imprecise estimates of impact.

In terms of high school academic achievement, there were no effects on 10th grade ELA or math scores. It is important to note that only one small district from the cohort uses the NDSA in 10th grade, and results should not be interpreted to represent the cohort of personalized, competency-based learning districts. There were very small negative effects of being in a personalized, competency-based learning district for 11th grade ACT Composite scores. These findings—mostly negligible in size and practical significance—are unsurprising given varying personalized, competency-based learning implementation across participating districts.

**Table 4. Effects of Personalized, Competency-Based Learning on Academic Achievement** 

Outcome	Effect size (in standard deviation units)	<b>p</b> value	Standard error
ELA 6th grade	-0.20	< 0.001	0.04
Math 6th grade	-0.11	0.01	0.04
ELA 7th grade	-0.20	< 0.001	0.04
Math 7th grade	-0.12	0.01	0.04
ELA 8th grade	-0.21	< 0.001	0.04
Math 8th grade	-0.19	< 0.001	0.04
ELA 10th grade	0.19	0.267	0.17
Math 10th grade	-0.16	0.313	0.16
ACT Composite 11th grade	-0.12	< 0.001	0.04

*Note.* Northern Cass and West Fargo do not administer the 10th grade NDSA. They use the ACT in 11th grade as their high school accountability measure. The 10th grade NDSA results only include learners from one of the cohort districts, Oakes.



These differences can be seen in the estimated 2023 ELA and math NDSA scores of learners in the personalized, competency-based learning districts compared to those in other districts across the state (see Figures 11 and 12). Figure 13 shows the estimated standardized 11th grade ACT Composite scores.

0.5 Predicted NDSA ELA Score 0.3 0.16 (Standardized) 0.05 0.1 0.01 -0.1 -0.06 -0.15 -0.19 -0.3 -0.5 6th Grade 7th Grade 8th Grade ■ PCBL ■ Non-PCBL

Figure 11. Predicted Scores 6th, 7th, and 8th Grade NDSA ELA Scores, 2022–23

Note: See Appendix D for a full description of Figure 11.

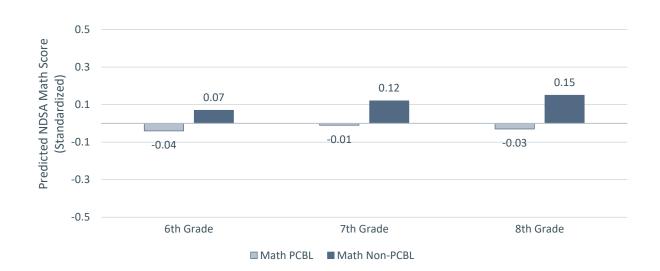


Figure 12. Predicted Scores 6th, 7th, and 8th Grade NDSA Math Scores, 2022–23

Note: See Appendix D for a <u>full description of Figure 12</u>.



0.25

0.20

0.20

0.20

0.20

0.15

0.07

0.07

0.00

PCBL

Non-PCBL

Figure 13. Predicted Scores 11th Grade ACT Composite, 2022–23

#### Attendance Rate

Being in a personalized, competency-based learning district is estimated to have a small but meaningful positive effect on attendance (see Table 5 and Figure 14). In other words, for each of the grade bands examined, learners in personalized, competency-based learning districts have slightly higher attendance rates than learners in nonpersonalized, competency-based learning districts. Specifically, learners from personalized, competency-based learning districts in 4th and 5th grades and in 9th through 12th grades have attendance rates that are each 1 percentage point higher than learners from nonpersonalized, competency-based learning districts, which equates to almost 2 days of school. For learners in 6th through 8th grade, the percentage point difference is 2, which equates to almost 4 days of school. These differences can be seen in the 2023 predicted attendance rates for learners in personalized, competency-based learning districts compared to those in other districts.

Table 5. Effects of Personalized, Competency-Based Learning on Attendance

Outcome	Percentage point difference	Effect size	<i>p</i> value	Standard error
Attendance grades 4–5	1	0.10	< 0.001	0.00
Attendance grades 6–8	2	0.10	< 0.001	0.00
Attendance grades 9–12	1	0.20	< 0.001	0.00



95 94 94 96 95 92 100 80 60 40 20 0 4-5th Grade 6-8th Grade 9-12th Grade ■ PCBL ■ Non-PCBL

Figure 14. Predicted Attendance Rate, 2023

Note: See Appendix D for a full description of Figure 14.

#### Graduation

Learners in personalized, competency-based districts were no more or no less likely to graduate within 4 years of starting high school as learners not in personalized, competency-based learning districts (see Table 6). Graduation is a culmination of many decisions and actions that take place over a long period of time, and the path to graduation may have been set for many learners before their districts began implementing personalized, competency-based practices. It may not yet be appropriate to estimate whether being in a personalized, competency-based district impacts graduation.

