DEEPER LEARNING NETWORKS SERIES

Big Picture Learning

Spreading Relationships, Relevance, and Rigor One Student at a Time

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Executive Summary

Big Picture Learning is a school network that is driven by a singular vision: to engage every student in individualized learning experiences that focus on their interests and curiosities. To this end, the network partners with schools and districts to transform teaching and learning environments in ways that ensure students will graduate from high school with the knowledge, relationships, dispositions, and abilities that make them more likely to thrive in college, career, and civic participation.

In its network of approximately 65 schools across 26 states, Big Picture Learning encourages students to explore their interests through deeper learning—pedagogical approaches that develop students' abilities to effectively communicate, collaborate, think critically, problem-solve, and engage in self-directed learning. These practices are captured in the network's 10 "distinguishers," or school features that are integral to the network's approach and differentiate Big Picture Learning schools from other schools. High-leverage distinguishers include learning through interests and internships, authentic assessments and exhibitions, learning plans, postsecondary planning, and staff professional development. Advisory structures—in-school spaces in which students engage in independent and personalized learning under the guidance of an advisor throughout their time at a Big Picture Learning school—are also distinguishing features of Big Picture Learning schools. Through these structures, Big Picture Learning nurtures learning environments that are centered on students and their varied needs and interests. In doing so, they meet the holistic needs of a diverse student population and cultivate school cultures grounded in relationship building, personalization, and student voice.

This report highlights how Big Picture Learning has instantiated its approach across varied settings. The report begins with a description of the network's approach and how it designs its schools to implement deeper learning. The report then describes the systems and structures that have enabled Big Picture Learning to spread its learning approach in a high-quality manner. In describing these findings, the report highlights how Big Picture Learning and its leaders have consistently been responsive to communities and local conditions, allowing network-affiliated schools to take on a distinct character while maintaining fidelity to its deeper learning focus. We find that:

1. **Big Picture Learning maintains a vision for deeper learning and equity that guides all aspects of school design, practice, and culture and supports schools in spreading its approach in high-quality ways.**

   Big Picture Learning has used its distinguishers to guide the creation of equitable deeper learning environments throughout the country, allowing the network to spread its school design in local contexts and to students furthest from opportunity. To bring its workplace-situated and interest-based learning approaches to life, Big Picture Learning designs schools in which advisors—teachers who work closely with students to facilitate learning experiences in and outside of classrooms—can build meaningful relationships with students and support them in learning focused on their personal interests and curiosities that go beyond conventional content areas.

   Leaders at Big Picture Learning schools also build master schedules that allow for outside-of-school learning, specialized courses of study, and extended learning blocks so advisors can support students in exploring the multiple dimensions of their interests. In building schools

that are designed to emphasize relationships, relevance, and rigor, Big Picture Learning advances educational equity by immersing its students—most of whom come from marginalized socioeconomic backgrounds—in student-driven learning environments that enrich their academic, personal, and civic development.

Implications for schools and districts: Big Picture Learning's commitment to its vision holds lessons for district and school leaders seeking to implement deeper learning. Findings from this case suggest that districts and schools implementing deeper learning strategies can benefit from developing a well-articulated vision for deeper learning—a vision that does not remain abstract but rather uncompromisingly guides the design and implementation of deeper learning schools and classrooms.

2. **Big Picture Learning collaborates with stakeholders to implement deeper learning, ensuring that its approach is feasible, sustainable, and engaged with the community.**

   Big Picture Learning instantiates its vision in schools and districts through collaborative processes. Although the network maintains a set of conditions that it aims to secure through memorandums of understanding with school districts to implement its design, it works closely with local officials to establish schools. For example, leaders at Big Picture Learning engage in discussions with district leaders and local educators about the feasibility and fit of the approach to ensure that it is a welcome addition to the district rather than an imposed one. In addition, local leaders have the option of adopting the comprehensive Big Picture Learning approach or a range of its distinguishers, allowing the design to be adapted and implemented in ways that are responsive to the local policy context.

   Big Picture Learning's collaboration with local stakeholders is not limited to the process of establishing a Big Picture Learning site. Rather, network and site leaders engage in ongoing efforts to involve the community, local businesses, and district officials to build investment and support for the implementation of their deeper learning approach. Building relationships with local stakeholders allows Big Picture Learning schools to educate communities about the approach and to demonstrate its educational and equity value. In turn, these relationship-building efforts have built local support for network-affiliated schools and helped sustain them over time. In addition, local engagement has assisted Big Picture Learning schools in implementing deeper learning. Through ongoing outreach to local businesses and community-based organizations, site leaders generate a steady stream of internship opportunities that can enhance student learning while contributing to local industries and community initiatives.

   Implications for schools and districts: School and district leaders seeking to implement deeper learning can consider how they can partner with local communities to build local knowledge and investment and the necessary infrastructure to support deeper learning.

3. **Big Picture Learning has developed and implemented multifaceted and experiential professional learning supports to build the capacity of leaders and educators to implement deeper learning.**

   In order to realize its vision, Big Picture Learning provides professional development that introduces its educators and leaders to the foundational elements of its design and builds a community of practitioners committed to deeper learning and equity. It does so through formal

and regional conferences, virtual access to instructional resources, and ongoing access to coaches who provide advisors and leaders with opportunities to address questions and concerns that have emerged in its implementation. The network also relies on experienced Big Picture Learning educators to facilitate cross-network professional development and mentorship programs between veteran and novice advisors. As network and site leaders facilitate these varied forums for professional learning, they make adult learning experiential, conducting professional development in ways that mirror what students will experience in Big Picture Learning classrooms.

Through these professional experiences, teachers and leaders at Big Picture Learning have the opportunity to learn the instructional strategies and structures associated with deeper learning. This multifaceted system of ongoing professional learning supports also develops and transforms educators' mindsets about how meaningful learning is facilitated. This transformation can sustain and grow deeper learning approaches as the network spreads the approach to new school settings.

Implications for schools and districts: To build educator capacity, schools and districts can consider investing in professional development that is focused on deeper learning, offer multiple and reinforcing opportunities to engage with experienced practitioners skilled in these meaningful learning practices, and facilitate visits to schools implementing deeper learning pedagogies.

4. **Big Picture Learning is a learning organization that has evolved its practices and structures to improve the quality of its approach and the spread of deeper learning.**

In re-creating its approach across the country, Big Picture Learning has evolved as an organization to improve the quality of its schools and its ability to bring student-centered learning to life. It has expanded and restructured its organization so that network staff can better support educators and sustain partnerships in its various regions. It has adjusted its teaching and learning approach and adapted its design, finding ways to enhance students' interest-based and disciplinary knowledge. Furthermore, Big Picture Learning has been proactive in seeking ways to further its impact beyond its schools.

Through its efforts to make virtual tools accessible to districts and its participation in deeper learning communities of practice, Big Picture Learning seeks to improve its practice by collaboratively engaging with practitioners who are committed to deeper learning and equity. Through these actions, the network has refined its practices and structures in response to challenges and opportunities, allowing it to improve the quality and responsiveness of its approach.

Implications for schools and districts: As schools and districts seek to implement and refine deeper learning approaches, they can consider how to establish structures that allow leaders and practitioners to routinely reflect on, evaluate, and iterate their practice. By maintaining a learning orientation, schools and districts may be able to evolve their practice to support students' interest-based transdisciplinary learning.

Introduction

Individualized Learning at Highline Big Picture

It is a rainy morning in Burien, WA, just a few miles away from the bustling metropolis of Seattle. Twelfth-grade students, colloquially called 401s, are in their advisory spread out across their large classroom working on laptops. Four students are seated around a U-shaped table, while three students are seated comfortably on the floor with their backs resting against blue and white pillows. Additional students, returning from classes at local community colleges and technical schools, walk purposefully into the classroom. Peter, the 401 advisor, glances up to greet the group of students. The returning students calmly sit among their classmates or form pairs or trios at groups of desks.

Peter grabs a gray pillow and joins a student on the floor. While sitting down, he asks the student if she followed up with the financial aid officer at a state university. The student replies that she sent an email yesterday and plans to follow up with a phone call that afternoon.

He shifts the conversation to inquire about the student's internship at a Seattle-based design and architecture company and related progress on a senior thesis project (STP) proposal. Switching tabs on her laptop, the student opens a document named "STP checklist." Running through the list, the student explains that she completed her topic approval paper and convened the required panel of students and staff for feedback. She adds that she is currently extending the background research section of the proposal to include a brief history of architectural designs and urban development in Seattle—a suggestion she received during the panel. Peter agrees that the addition would strengthen the proposal's required historical context section.

Next, Peter points to the student's STP checklist and asks the student to explain the "theory of change," another requirement for the proposal and the purpose of the STP. The student describes her plans to create multiple design challenges for the company that would lead to employees' improved performance.

The origins of her theory of change stem from her recent experience building an in-school recording studio. She adds that the goal for her theory of change is for the design and architecture company to use her series of recommended design challenges as both assessments and routine practice exercises to improve the performance and collaboration of current and future employees and interns.

Before getting up from the floor, Peter reminds the student of next week's deadline for the draft of the proposal. The student affirms that she has planned how she will complete the remaining sections before next week's exhibition.

Next, Peter returns to his desk and picks up a binder titled "Learning Plans." He joins a pair of students sitting across from one another at a group of desks. One student's laptop screen displays a document titled "Exhibition Reflection." Peter asks, "What are your thoughts on the feedback you received at yesterday's exhibition?" The student replies that he agrees with his peers and staff that he had not written as many chapters as expected but is creating a concrete and realistic writing plan to complete at least three more chapters before the next exhibition. He opens Google Calendar on his phone to show designated times he allocated in the next 2 months devoted to writing. Peter replies, "I'm glad you're using the calendar to get on track and organized. Last week we discussed ways for you to make your characters more compelling and to come to life for readers. Since you'll be at your internship tomorrow, by Friday, please highlight where you have used those strategies."

Moving swiftly across the room back to the U-shaped table, Peter tells students they will have to transition to their math class in about 15 minutes.

Peter sits next to a student who has returned from a course at the local community college. He tells the student, "I saw that your latest blog post got more hits than the previous posting." Excitedly, the student shares, "I posted a screenshot of it on my Instagram page and asked a couple of friends to tweet about it. There were even views from Canada." As the student opens the blog on her computer, Peter asks, "Are you planning to continue to incorporate segments of your personal and family history from your autobiography in your posts?" As time in advisory ends, he bounces between individuals and groups of students to check in and ensure next steps have been finalized.

Big Picture Learning is a school network that is driven by a singular vision: to engage every student in individualized learning experiences that center on their interests and curiosities. The network partners with schools and districts to transform teaching and learning environments in ways that ensure students will graduate from high school with the knowledge, relationships, dispositions, and abilities that make them more likely to thrive in college, career, and civic participation.

To meet these expectations across its network of 62 schools in the United States, Big Picture Learning aims to foster individualized and student-centered learning practices such as those described above in all of its classrooms. In network-affiliated schools, students and advisors codesign learning experiences that allow students to follow personalized lines of inquiry around their interests and curiosities. Along this individualized academic journey, students and advisors codevelop authentic assessments, continuous feedback, workplace-situated learning, student ownership of learning, and strong relationships between adults and students.

The individualized learning experiences, similar to those in the classroom described above, are grounded in deeper learning. Deeper learning refers to pedagogical approaches that enable students to engage core academic content while applying their knowledge in authentic and relevant ways. In this form of learning, teachers use a variety of instructional approaches and assessment methods to develop student competencies related to effective communication, collaboration, critical thinking, problem-solving, and self-directed learning. Deeper learning also aims to enable students to "learn how to learn" and to develop academic mindsets that increase perseverance and productive learning behaviors.[1]

Workplace-situated learning, commonly known as real-world learning, is a primary feature of the Big Picture Learning approach and creates opportunities for students to build their knowledge and skills in real-world settings and in collaboration with peers, advisors, and workplace mentors. While in school, learning is interest-based, creating opportunities for students to develop their knowledge and skills by investigating a meaningful problem or answering a complex question related to their interests. In many instances, the interest-based learning environment also includes students using skills and knowledge to complete projects. Through their interests, relationships, and practice, Big Picture Learning students explore the scientific, mathematical, historical, and literary dimensions of their interests to build their expertise in ways that align with their individualized learning experiences.

To demonstrate students' growing knowledge, Big Picture Learning schools also ask them to engage in another staple of deeper learning: performance assessments. These assessment practices ask students to go beyond mere demonstrations of content knowledge to include demonstrations of a wide breadth of knowledge and skills.

In implementing these pedagogical practices, deeper learning practitioners integrate the learning principles identified by researchers in the science of learning and development.[2] They enact personalized instructional strategies—strategies that assume that variability in learning is the norm rather than the exception and allow students to be active generators of knowledge. They emphasize the development of affirming relationships to catalyze learning, which support students in taking learning risks while mitigating the effects of adversity that many students face. They also directly focus on, and attend to, students' social-emotional skills, which can help them develop productive and prosocial lifelong behaviors. Taken together, approaches to deeper learning, such as Big Picture Learning, have shown promise for producing strong outcomes for students.[3]

Despite its unconventional approach, Big Picture Learning has successfully spread and been sustained in schools across the country. Notably, the network has accomplished this by working primarily within conventional public school districts. This approach challenges the perception that these designs can be implemented only in boutique or independent settings or that the network's efforts will inevitably be stunted by institutional and normative barriers that often accompany fundamental changes to learning and education.[4] Moreover, Big Picture Learning has primarily implemented its approach in communities that face significant socioeconomic challenges and aims to mitigate inequities that limit access to these meaningful learning environments to the most advantaged populations.