Table 6. Effects of Personalized, Competency-Based Learning on Graduation

Outcome	Log odd estimate	<i>p</i> value
Graduation within 4 years	1.01	0.95

#### School-Level Analyses

To look at learner outcome data another way, we conducted school-level fixed-effects analyses, which rather than focusing on individual-learner outcomes, as in the matching analyses presented above, focus on school-level changes in outcomes over time. Specifically, we used a



school-level fixed-effects difference-in-difference approach. This approach assumes that prior to the implementation of the initiative—in this case, personalized, competency-based learning—the schools had similar trends in the outcomes of interest (e.g., assessment scores); therefore, any differences observed after the implementation period are due to participation in the initiative.

We see null, negative, and positive effects for the academic achievement outcomes (see Table 7). We see null effects for the 6th grade ELA and 6th grade math. However, we see negative effects on 8th grade ELA and math. The effects on attendance are null except at the high school level, which aligns with the learner-level analyses. The school-level fixed-effect for graduation is null, as it is in the learner-level analyses.

**Table 7. School Fixed-Effect Results** 

Outcome	Effect size	Robust standard error	Adjusted R <sup>2</sup>	<i>p</i> value	Number of observations
ELA 6th grade	-0.092	0.103	0.614	0.374	820
Math 6th grade	0.007	0.133	0.626	0.960	820
ELA 8th grade	-0.283	0.084	0.537	0.001	792
Math 8th grade	-0.181	0.064	0.622	0.005	792
4th grade attendance rate	0.004	0.002	0.625	0.120	1,2019
8th grade attendance rate	0.002	0.008	0.532	0.212	697
10th grade attendance rate	0.029	0.008	0.719	0.001	566
Four-year graduation rate	0.016	0.017	0.823	0.346	792

#### **Choice Readiness**

Choice readiness indicates having the knowledge, skills, and disposition to be prepared for a variety of postgraduate career paths, with students potentially being Choice Ready in more than one category. Districts have kept and reported Choice Ready data for high schoolers since the 2017–18 school year, with each learner's status updated each year. Although NDDPI has collected this data for several years, it considers data collected prior to the 2021–22 school year to be unreliable, given that many districts were unprepared to collect and report Choice Ready



data prior to and during the COVID-19 pandemic. For these reasons, we conduct descriptive analyses using data for 12th graders from the 2021–22 and 2022–23 school years only to report on the average attainment on the Choice Ready indicators.

Both personalized, competency-based learning and nonpersonalized, competency-based learning districts saw an increase in the percentage of 12th graders who were Choice Ready between the 2021–22 and 2022–23 school years. Most 12th graders achieved choice readiness in the workforce category, which requires learners to complete a 4-year rolling career plan and to complete two or more additional indicators (e.g., complete three or more career and technical education courses with a C or higher; complete a dual-credit course with a grade of C or higher; or complete 40 or more hours of a work-based learning experience). Across all districts in 2022–23, 12th graders had similar rates of workforce readiness and postsecondary readiness but dissimilar rates of military readiness. Specifically, learners in personalized, competency-based learning districts had a higher rate (9 percentage points) of being military ready (57%) compared to those in nonpersonalized, competency-based learning districts (48%). By the 2022–23 school year, the personalized, competency-based learning districts closed the gap in workforce readiness for their 12th graders compared to nonpersonalized, competency-based learning districts (see Figure 15).

Figure 15. Choice Readiness Indicators: Personalized, Competency-Based Learning and Nonpersonalized, Competency-Cased Learning Districts, 2021–22 and 2022–23



Note: See Appendix D for a full description of Figure 15.



#### **Postsecondary Enrollment**

An important long-term outcome for personalized, competency-based learning is increased college and career readiness. One, albeit imperfect, way to measure college readiness is through postsecondary enrollment. We examine trends in the percentages of graduates who enrolled in any public or private postsecondary institutions.<sup>2</sup> Prior to the start of the personalized, competency-based learning initiative, the percentage of graduates enrolling in postsecondary institutions in the fall after graduation were similar for learners in personalized, competency-based learning and nonpersonalized, competency-based learning districts. During the height of the COVID-19 pandemic, both personalized, competency-based learning and nonpersonalized, competency-based learning districts saw a dip in the percentage of graduates who enrolled in postsecondary institutions in the fall after graduation. By fall 2022, enrollment recovered to higher than pre-pandemic levels for the personalized, competency-based learning districts but continued to decline for nonpersonalized, competency-based learning districts (see Figure 16). It is important to note that these are descriptive trends that are not causal, nor do these comparisons use matched learner pairs. It is also possible that the composition of learners in the districts changed over time. Several more years of post-pandemic data will be needed to assess this trend.

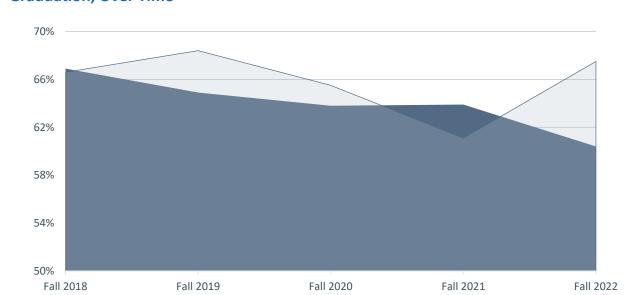


Figure 16. Percentage of Learners Enrolling in Postsecondary Institutions the Fall After Graduation, Over Time

Note: Fall 2023 data were not available at the time of this report. See Appendix D for a full description of Figure 16.