How Big Picture Learning has instantiated its sophisticated approach across disparate settings is the subject of this case study. The case study begins with a description of the network's equity-centered and multifaceted approach and how it designs schools so that the network's vision and commitment to deeper learning come alive. After describing the approach, the report identifies the systems and structures that have enabled Big Picture Learning to spread its approach in a high-quality manner. Through an analysis of interviews with personnel and observations at school and professional learning sites (see Appendix A for a full description of the study's methodology), findings suggest that Big Picture Learning has successfully spread in schools by:

- maintaining a distinct vision for deeper learning and equity that guides all aspects of school design, practice, and culture;
- collaborating with a variety of stakeholders to enact and sustain personalized learning structures;
- providing a robust system of ongoing professional learning supports that enable educators, advisors, and leaders to develop and improve their ability to implement interest-based, deeper learning; and
- maintaining a learning orientation that has enabled the network to refine its professional learning and organizational practices to support quality and diffusion.

In describing these findings, the report also details how Big Picture Learning and its leaders have consistently been responsive to communities and local conditions in implementing their approach, supporting network schools to take on distinct characteristics while maintaining a coherent approach and consistent focus on deeper learning and its design elements.

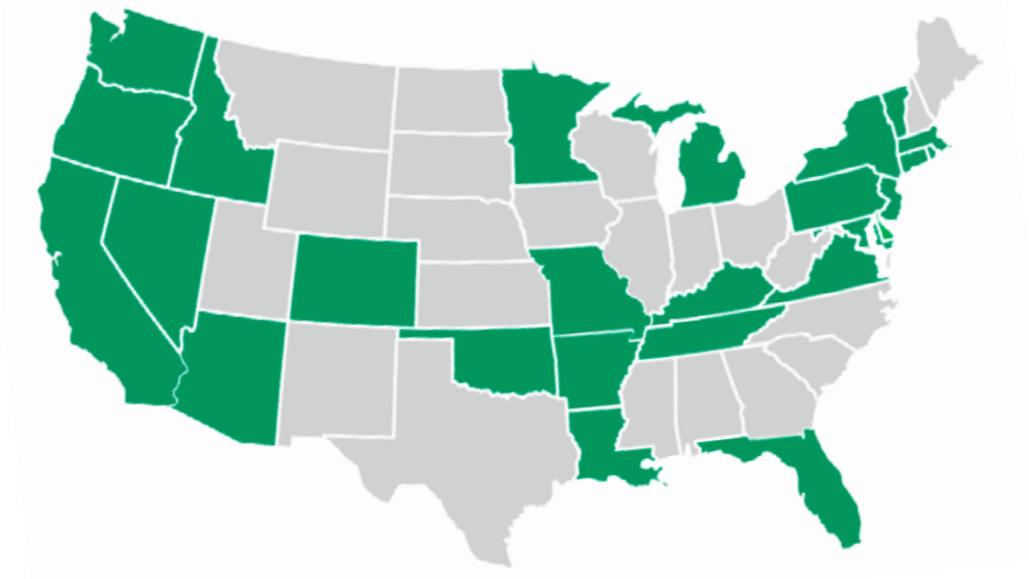
Big Picture Learning's Vision, Approach, and Evidence of Success

Big Picture Learning's mission is to create learning environments that put students directly at the center of their own learning. To bring this vision to life, Andrew Frishman, the network's Co-Executive Director, explained that the network "activates the potential of schools, systems, and education through student-driven real-world learning."[5] Through this approach, students delve deeply into their interests by engaging in transdisciplinary learning focused on their personal interests and curiosities—one that Frishman describes as blurring imaginary disciplinary boundaries that are not necessarily helpful to the learning process.

Across the network, Big Picture Learning builds communities of learners in which academic content is inextricably linked to students pursuing their own passions. To broaden its impact beyond the network schools, Big Picture Learning also works to influence local, state, national, and international conversations to reimagine how the current education system can engage learners in a fundamentally different way.[6]

Spurred by the mission of putting students directly at the center of their own learning, Dennis Littky and Elliot Washor founded the first school in the Big Picture Learning network in 1996, establishing the Metropolitan Regional Career and Technical Center (the MET) with 30 students in Providence, RI. Since its inception, Big Picture Learning has expanded to serve approximately 26,000 students across the United States, and sister organizations serve tens of thousands more worldwide. (See Figure 1.) Currently, the network is composed of approximately 65 Big Picture Learning schools in the United States and supports more than 100 schools internationally, including schools in Australia, Belize, Canada, Israel, India, Italy, the Netherlands, and New Zealand.

Figure 1
States With Big Picture Learning Affiliated Schools



Source: Big Picture Learning. (n.d.). About Us—Our Schools. https://www.bigpicture.org/apps/pages/index.jsp?uREC_ID=422935&type=d&pREC_ID=923039 (accessed 07/01/17).

Approximately two thirds (72%) of the network consists of district public schools—many of which are designated as some form of alternative school, with a wide range of student demographics and enrollment procedures. Traditionally, alternative schools are designed to support students whose academic and social-emotional needs are underserved in conventional schools and/or who are at risk of educational failure (e.g., those who have poor grades, those who have low attendance records, and those who become pregnant).[7] However, a network staff member indicated that Big Picture Learning preferred to call alternative schools referral or re-engagement schools, or spaces for students whose needs are not being met in conventional, comprehensive high school settings.[8] Describing the significance of Big Picture Learning's work in alternative schools, another network staff member commented, "Across all districts in the United States, the most inequity lives or hides in alternative education programs." The comment emphasizes Big Picture Learning's commitment to creating viable schooling pathways for students who have been marginalized from conventional systems. Of the other one third of schools in the network, there are a few private schools that are Big Picture Learning affiliates, and others operate as charter schools.

The network includes schools in disparate geographic regions, with 90% of its schools in urban areas, 5% in rural regions, and 5% in suburban settings. In its growth, Big Picture Learning has spread its student-centered, deeper learning vision to historically underserved communities. More than 65% of Big Picture Learning's student population identify as Black, Latino/a, or Indigenous, and 21% of the students served in the network receive special education services. Additionally, 60% of students in Big Picture Learning schools qualify for free and reduced-price lunch. (See Table 1.) In addition, more than two thirds of students will be first-generation college students.[9] These subgroups of students typically attend under-resourced schools and are underrepresented in institutions of higher education. Overall, Big Picture Learning serves the needs of a diverse student population by cultivating school cultures grounded in relationship-building, personalization, and student voice.

Table 1
Demographic Composition of Students in Big Picture Learning Schools in 2016–17

Student Demographics	Percentage
Hispanic/Latino/a	43%
Black/African American	23%
White	31%
Asian/Pacific Islander	2%
Native American/Indigenous	1%
Free and Reduced-Price Lunch	60%
Students Receiving Special Education Services	21%

Note: The racial demographics are based on the following percentages of schools that reported data: Hispanic/Latino/a = 67% of schools; Black/African American = 23% of schools; White = 31% of schools; Asian/Pacific Islander = 2% of schools; Native American = 1% of schools. Seventy-one percent of Big Picture Learning schools reported free and reduced-price lunch; 21% of Big Picture Learning schools reported special education services.

Source: Secondary data from state departments of education provided by Big Picture Learning Network staff.

Big Picture Learning staff support implementation of their real-world learning and student-centered approach through a specialized organizational structure. Within this structure, network leaders, including founders and executive directors, are responsible for overseeing the network operations, board relationships, and ongoing fundraising efforts. At the same time, the organization has staff who support regional sites in implementing its approach at the ground level. Big Picture Learning's Regional Directors are a case in point. Regional Directors are primarily focused on the establishment and management of Big Picture Learning schools. Within this role, Regional Directors respond to interest and invitations from communities to engage with them in designing new and transformed schools. Additionally, they oversee school sites, coordinate school visits, and lead school success studies, which are described in more detail below. Regional Directors who have specific areas of expertise may also conduct professional development at school sites to support those sites in their specific learning needs. Big Picture Learning also has designated School Design Coaches who have the sole responsibility of working directly with school personnel (e.g., school leaders, advisors, and staff) to provide ongoing professional development as schools and districts work to implement the network's student-centered learning approach.

Big Picture Learning's Deeper Learning Pedagogy

Big Picture Learning's student-centered vision guides the network's pedagogical approach to learning. The network identifies 10 features, or "distinguishers," that are integral to its approach and differentiate Big Picture Learning schools from conventional ones. Figure 2 provides the complete list of distinguishers. The distinguishers support the creation of schools that advance the interest-based, deeper learning vision at the network's core—one that allows students to explore their curiosity through workplace-situated, problem-based, and individualized learning experiences. The network explains that these distinguishers "are interrelated and inform one another—none work in isolation. It is the seamless integration of reflection-based action and the distinguishers that result in the powerful success of the Big Picture Learning design."[10]

The network uses the 10 distinguishers to guide the implementation of its approach and engagement with schools, leaders, educators, students, and families. Advisories are a primary vehicle for bringing the network's approach to life. Within advisories, students build trusting relationships with their peers and advisors, develop postsecondary plans, complete classwork and projects aligned to their interests, and plan for presentations (i.e., exhibitions) that authentically assess a student's learning. Workplace-situated learning and authentic assessments are also significant components of the Big Picture Learning approach.

Big Picture Learning schools can adopt all 10 distinguishers in their school design, or they may choose a set of high-leverage distinguishers that allow the approach to be feasibly enacted in their districts.[11] The high-leverage distinguishers that all Big Picture Learning schools share include:

- advisory structure;
- "One Student at a Time": personalization via individualized learning plans;
- Learning Through Interests and Internships (LTIs);
- authentic assessments, including exhibitions; and
- parent and family engagement.

Through these distinguishing features, Big Picture Learning cultivates learning environments that are centered on students and their varied needs and interests at every turn. In the following sections, we describe the key pedagogical approaches employed at network-affiliated schools.

Figure 2
Big Picture Learning's 10 Distinguishers

ONE STUDENT AT A TIME—The entire learning experience is personalized to each student's interests, talents, and needs. Personalization expands beyond mere academic work and involves looking at each student holistically.

ADVISORY STRUCTURE—Advisory is the core organizational and relational structure of a Big Picture Learning school, its heart and soul, often described as a "second family" by students. Students stay with an advisor and a group of fellow classmates for four years, building close personal relationships that last a lifetime.

LEARNING THROUGH INTERESTS AND INTERNSHIPS (LTIs)—Real world learning is best accomplished in the real world. Big Picture students intern—often twice a week for an entire school day—with experts in their field of interest, completing authentic projects and gaining experience and exposure to how their interests intersect with the real world.

PARENT AND FAMILY ENGAGEMENT—Parents are welcome and valued members of the school community and play a proactive role in their children's learning, collaborating in the planning and assessment of student work. They use their assets to support the work of the school, and often play an integral role in building relationships with potential LTI mentors.

SCHOOL CULTURE—In Big Picture schools, there is palpable trust, respect, and equality between and among students and adults. Students take leadership roles in the school, and teamwork defines the adult culture. Student voice is valued in the school decision making process and visitors are struck by the ease with which students interact with adults.

AUTHENTIC ASSESSMENT—Students are assessed not by tests, but by public displays of learning that track growth and progress in the student's area of interest. Assessment criteria are individualized to the student and the real world standards of a project. Students present multiple exhibitions each year and discuss their learning growth with staff, parents, peers, and mentors.

SCHOOL ORGANIZATION—Schools are organized around a culture of collaboration and communication. They are not bound by the structures of buildings, schedules, bells, or calendars. There is an interdependence between school and community.

LEADERSHIP—Leadership is shared and spread between a strong, visionary principal; a dedicated, responsible team of advisors and other staff; and students. The community functions as a democracy. A pervasive sense of shared ownership drives a positive culture dedicated to ongoing improvement.

POST-SECONDARY PLANNING—Students develop plans that contribute to their future success—be it through college, trades, schools, travel, the military, or the workforce.

PROFESSIONAL DEVELOPMENT—Regular advisor PD is conducted at each school by principals, other school staff, and BPL staff and coaches. A Big Picture School is a community of lifelong learners who embrace continuous improvement.

Source: Big Picture Learning. (n.d.). 10 Distinguishers—Big Picture Learning. https://www.bigpicture.org/apps/pages/index.jsp?uREC_ID=389353&type=d&pREC_ID=902235 (accessed 03/01/19).

Learning Through Interests and Internships (LTIs)

Big Picture Learning delivers its vision of deeper learning through interest-based internships. By participating in internships, students experience the value of learning outside of school while simultaneously serving their community and working with mentors in their field of interest. Internships also allow students to explore their personal curiosities and gain specialized knowledge through real-world learning experiences. In the process, students at Big Picture Learning schools also build their social capital, a critical component to their economic, career, and educational trajectories, as they form professional networks through internship experiences and relationships with mentors. The simultaneous development of skill and their professional networks opens up opportunities to students as they explore their interests.

Students at Big Picture Learning schools also build their social capital, a critical component to their economic, career, and educational trajectories, as they form professional networks through internship experiences and relationships with mentors.

In most cases, students intern 2 days per week. Students may change internships throughout the year and usually engage in several internships (four to six) throughout their 4 years. At times, students will remain at an internship for a year or longer if there is continued growth and learning.