■ Non-PCBL □ PCBL

<sup>&</sup>lt;sup>2</sup> These data are held by the National Clearinghouse for Postsecondary Education. Analyses were conducted by North Dakota SLDS staff.



#### Limitations

Because districts and schools were not randomly assigned to participate in the personalized, competency-based learning initiative, we cannot make causal inferences from the analyses. These analyses provide estimates of the effect of district-level participation in the initiative, regardless of individual learner exposure or engagement in personalized, competency-based learning experiences. With the small number of participating districts and the uniqueness of each of their implementation approaches, we cannot generalize these findings beyond their context. In addition, the large size of West Fargo compared to Northern Cass and Oakes may mask any potential impacts of personalized, competency-based learning in the smaller districts.

The lack of prior achievement variables for matching learners at the 6th and 7th grades is a limitation that suggests that findings for these grades should be interpreted as descriptive and not as an effect of personalized, competency-based learning. In addition, due to poor matching outcomes, the 10th grade NDSA analyses do not use learner-level matching, suggesting that these findings are more exploratory than causal. A small number of data points for 10th grade NDSA and 11th grade ACT scores prevented a school-level fixed-effects analyses of these outcomes. The school-level analyses could benefit from additional analysis of learning trends prior to implementation of personalized, competency-based learning.

Furthermore, the initiative's logic model hypothesizes that impacts on learner outcomes will be observed on a 10-year horizon; however, the initiative has just completed year 5. Therefore, these analyses should be considered exploratory, rather than definitive. The outcomes used are also imperfect measures of the anticipated impacts on learners of personalized, competency-based learning.

#### **Discussion of Learner Outcomes**

The results of the learner-level and school-level analyses were closely aligned, though there were some notable differences. Some of the outcomes that were significant at the learner-level analyses become nonsignificant in the school-level analyses. The 6th grade ELA and math effects were statistically significant in the learner-level matched analysis but not in the school-level fixed-effects approach. Given that the 6th grade learner matching cannot control for learner baseline assessment scores, this switch in significance is not surprising.

The attendance rates in the school fixed-effects model are significant and positive for 10th grade, which aligns with the findings from the learner-level analyses. However, attendance at the lower grades becomes nonsignificant with school fixed effects. Graduation is consistently not significant in both approaches. These mixed results suggest that the impact on learning in a personalized, competency-based learning district is not yet clear and raises more questions. For example, does the length of time a learner spends in a personalized, competency-based learning district affect attendance outcomes, or does being in a personalized, competency-based learning district impact academic and attendance outcomes differently? It also raises the



question of whether specific personalized, competency-based practices have different impacts on different outcomes.

The learner-level analyses show mixed impacts at the high school level, with null effects for 10th grade math and negative effects on 11th grade ACT. These mixed findings suggest the need for better outcomes measures to more sensitively capture impacts of personalized, competency-based learning. It is possible, however, that some of the impacts of personalized, competency-based learning are not measurable or are not visible to observers. It also suggests the need for further research to assess whether exposure to specific personalized, competency-based practices may have different impacts on outcomes.

## Implications for Personalized, Competency-Based Learning

# Personalized Learning in Practice

In a 4th grade math classroom late in the spring, learners were working independently or in small groups to achieve proficiency in standards where they hadn't yet achieved proficiency. The educator was moving between groups as needed. Learners were coming in and out of the classroom.

Posters with a matrix of learner names matched with each standard hung on the wall. Learners used the posters to track their "score" (e.g., 1-2-3-4) for each standard. The numbers in some of the cells were crossed out and new numbers were written, showing evidence of student growth toward proficiency. Learners shared how they used the charts to track their learning to show which standards they had yet to meet.

Learners described that they continue to work to improve their score to achieve one of at least a 3, or proficiency, for every standard. They shared that with the end of the year approaching, they were each working on different standards, to either achieve proficiency where they hadn't yet or to work on mastery. Learners also had the choice to work on standards for the next grade level. Some learners had begun working on the grade 5 standards and worked in the 5th grade classroom next door.

The 4th grade educator had prepared packets for each learner that indicated which standards they had yet to master. Learners then chose which standards they wanted to work on first. They could choose from a list of activities that would help prepare them to reach proficiency on that standard. Some learners were working through problems in books, some were watching video lessons, and others were doing worksheets while the educator circulated throughout the room, supporting individual or groups of learners as needed.