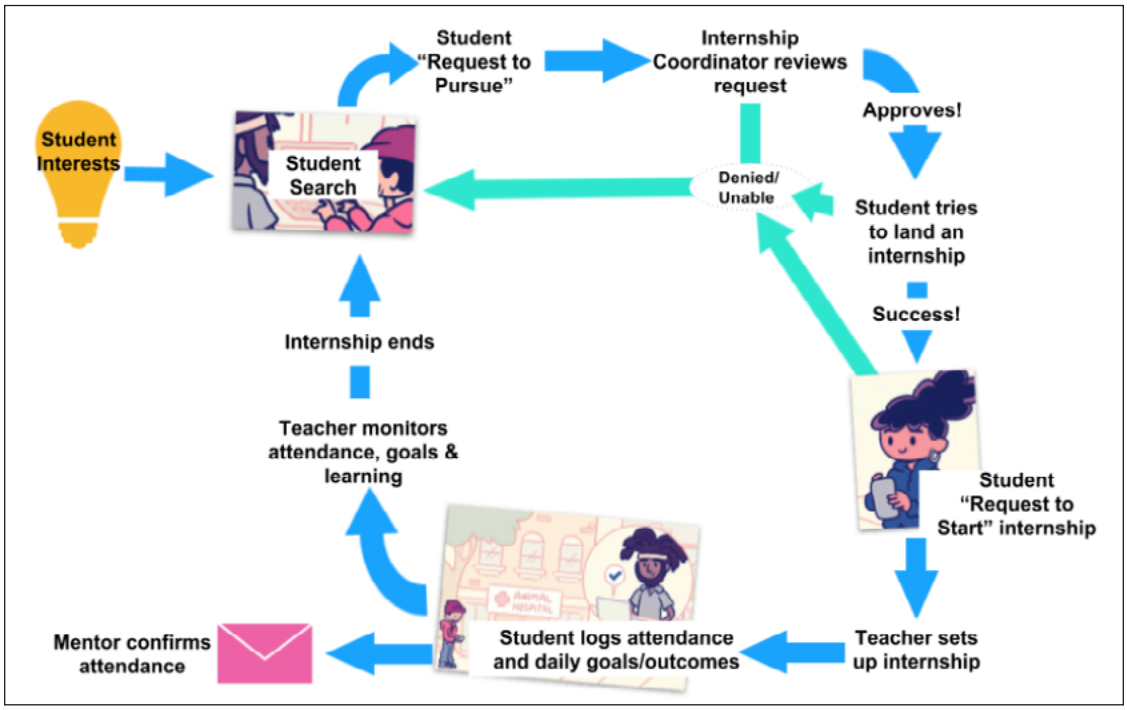
Landing an internship

Before searching for an internship, students work closely with their advisor and school-based LTI coordinator to identify their interests and related career opportunities. Advisors and coordinators use one-on-one conferences, interest exploration surveys, and school-hosted fairs to help students pinpoint their interests. Students then research local companies to learn about organizations, potential roles and responsibilities, and any prerequisites. Students are then encouraged to conduct informational interviews with potential mentors at their site of interest. Following an interview, students request to participate in a shadow day during which they spend one to several days at the potential internship site. If the student decides to pursue the internship, the advisor and student will meet with the mentor to discuss expectations and potential areas of work and learning to focus on. If all three parties agree, the student will start the internship. This process allows students to explore, in an authentic way, the options available to them. (See Figure 3.)

After a student has spent some time at the internship, mentors, advisors, and students collaboratively develop a focus of the student's work, learning, projects, and an accompanying rubric that allows students to explore their interests while building their academic and industry-specific knowledge and transferrable skill set. The work, learning, and projects that students engage in at their internships are intended to be authentic and rigorous learning experiences that give students concrete workplace tasks and expose them to exemplary approaches of work in their respective industries.

LTI work also aims to provide tangible benefits to the internship site by addressing an organizational need. For example, a Big Picture Learning student in the Pacific Northwest worked with a preschool advisor at the school's in-house day care center to learn about early childhood education while addressing the capacity needs of the center. Similarly, a student attending a network-affiliated school in the Northeast was interested in art and graphic design and worked with a local trophy shop to launch and maintain an online store to meet the business's growing demand.

Figure 3
Big Picture Learning's Real-World Learning Cycle and Internship Journey



Source: Big Picture Learning. (n.d.). ImBlaze. https://www.imblaze.org (accessed 05/19/19).

Role of mentors

Mentors play a significant role in Big Picture Learning's approach to student learning. Not only do mentors support student project development and implementation, but they also provide content knowledge, assist with postsecondary planning, and build authentic long-term relationships with students. For instance, one high school junior who was interested in art expressed that he had learned technical and work-related skills through his internship, including perseverance, time management, and accounting methods, while also developing the prerequisites for postsecondary art school. He noted that during his senior year he will continue to work with his mentor, who is a member of the review board for student portfolios at the state's premier art university.

These workplace-situated learning experiences exemplify Big Picture Learning's interest-based, deeper learning approach. Internships allow students to pursue their passions, build meaningful relationships with adults, and engage in authentic and relevant learning around their interests.

Furthering interest-based learning in schools

When Big Picture Learning students are not at their internships, they are at school sites working independently or with their advisors to design and engage in a variety of personalized projects to further explore their interests and advance their learning. For example, a signature Big Picture Learning student project is an *autobiography* that students begin during their first year as a means of self-exploration and to delve deeply into their personal and family histories. This self-exploration helps students to identify academic, career, and personal goals, a necessary component to implementing the network's student-centered learning approach.

Autobiographies build into a comprehensive *autoethnography*, which students complete during their third and/or fourth year. The project asks students to research a subgroup or community to which they belong, in order to develop a rich of understanding of the social, political, and economic factors and histories affecting the group's opportunities and constraints. For example, one Big Picture Learning student investigated the lives of children of active military members to contextualize her own experience as a child whose father had frequently been deployed overseas.

Finally, Big Picture Learning students conduct a *senior thesis project*, which asks them to design, lead, and implement a project that addresses a problem within their community, to culminate their high school careers. The project requires students to demonstrate the five Big Picture Learning goals (competencies), as well as their growth in skills and content knowledge. For example, a Big Picture Learning student identified the need for access to women's health clinics in her neighborhood and created a website called Safe Place Project that catalogues locations of women's health clinics nationwide. The project was featured in local and national press publications.

Each of these projects allows students to explore their interests through transdisciplinary inquiry. In designing and implementing each project, students are expected to investigate the empirical, historical, and literary dimensions of their topics of interest. They do so in consultation with their advisors, who pose open-ended questions that enable students to identify their interests and lines of inquiry and connect them with potential resources that can inform their learning. Advisors shared that students become increasingly independent as they complete several projects over the course of their academic career and build upon their own self-management skills.

The use of interest-based projects at Big Picture Learning is one way network schools support student-centered, deeper learning. A senior network staff member commented on the value of personalized, interest-driven student work by explaining that it is "teaching young people to be thinkers, to be curious, to know the steps to get from curiosity to creation." He elaborated: "It helps students design a learning experience that answers their questions, connects them to multiple ways of understanding it, and opportunity to communicate it to a larger audience—a major indicator of postsecondary success." Although developing and completing projects is a common way that interest-based learning is practiced in Big Picture Learning schools, network leaders emphasized that students have additional opportunities outside of the completion of projects to explore their interests and passions.

Authentic assessments and exhibitions

Big Picture Learning uses authentic assessments to assess student growth in the context of its deeper learning approach. Rather than basing student achievement on test scores, Big Picture Learning believes that student learning is best captured in formative and summative demonstrations of learning. These authentic assessments allow students to share their achievements, learning, and potential, while staff can assess the development and application of student knowledge, personal qualities, and skills.

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Big Picture Learning uses a range of informal and formal authentic assessments. For example, student progress is informally observed through advisor-student conferences and during visits to internship sites. On the more formal end of the spectrum are student exhibitions. Exhibitions are performance assessments that take place multiple times a year wherein students give presentations of their current work and learning and provide evidence that demonstrates progress on academic and personal goals. In one observed exhibition, for example, a student shared evidence of a reading log, discussed her internships at a hospital and with a local Meals on Wheels program, and demonstrated her progress on a research paper that examined psychological dimensions and implications of this work. The student also discussed the results of a survey she conducted as part of her statistics course. Throughout the presentation, the student shared reflections on her learning and her plans for the next learning cycle.

Exhibitions often last from 30 to 60 minutes and are attended by the student's peers, family members, mentors from LTI sites, advisors, and other adults who play a key role in the student's life, both inside and outside of school. Each member of the audience provides feedback and assesses the student using a rubric that evaluates the student's competencies, personal qualities, social reasoning, quantitative reasoning, communication, and empirical reasoning. In a few rare cases, exhibitions replace district assessments. However, in most Big Picture Learning schools, students must take the mandated standardized tests that their counterparts in other schools take.

Learning plans

Central to Big Picture Learning's implementation of authentic assessment are personalized student learning plans. Each student at a Big Picture Learning school has an individualized learning plan. Learning plan templates vary by school and become less prescriptive as students mature through grades. However, the essential components of each plan include a student's vision, goals, and projects, which are all student-centered and cocreated by the student working with the advisor, mentor(s), parents, and/or family members. In this way, students take ownership of their learning. A senior staff member described learning plans as a tool "to figure out what every student needs" and explained that "learning plans help us to identify the strengths that every student walks in our doors with, and we build on those. And then, simultaneously, we're addressing some of the students' challenges."

Interviewed staff described learning plans as living documents that students revise after each exhibition, at minimum. A senior Big Picture Learning staff member also noted that learning plans are the "backbone of exhibitions." Those attending exhibitions each receive a copy of the student's learning plan and ground their questions and feedback in the student's identified goals.

Advisory

Big Picture Learning's main vehicle for implementing its pedagogical approach is advisory. Advisories are made up of approximately 12–25 students, led by an advisor. Students remain in their cohort with their advisor for their 4 years of high school. Because of this structure, advisors are the main point of contact for students' educational progress. Advisors coordinate, facilitate, and assess students' educational progress, independent projects, and internship experiences.

At Big Picture Learning schools, a typical day in advisory begins with a circle to discuss current events, social issues, and students' personal and family lives. Giving students space and agency to discuss public and private events, these circles offer an example of Big Picture Learning's use of the school day to build relationships and simultaneously address students' social-emotional needs. In two schools we visited, circles were grounded in restorative justice practices.

Advisories are also in-school spaces where students engage in personalized learning. They are the primary classroom spaces in which advisors and students co-facilitate learning. Students spend much of their time in advisory engaging in independent work study. Advisors typically confer with students individually to pose questions that help identify students' interests, to help them develop robust projects, and to guide them through project completion. Individualized instruction also allows advisors to support students' identified learning gaps. Big Picture Learning advisors also occasionally engage students in whole-group and small-group instruction when learning needs and student interests align.

During this time, advisors also aim to have students develop transdisciplinary knowledge about their interests and apply this knowledge to their individualized projects. Big Picture Learning's five learning goals—communication, social reasoning, quantitative reasoning, empirical reasoning, and personal qualities—guide advisors' transdisciplinary instruction and student projects. (See Figure 4 for a full description of Big Picture Learning's learning goals.) To accomplish this, advisors direct students to resources that allow them to engage across content areas in relation to their projects as outlined in their learning plan and internships.

The extended time spent in advisory creates an inclusive community, grounded in restorative practices, so that students can feel nurtured and conflicts can be resolved constructively. A senior network leader explained:

> It's more than just homeroom. You really create a space where kids feel known and that they're loved. We are creating opportunities for them to own their learning and then thrive outside—not even outside of school like in the internship—but it's more holistic. It's not just about a means to an end, getting credits and graduating from high school. We push for advisory to be a space where a little bit of everything can exist and that students are learning by doing.

Advisories also provide space and time to build authentic and trusting relationships between students and their advisors, often leading advisors to be "advocate[s] for [their] students," as one junior class advisor expressed.

Both veteran and novice advisors liken advisories to families. A Big Picture Learning advisor explained:

> You get to spend a lot of time with kids and get to see them in a lot of different venues.... To not see them for a small chunk of the day only working on one thing allows me to get a better picture of the whole student. Also, we have an exhibition three times a year, so I see them every day, but I see their family at least three times a year. I think just being able to allow more of the student's authentic life into my vision of how to work with a student is really impactful.

Overall, Big Picture Learning's advisory structure fosters long-term investment in and support of students throughout high school and their career trajectories.

Figure 4
Big Picture Learning's Five Learning Goals

Source: Big Picture Learning. (n.d.). The learning goals. http://www.bigpicture.org/apps/download/ZpD0sXp9Dnd7Grk0Bjpoavb7oEsX7yRVka4MDarQ6ILqoBly.jpg/LearningGoals.jpg (accessed 05/19/19).

Designing Schools for Interest-Based, Deeper Learning

Big Picture Learning schools are designed to bring the network's deeper learning approach to life. Although they range in enrollment size from 50 to more than 800 students, relatively small student populations and class sizes are essential for Big Picture Learning's pedagogical approach. This is accomplished either by developing intentionally small schools or by breaking large schools into smaller subunits. Small class sizes of 10–25 help advisors build meaningful relationships with all students, a key component to advisories and personalized learning. Furthermore, small class sizes support interest-based learning, as advisors can give each student individualized instruction and guidance. The small-school approach allows each student to be known and recognized and enables greater quality and ease in implementing deeper learning at the classroom level.