Although personalized, competency-based learning is well known to KnowledgeWorks and their partners, in the history of education, it is a relatively new way of thinking about teaching and learning. Transforming schools from a conventional schedule and a traditional instructional and assessment model to a personalized, competency-based learning model takes time. The work in North Dakota has been guided by the State Impact Assessment (see Figure 2), which outlines when districts and states might expect to see certain kinds of changes. Initially, educators and learners were challenged to think differently about teaching and learning. In many classrooms, evaluators are seeing continued evidence of these changes in practice, as well as the spread of these practices across schools and districts. Similarly, all districts have seen growth in the impact of learner agency on learners themselves, where "learners have significant, meaningful, and regular input into decisions that will shape their learning experiences and those of their peers" (KnowledgeWorks, 2021).

A systemic implementation of personalized, competency-based learning takes an enormous operational and mindset shift. This includes changing schedules, grading systems, and professional learning, as well as changing educator mindsets, stakeholder communication, and buy-in. All districts are engaged in this process at some level and have progressed in their learning and application of operational implementation. In all districts, there has been some degree of shift in educator practices. Some educators have realized that their school or district is no longer a good fit for them. For other educators, it means a recalibration of conditions for learning and a gradual release of control over learning; still others are leading the way by embracing and modeling these practices for their colleagues.

Factors that affect implementation emerged over the 5 years of the North Dakota Personalized, Competency-Based Learning Initiative that may have implications for future personalized, competency-based learning work in North Dakota and in other states and districts. These factors include readiness, leadership, culture, professional learning and onboarding, and the variable of time. As noted above, one overarching theme is the importance of a partner organization—a "backbone organization"—like the role KnowledgeWorks played in North Dakota. Being outside of the day-to-day of the district and school, KnowledgeWorks staff were able to help districts keep the big picture of systems change in sight while the districts were simultaneously making the smaller decisions that led up to that change. They met each district's specific needs and adapted as needs and context changed. They were able to be critical friends and accountability partners to the districts.

#### Context makes a difference.

As a large district, West Fargo faced different implementation challenges than Oakes or Northern Cass, both of which sit entirely on one campus in one building. The supports and path that each district takes to implement personalized, competency-based learning will likely vary, and this has implications around district readiness, another important measure of personalized, competency-based learning implementation. The degree to which schools and districts were



ready to receive personalized, competency-based learning as a novel approach impacted the rate and quality of implementation. The districts varied in their understanding of personalized, competency-based learning and what it took to launch the work, which affected pace and progress.

#### Leadership matters.

There were some leaders who were champions of the work from the start, some who gradually became champions, and others who are still adjusting to the change. Leadership affects many of the district conditions for personalized, competency-based learning, including culture, transparency, and agency. Strong leadership sets the stage for the conditions to emerge and grow toward operationalizing. Lack of strong leadership can threaten personalized, competency-based learning implementation.

#### Culture is important—and nuanced.

Each district has its own culture, and it is important for the leadership to have a sense of the culture and how to navigate it to support implementation, including strengthening culture if necessary. Smaller districts talked about a "family culture," where the school is the heart of the community. In those same places, it was often difficult for new staff to learn the culture, particularly the practice of personalized, competency-based learning. To engage in changing practice, people must first feel that they belong and are part of the practice.

# Professional learning and onboarding to personalized, competencybased learning are critical.

Since the 2020–21 school year, districts have been talking about the importance of onboarding new staff to personalized, competency-based learning. An onboarding framework and toolkit will be essential to sustaining personalized, competency-based learning beyond the life of the grant and should be a focus of the Network.

# True personalized, competency-based learning implementation takes time.

It takes commitment, dedicated leadership, and supportive colleagues who are philosophically aligned not only to get this off the ground but to maintain momentum and commitment in the face of challenges and changing leadership.



# Appendix A. Research Questions

The formative evaluation and continuous improvement activities are the focus of the first 3 years of the evaluation.

- **1.** To what extent is the professional learning and technical assistance provided by KnowledgeWorks and partners high quality?
- 2. What is the progress of implementation of personalized, competency-based learning practices in the participating districts and Youth Correctional Center? To what extent was personalized, competency-based learning implemented with quality?
- **3.** What changes are observed in the schools and districts with regard to organization/structures, instructional practices, and student engagement?
- **4.** What are learner, parent, educator, leader, and support personnel perspectives on the personalized, competency-based learning model?

The summative evaluation questions are the following:

- **1.** Does implementation of a personalized, competency-based learning model increase equity of learning outcomes for all learners and subgroups of the population?
- 2. Have learning communities made systemic shifts to empower learner ownership of learning, and have they transformed to personalized, competency-based learning environments?
- **3.** Does implementation of a personalized, competency-based learning model increase the number of students who have the academic skills necessary for success in postsecondary education?
- **4.** Does implementation of a personalized, competency-based learning model increase the number of students who are engaged in learning, have essential workplace skills, and are career-ready?
- **5.** Does implementation of a personalized, competency-based learning model increase the number of students who graduate from high school on time?
- **6.** Does implementation of a personalized, competency-based learning model increase the number of students who successfully transition into careers and postsecondary education?