Successful design implementation also depends upon flexible master schedules. In order to implement workplace-situated learning, schedules must allow for students to be out of the school building on varying days of the week to conduct informational interviews, participate in shadow days, and regularly attend their internships. Additionally, advisories require large blocks of time to be reserved for independent work and for advisors to confer with students. When applicable, master schedules must also allow students time to attend local community college courses so they can pursue their interests and garner transdisciplinary expertise.

Advisors loop with their students for 4 years of high school. Working closely with students over several years enables the advisors to nurture meaningful relationships with students. The looping approach also ensures continuity with project development—as Big Picture Learning students typically extend and deepen existing interests and project work throughout their high school careers. An internship coordinator at Highline Big Picture in Burien, WA, described the power of the looping approach:

> One thing that is essential is the 4-year looping approach that we have: the fact that you get to spend 4 years with a kid and develop a relationship with them, so that they come to be able to trust you, to be able to talk about what is actually important to them, what factors from their family influence the way they think about their own post–high school plans.

Big Picture Learning's vision for student learning and commitment to focusing on students' interests dictate its unique school design.

Advisor Competencies That Support Big Picture Learning's Design

As a result of its approach, Big Picture Learning advisors and leaders develop a variety of skills and competencies to engage students in interest-based, deeper learning. These skills include (1) relationship-building, (2) design and implementation of deeper learning experiences, (3) development of transdisciplinary learning experiences, (4) differentiation, (5) project management, and (6) problem-solving.

Relationship-building

Big Picture Learning staff consistently described an advisor's ability to foster strong relationships as a foundational skill for their deeper learning approach. Big Picture Learning defines this competency as the ability for an advisor to "get to know students and families well and [create]

an inclusive learning team in order to create relevant, challenging, and supportive experiences for each student." Central to the network's definition of this competency is the development and maintenance of supportive advisor–student relationships in which advisors seek to understand a student's personal and academic history to codesign a learning trajectory around his or her interests.

An advisor's ability to foster positive student–student relationships is also central to the creation of an inclusive advisory culture. Big Picture Learning advisors must be able to build a group dynamic that enables in-depth discussions that allow students to grapple with new ideas, perspectives, people, and situations that may expand their interests. Advisors must also nurture an environment that encourages productive critique and conflict resolution to mend relationships when needed.

Building strong adult relationships is also an element of this competency. For instance, maintaining positive relationships with families is critical, as family members serve as active partners in designing and supporting student learning. In addition, advisors must develop and maintain supportive, collegial relationships with fellow staff members who will serve not only as academic and social-emotional resources for students but also as thought partners to advisors in their professional learning. Finally, Big Picture Learning advisors must also engage in and maintain working relationships with student mentors to ensure that students have robust and meaningful workplace-situated learning experiences.

Design and implementation of deeper learning practices

Big Picture Learning advisors must also be skilled in designing and implementing deeper learning practices, such as performance assessments and individualized, inquiry-based learning experiences. For example, advisors must be well versed in assisting students in identifying and designing potential areas in which to focus their learning, practice, and student work to connect to their interests. In this way, advisors must be adept listeners and pose open-ended yet directed questions that allow students' interests to emerge and drive the learning plan and student work development process. After helping students identify their interests, advisors work to support students' learning by identifying relevant resources and scaffolds that ensure project depth, feasibility, and completion. Throughout this process, advisors also help students develop their abilities to engage in self-directed inquiry. Big Picture Learning states that practices related to goal-setting, backward planning, and timeline creation are indicators of this practice.

Big Picture Learning advisors must also be adept at guiding students through formal and informal authentic assessments. Supporting students through the formal exhibition process is an essential element related to this competency. Advisors assist students in selecting, creating, and reflecting on personalized portfolios of work and instruct students on exhibition presentation. Advisors must also be well versed in conducting authentic assessments in more informal settings. For instance, advisors observe students at school and in real-world learning sites to capture and document demonstrations of learning, and they work with mentors at internship sites to identify assessment opportunities in the workplace. Finally, advisors must be able to utilize the insights gained in these assessment opportunities to analyze student progress and to provide feedback to clearly communicate progress to students and families.

Supporting transdisciplinary learning experiences

With the network's individualized, interest-based, deeper learning approach, Big Picture Learning advisors are also charged with engaging students in transdisciplinary investigations that build their skills and knowledge. To accomplish this, advisors direct students to resources that allow them to explore the literary, mathematical, historical, and scientific elements of their projects and internships, which students then incorporate into their practice, projects, reflection, exhibitions, and final products. To do this, advisors must maintain a holistic and transdisciplinary view of student learning that draws on multiple areas of work and experience and, in turn, help students synthesize insights into their learning experiences and projects. If advisors are unfamiliar with a topic, they must also proactively seek out resources or other staff who can support students in their investigations.

Differentiation

Big Picture Learning notes how its staff must maintain strong differentiation, or personalization, skills to enact the network's "One Student at a Time" philosophy. Because they individualize educational goals and experiences for each student based on the student's personal interests, Big Picture Learning advisors must be able to "treat everyone alike differently"—or facilitate each student's path toward pursuing their passion while noting that each road will be distinct.

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Big Picture Learning staff also directly support student learning of content by providing consistent instruction, particularly in reading, writing, and mathematics, which are areas in which many entering Big Picture Learning students have learning gaps. They provide this instruction during advisory, in small groups, or in one-to-one settings and use a variety of resources to ensure they support all students at their appropriate academic levels.

Advisors systematically do this by helping students create personalized learning plans that contain both academic and personal goals, which they use to track individual student growth. They also use assessments and frequent communication with other stakeholders (e.g., mentors, other advisors, parents) to assess student progress. With this input, they engage students in short-term or long-term learning experiences that can address learning gaps and provide appropriate scaffolds that advance student learning at each student's academic level.

Project management

Beyond the skills needed to engage students in individualized and transdisciplinary interest-based learning, Big Picture Learning advisors also need keen project management skills. Advisors help to coordinate all aspects of each student's education, including their school-based and workplace-situated learning experiences. They use student learning plans as primary documents to track student progress and actively coordinate and communicate with other adults to track progress and project completion. When necessary, they also use their personal and professional

connections. Advisors may also advocate on behalf of students to address any challenges that arise during a project's or internship's duration. Because they do this for every student in their advisory, advisors must have systems that allow them to monitor each student's unique interest-based learning experiences.

In addition to their own coordination and facilitation of student learning, projects, and internships, Big Picture Learning advisors help students learn these same skills. They do so by helping students identify and use appropriate tools that will improve organization, self-management, and reflection. For example, advisors introduce students to technology or software (e.g., Google Calendar) that can help them manage and prioritize their time and instruct them on how they might organize their materials in portfolios. They also help students improve their abilities to realistically self-assess their project development and progress by modeling self-reflection and having students think and speak through their experiences in exhibitions and other instances of peer or public critique.