# Appendix B. Data Collection and Methodology

Evaluation methods included qualitative and quantitative data collection and analyses. To answer formative evaluation questions about implementation progress and outcomes, qualitative data were collected from interviews, focus groups, and observations, which were frequently collected as part of in-person or remote site visits, as well as document reviews and surveys. The evaluation team also observed many of the cross-cohort quarterly convenings. We used quantitative data collected from state administrative data and the state's longitudinal data system to explore summative questions about the impact of the initiative on learner outcomes. Table B1 summarizes the data collected each year:

**Table B1. Evaluation Data Collection Summary** 

Date range	Activities
Fall 2019	In-person site visit
Winter/Spring 2020	Remote site visits (interviews and focus groups only)
Fall 2020	Remote site visits & survey
Winter/Spring 2021	Remote site visits
Fall 2021	Remote site visits & survey
Winter/Spring 2022	In-person site visit & survey (with two districts)
Fall 2022	Survey
Winter/Spring 2023	In-person site visit



## **Implementation Evaluation**

Evaluators conducted 22 separate multiday site visits to participating schools and districts, 10 of which were conducted in person in 2019, 2022, and 2023. Due to the COVID-19 pandemic, the other site visits were conducted remotely using Zoom, Swivl cameras, and other video technology. Site visits were customized to each site and generally included the following:

- Observations of different grade level and subject matter classrooms
- Focus groups with
  - Classroom educators representing different grade levels and subject areas
  - Other professional staff (e.g., counselors, coaches, school psychologists)
  - Administrative and support staff (e.g., classroom aides, front office staff)
  - Learners representing elementary, middle, and high schools
  - Parents or family members
  - District design teams
  - School board members
- Interviews or group interviews with leadership, including the superintendent, principals and assistant principals, directors of personalized learning, and other director-level staff

#### **Classroom Observations**

Observations were conducted by researchers at each of the schools using a protocol aligned to the conditions outlined in *Finding Your Path: A Navigation Tool for Scaling Personalized, Competency-Based Learning* from KnowledgeWorks (2021). The protocol lists practices and evidence, aligned to each condition, for researchers to observe in the classrooms. Multiple observations were conducted at each school to capture a variety of grades and subject matter. The observations were conducted in person or using Swivl or Zoom cameras. Evaluators also collected artifacts, such as pictures of assignments or trackers, to support the observations. Based on the observation and evidence, researchers documented each practice and condition as "observed," "observed, but limited," or "not observed/applicable." The evaluators calibrated in their use of the protocol for consistency across observations.

#### **Interviews and Focus Groups**

Interviews and focus groups were conducted with key interest holders, including leaders, educators, learners, staff, school board members, and parents as part of each district site visit. Interviews and focus groups were held in a private space with two WestEd evaluators; the interviews and focus groups were not recorded. One evaluator facilitated the discussion while



the other took detailed notes. The evaluation team asked questions aligned to the conditions included in *Finding Your Path: A Navigation Tool for Scaling Personalized, Competency-Based Learning* from KnowledgeWorks (2021). As part of the discussion, evaluators requested that participants share examples and evidence, whenever possible, to support claims. The range of interest holder voices helped identify which sentiments and practices were consistent themes among the broader district population. The evaluation team coded each of the interviews and focus groups by district condition. The responses were then analyzed for themes and consistency by individual condition.

#### Survey

The WestEd evaluation team and KnowledgeWorks developed a survey that is aligned to the district conditions for scaling personalized, competency-based learning. The survey was further refined by WestEd and KnowledgeWorks, as well as a committee of participants from the cohort. The survey was fielded with all districts in the fall semesters of 2020, 2021, and 2022. Two districts also fielded the survey in the spring of 2021. In each administration, the survey was open for several weeks to gain the maximum number of responses. Table B2 summarizes the total number of respondents across the cohort for the fall 2022 survey. After each survey administration, the evaluators summarized and reported the data to each district.

**Table B2. Summary of Survey Responses Received Each Year** 

District	Cohort	Fall 2020	Fall 2021	Spring 2022	Fall 2022
Northern Cass	Learners	422	279	349	368
	Adults	46		70	125
Oakes	Learners	299	351	226	255
	Adults	38	47	56	44
West Fargo	Learners	3,563	3810	NA	5,546
	Adults	772	397	NA	744
Youth Correctional	Learners	12	4	NA	17
Center Marmot	Adults	9	17	NA	46



#### **Strengths and Limitations**

The implementation evaluation collected extensive qualitative data, from many individuals in different roles and with different interests across the districts and over time. Data collection used the 12 conditions for scaling personalized, competency-based learning as the framework for inquiry. There are both strengths and limitations present in this evaluation approach. One strength of the evaluation is that it collects extensive and varied data from a wide range of stakeholders, allowing for triangulation and a comprehensive view of the implementation process in each district. A limitation is that much of the data gathered is perceptual data, primarily self-reported, and based on the individual experiences of learners, educators, leaders, and other members of the district. To address the limitation of self-reported data, evaluators use triangulation from multiple data sources, including self-reports, documents (e.g., tracking forms, badges, classroom posters), and observations to cross-check and verify claims and themes. By both hearing examples of personalized, competency-based learning practices in the district and seeing classroom practice in action, evaluators were able to distinguish between consistent implementation practices and practices only occurring in pockets.

# **Summative Evaluation/Learner Outcomes**

#### **Data**

The NDDPI provided the learner-level data for the analyses presented in this report except for the postsecondary enrollment analyses. The postsecondary enrollment analyses were conducted by staff at the North Dakota SLDS and provided to WestEd for use in this report. The NDDPI provided data from 2017/18 through 2022/23 in the following categories:

- Ethnicity
- Race
- Gender
- Economic/free lunch status
- IEP status
- English learner status
- ELA and math scale score and proficiency (no test score data were available in 2019/20)

- ACT (11th grade)
- Choice Ready
- Percentage of days absent
- Attendance rate
- Four-year graduation status



#### **Statistical Methods**

We used Mahalanobis Distance Matching (MDM) for the learner-level matching, without replacement, using a 2:1 optimal pair to find the best balance for all outcomes, except for 10th grade NDSA, which did not use learner-level matching,<sup>3</sup> and grade 6–8 attendance and grade 9–12 attendance, which used nearest-neighbor matches to achieve the best balance. The matching was performed using an average treatment effect of the treated, which means the average effect of treatment for those who receive treatment. For each of the outcomes analyzed, the final matching method yielded a standard mean difference, after matching, below 0.1 for all prognostically important covariates. Table B3 provides matching details, including method, distance, number of observations, and the learner- and school-level covariates used for each outcome examined.

To robustly estimate the effect of being in a personalized, competency-based learning district on the outcomes of interest, we made school-level covariate adjustments by including school-level aggregated data from the 2022–23 school year in the matching model. School-level covariates included school size (i.e., total enrollment), lowest and highest grade bands served, and aggregated school characteristics (i.e., percentage of students identifying as a race/ethnicity other than White, percentage of students identifying as female, percentage of students eligible for free or reduced-price meals, percentage of students with an IEP, and percent of English language learners). At the individual level, learners were matched on race, ethnicity (Hispanic/Latino or not Hispanic/Latino), gender, free or reduced-price meals eligibility, IEP status, and English language learner status. Learners in 8th grade or higher were additionally matched on their baseline ELA and math test scores from the 2017–18 school year.

**Table B3. Matching Summary for Outcomes Variables** 

Outcome	Method	Distance	Number of original observations	Number of matched observations	Number of treatment learners	Learner-level covariates
6th grade ELA NDSA	2:1 optimal pair	Mahalanobis	8,317	2,844	948	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino)

<sup>&</sup>lt;sup>3</sup> Learner-level matching was not used for the 10th grade NDSA outcomes. The matching results for the 10th grade sample were not balanced, and the overall power of the analyses were low. Instead of matching, we estimated the models without matching, controlling for whether the school participated in the personalized, competency-based learning initiative and with standard errors clustered at the school level.



Outcome	Method	Distance	Number of original observations	Number of matched observations	Number of treatment learners	Learner-level covariates
6th grade math NDSA	2:1 optimal pair	Mahalanobis	8,317	2,844	948	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino)
7th grade ELA NDSA	2:1 optimal pair	Mahalanobis	8,382	2,802	934	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino)
7th grade math NDSA	2:1 optimal pair	Mahalanobis	8,382	2,802	934	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino)
8th grade ELA NDSA	2:1 optimal pair	Mahalanobis	6,888	2,319	773	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino), 2017 ELA standardized test score
8th grade math NDSA	2:1 optimal pair	Mahalanobis	6,888	2,319	773	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino), 2017 math standardized test score
11th grade ACT composite	2:1 optimal pair	Mahalanobis	4,553	2,034	678	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino), 2017 ELA and standardized test scores
Four-year graduation	2:1 optimal pair	Mahalanobis	6,401	2,088	696	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino), 2017 ELA and standardized test scores
Grade 4–5 attendance	2:1 optimal pair	Mahalanobis	18,569	6,675	2,225	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino)



Outcome	Method	Distance	Number of original observations	Number of matched observations	Number of treatment learners	Learner-level covariates
Grade 6–8 attendance	2:1 nearest neighbor matching without replacement	Mahalanobis	27,014	9,408	3,136	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino)
Grade 9– 12 attendance	1:1 nearest neighbor matching without replacement	Mahalanobis	27,630	6,176	6,176	Gender, race, FRPM eligibility, IEP status, English Learner status, ethnicity (Hispanic/Latino or not Hispanic/Latino), 2017 ELA and standardized test scores

Notes. School-level covariates for all models include total school enrollment, lowest school grade, highest grades, percentage of learners who are non-White, percentage of learners who are female, percentage of learners who are eligible for free and reduced-priced meals (FRPM), percentage of learners who have an IEP, and percentage of learners who are English language learners.

#### **Effect Sizes**

To estimate marginal effects, we use a method known as g-computation (Snowden et al., 2011) or regression estimation (Schafer & Kang, 2008). This involves first specifying a model for the outcome as a function of the treatment and covariates. Then, for each unit, we compute their predicted values of the outcome, setting their treatment status to treated, and then again for control, leaving us with two predicted outcome values for each unit, which are estimates of the potential outcomes under each treatment level. We compute the mean of each of the estimated potential outcomes across the entire sample, which leaves us with two average estimated potential outcomes. Finally, the contrast of these average estimated potential outcomes (e.g., their difference or ratio, depending on the effect measure desired) is the estimate of the treatment effect.

Every test-related estimate is in standard scores (z scores), and thus the estimates are given in standard deviations (SDs). Per literature, anything less than 0.2 SDs suggests a very small effect.



**Table B4. Effect Sizes for Academic Achievement and Attendance Outcome Variables** 

Outcome	Effect size estimate	Std error	Statistic	<i>p</i> value	Confidence interval (low bound)	Confidence interval (high bound)
6th grade ELA NDSA	-0.20	0.04	-4.67	< 0.001	-0.29	-0.12
6th grade Math NDSA	-0.11	0.04	-2.61	0.01	-0.19	-0.03
7th grade ELA NDSA	-0.20	0.04	-4.68	< 0.001	-0.29	-0.12
7th grade Math NDSA	-0.12	0.04	-2.80	0.01	-0.21	-0.04
8th grade ELA NDSA	-0.21	0.04	-4.93	< 0.001	-0.30	-0.13
8th grade Math NDSA	-0.19	0.04	-4.80	< 0.001	-0.26	-0.11
10th grade ELA NDSA	0.19	0.17	1.12	0.267	-0.15	0.53
10th grade Math NDSA	-0.16	0.16	-1.01	0.313	-0.47	0.15
11th grade ACT Composite	-0.12	0.04	-2.93	< 0.001	-0.21	-0.04



### **Table B5. Effect Sizes for Graduation Outcome Variables**

Outcome	Effect size	<i>p</i> value	Confidence interval (low bound)	Confidence interval (high bound)
Graduated within 4 years	1.01	0.95	0.65	1.57

# **Table B6. Effect Sizes for Attendance Outcome Variables**

Outcome	Effect size	Standard error	Statistic	<i>p</i> value	Confidence interval (low bound)	Confidence interval (high bound)
Grade 4–5	0.01	0.00	7.99	< 0.001	0.01	0.01
Grade 6–8	0.01	0.00	8.23	< 0.001	0.01	0.02
Grade 9–12	0.02	0.00	8.89	< 0.001	0.02	0.03



# Appendix C. Timeline

# **Table C1. Timeline Overview of Support Activities Planned By KnowledgeWorks and Partners**

Year	Activities
Year 0 2017–18	<ul> <li>District application and vetting</li> <li>Biweekly coaching sessions with district leaders, KnowledgeWorks, and NDDPI</li> <li>State policy work</li> </ul>
Year 1 2018–19	<ul> <li>In-person or virtual cohort convenings (sometimes included students)</li> <li>District action planning</li> <li>Biweekly coaching sessions with district leaders, KnowledgeWorks, and NDDPI</li> <li>Districts develop Portrait of a Graduate</li> <li>Performance assessment development</li> <li>District-specific professional learning</li> <li>District training in continuous improvement PDSA cycles</li> <li>Summer professional learning and planning</li> <li>Foresight workshops with learners and district school boards</li> <li>State policy work</li> </ul>
Year 2 2019–20	<ul> <li>In-person or virtual cohort convenings (sometimes included students)</li> <li>District action planning</li> <li>Biweekly coaching sessions with district leaders, KnowledgeWorks, and NDDPI</li> <li>Districts operationalizing of Portrait of a Graduate</li> <li>Performance assessment development</li> <li>District-specific professional learning</li> <li>District data fellows</li> <li>District training in continuous improvement PDSA cycles</li> <li>Summer professional learning and planning</li> <li>Foresight workshops with learners and district school boards</li> <li>State policy work</li> <li>Learning continuum development</li> <li>Researcher site visits and data reporting</li> </ul>



Year	Activities
Year 3 2020–21	<ul> <li>In-person or virtual cohort convenings (sometimes included students)</li> <li>District action planning</li> <li>Biweekly coaching sessions with district leaders, KnowledgeWorks, and NDDPI</li> <li>District leadership development coaching cycles</li> <li>Districts operationalizing of Portrait of a Graduate</li> <li>District-specific professional learning</li> <li>District data fellows</li> <li>Summer professional learning and planning</li> <li>State policy work</li> <li>Learning continuum development</li> <li>Researcher site visits and data reporting</li> </ul>
Year 4 2021–22	<ul> <li>In-person or virtual cohort convenings (sometimes included students)</li> <li>District action planning</li> <li>Biweekly coaching sessions with district leaders, KnowledgeWorks, and NDDPI</li> <li>District leadership development coaching cycles</li> <li>Districts operationalizing of Portrait of a Graduate</li> <li>District-specific professional learning</li> <li>District cohort peer site visits</li> <li>District data fellows</li> <li>District training in continuous improvement PDSA cycles</li> <li>Summer professional learning and planning</li> <li>State policy work</li> <li>Cohort steering committee</li> <li>Researcher site visits and data reporting</li> </ul>
Year 5 2022–23	<ul> <li>In-person or virtual cohort convenings (sometimes included students)</li> <li>District action planning</li> <li>Biweekly coaching sessions with district leaders, KnowledgeWorks, and NDDPI</li> <li>District leadership development coaching cycles</li> <li>Districts operationalizing of Portrait of a Graduate</li> <li>District-specific professional learning</li> <li>District cohort peer site visits</li> <li>District data fellows</li> <li>Summer professional learning and planning</li> <li>State policy work</li> <li>Cohort steering committee</li> <li>Researcher site visits and data reporting</li> </ul>
Year 6 2023–24	<ul> <li>District cohort peer site visits</li> <li>District data fellows</li> <li>Cohort steering committee</li> <li>NDPL Network</li> </ul>



# Appendix D. Extended Figure Descriptions

# **Description of Figure 4**

A bar chart shows the percentage of educators who indicated that they agreed or strongly agreed with three statements about their understanding of personalized, competency-based learning in their district for 2021 and 2022.

Statement	2021 (N = 391)	2022 (N = 725)
My district has a plan to advance PCBL.	79%	80%
I understand my district's vision for serving all students through PCBL.	81%	77%
I get the support I need to implement our district's PCBL initiative.	70%	62%

See Figure 4.



A bar chart shows the percentage of elementary and secondary learners who indicated that they agreed or strongly agreed with the statement "Learners can show their learning in different ways," for 2021 and 2022.

School Type	Year	Percent Agree and Strongly Agree
Elementary	2021 (N=1,673)	71%
	2022 (N=1,933)	75%
Secondary	2021 (N=2,069)	50%
	2022 (N=3,184)	60%

See Figure 5.

# **Description of Figure 6**

A bar chart shows the percentage of secondary learners who indicated that they agreed or strongly agreed with statements about their district's Portrait of a Learner for 2021 and 2022.

Statement	2021	2022
I understand my district's Portrait of a Learner	67%	81%
My district's Portrait of a Learner is relevant to my learning	60%	74%

See Figure 6.



A bar chart shows the percentage of West Fargo learners who indicated that they agreed or strongly agreed with statements about their district's Profile of a Graduate in 2021 and 2022.

Statement	2021	2022
I understand my district's Portrait of a Graduate	61%	69%
My district's Portrait of a Graduate is relevant to my learning	54%	55%

See Figure 9.

# **Description of Figure 10**

A bar chart shows the percentage of West Fargo educators who indicated they agreed or strongly agreed with statements about their experiences with aspects of the district's PCBL initiative for 2021 and 2022.

Statement	2021	2022
I get to choose my own professional development engagements.	54%	66%
I understand my district's vision for serving all students through personalized, competency-based learning.	73%	80%

See Figure 10.



A bar chart shows the predicted standardized scores on the 2022-23 English Language Arts North Dakota State Assessment for 6th, 7th, and 8th grade learners in personalized competency-based learning districts compared to their matched counterparts in other districts.

	PCBL	Non-PCBL
6th Grade	-0.15	0.05
7th Grade	-0.19	0.01
8th Grade	-0.06	0.16

See Figure 11.

# **Description of Figure 12**

A bar chart shows the predicted standardized scores on the 2022-23 Math North Dakota State Assessment for 6th, 7th, and 8th grade learners in personalized competency-based learning districts compared to their matched counterparts in other districts.

	PCBL	Non-PCBL
6th Grade	-0.04	0.07
7th Grade	-0.01	0.12
8th Grade	-0.03	0.15

See Figure 12.



A bar chart shows 2023 predicted attendance rates for learners in personalized, competency-based learning districts compared to their matched counterparts in other districts. The chart reports data for three different grade bands, learners in 4 and 5th grades, learners in 6 through 8th grade, and learners in 9 through 12th grade.

	PCBL	Non-PCBL
4 and 5th Grade	95	94
68th Grade	94	92
912th Grade	96	95

See Figure 14.

## **Description of Figure 15**

A bar chart shows the percentage of learners who attained each category of choice readiness in 2021-22 and 2022-23 in personalized, competency-based learning districts compared to their matched counterparts in other districts.

Choice Readiness	2021-2022	2022-2023
Military Ready PCBL	56%	57%
Military Ready Non-PCBL	41%	48%
Workforce Ready PCBL	69%	87%
Workforce Ready Non-PCBL	83%	88%
Post-Secondary Ready PCBL	58%	62%
Post-Secondary Ready Non-PCBL	58%	62%

See Figure 15.



A chart shows changes in the percentage of learners enrolling in a postsecondary institution in the fall after graduation in personalized, competency-based learning districts compared to their matched counterparts in other districts.

Year	Students in Non- PCBL Districts	Students in PCBL Districts
Fall 2018	67%	67%
Fall 2019	65%	68%
Fall 2020	64%	66%
Fall 2021	64%	61%
Fall 2022	60%	68%

See Figure 16.



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