Problem-solving

The ability to problem-solve, or to think nimbly, as it was also described, is another important competency that advisors need when enacting the Big Picture Learning approach. The network defines problem-solving as the ability to "collaborate and use resources to help students academically and nonacademically."[12] Advisors bring together essential supports to clarify an issue, to extend student learning, and to secure socioemotional supports for students when relevant. In practice, this includes seeking out timely and proactive support to clarify an issue or to overcome an obstacle that is inhibiting student learning. For example, advisors might connect students with other colleagues or outside resources to explore content related to their projects or engage in dialogue with other leaders, counselors, and/or support staff to provide holistic interventions for students. Advisors also demonstrate flexible thinking as they work with students to design and implement learning and projects based on their evolving interests.

The ability to problem-solve and think flexibly also applies to professional learning. Big Picture Learning advisors need to be proactive in seeking guidance and expertise in relation to their own development and reciprocate by sharing their own knowledge. One network leader described how the network nurtures this orientation to problem-solving and solution seeking. She explained, "Everything is relative to something else, so don't feel like you ever have it all figured out.… That then frees you from feeling like you have to have all the answers."

Essential Competencies for Big Picture Learning School Leaders

As instructional leaders, Big Picture Learning school leaders must possess the skills and competencies necessary to implement the network's pedagogical approach. School leaders then use this knowledge to differentiate professional learning based on advisors' experiences and monitor professional learning through advisors' individualized learning plans. School leaders further use the insights gained from advisors to enact learning experiences that are both individualized and holistic to improve teaching practice and learning at their sites.

In addition to providing key instructional supports, Big Picture Learning school leaders must ensure that advisors are invested in the approach's design and power. One senior network leader explained:

> Because leaders are the gatekeepers, they have an impact on the culture of the school, particularly for their advisors, and they have a lot of control over advisors, whether they want to fully own the approach or not. I think we try to invest a significant amount of time in helping our school leaders really understand pedagogy on many different levels and being comfortable with owning and sharing, so that a leader can say "I don't have all the answers, but this is the belief system for our school."

As this senior leader indicates, Big Picture Learning school leaders must be well versed in the network's pedagogical approach to convey its importance and build advisor investment. Her words also demonstrate how school leaders must be problem-solvers who think flexibly to ensure that advisors and students can bring the network's pedagogical approach to life. They approach this nimble thinking by acknowledging their own limitations and connecting students, advisors, and community partners with the resources to address their questions and concerns. They thus establish a solutions-seeking culture at their sites and enable their constituents to become comfortable with seeking support.

Big Picture Learning school leaders must also demonstrate their relationship-building capacity. They not only support their staff in generating inclusive classroom environments and building positive relationships with students, but also facilitate inclusive professional learning settings and build their own relationships with students and families. Site leaders build relationships with community and district stakeholders to ensure the sustainability of their sites. They must therefore be skilled communicators as they describe the school and its contributions to varied audiences.

Evidence of Success

During its 24-year history, Big Picture Learning has spread its deeper learning approach and school design to schools domestically and internationally, and both internal and external studies of network-affiliated schools indicate that its model is generating positive student outcomes.

Researchers have long examined the outcomes of work-based learning programs and their iterations, such as Career and Technical Education (CTE) and Linked Learning pathways. Although questions persist in the field regarding what outcomes should or can be measured through these learning experiences, reports indicate that students participating in work-based learning perform stronger in all academic measures (e.g., graduation rates, college attendance, GPA, and test performance)[13] and show stronger interpersonal and intrapersonal skills (e.g., collaboration, communication, self-efficacy, and growth mindset) as compared to their counterparts.[14]

Reports investigating the impact of Big Picture Learning's approach have found similarly positive outcomes for students across various measures. For example, internal data analyses conducted by the network compared test scores and graduation rates of students at four established Big Picture Learning schools to their surrounding district schools. Their analysis suggested that Big Picture Learning students scored higher on state assessments in math and English language arts and graduated from high school at higher rates than their district counterparts.[15]

Other internal research tracked postsecondary outcomes for students across the network. Although it did not cite a comparison group, Big Picture Learning reported that 95% of its students were accepted into 2-year or 4-year institutions and 88% of those who did not enroll in college secured full-time employment—with three quarters of students reporting that this employment was facilitated through a mentor or professional contact from one of their high school internship experiences.[16]

External studies have corroborated many of these results.[17] For instance, researchers with the American Institutes of Research (AIR) conducted a series of studies on deeper learning and its outcomes, which included Big Picture Learning as one of 10 deeper learning networks in their sample. Researchers compared performance outcomes for students in deeper learning networks with those of students in matched schools, controlling for student background, and found that students in deeper learning schools such as Big Picture Learning scored higher on state literacy, numeracy, and science tests.[18] In another study, researchers at Boston College conducted a longitudinal investigation of postsecondary outcomes of Big Picture Learning alumni from 23 schools. They found that 47% of students in the graduating class of 2006 earned an associate degree, a bachelor's degree, or another credential[19]—a percentage higher than the national average for students from low-income backgrounds.[20]

In addition to investigating Big Picture Learning's impact on traditional outcome measures such as test performance and postsecondary outcomes, researchers have examined how the network's deeper learning approach has developed students' interpersonal and intrapersonal skills, which are at the heart of this approach to learning. For example, researchers found that teachers and leaders in deeper learning networks, including Big Picture Learning, put more emphasis on the development of these skills (e.g., collaboration, motivation to learn, content engagement, and making real-world connections) in their teaching as compared to teachers and leaders in more conventional schools.[21] With this emphasis, students, in turn, reported higher levels of many of these interpersonal and intrapersonal skills on surveys as compared with their peers in non-network schools.[22] Specifically, students attending network schools such as Big Picture Learning reported greater collaboration skills, self-efficacy, and academic engagement, though questions remain as to whether outcomes were equally felt among students entering school at lower academic levels.[23]

With its large institutional presence and record of success, Big Picture Learning has seemingly overcome institutional barriers to instantiate its deeper learning approach, and has done so in ways that advance multiple dimensions of learning, particularly among students farthest from opportunity. In the remainder of this report, we identify the systems and processes that have enabled the network to manage this feat.

Sowing the Seeds for Success: Big Picture Learning's Approach to Diffusion and Quality

Big Picture Learning has spread its deeper learning approach domestically and internationally through a system of structures and practices that ensure that the necessary knowledge and conditions for its design are in place. In the following sections, we describe the network's approach to growth and how it supports its distinct teaching and learning practices. First, we describe how its cofounders laid the foundation for the network and its approach to learning. We then describe network practices related to site selection and the network's intentional approach to building support from local stakeholders. Next, we describe Big Picture Learning's system of ongoing, multifaceted learning supports that enable advisors and leaders to bring the design to life. Finally, we conclude with a description of systemic and organizational changes the network has put in place to ensure the high-quality diffusion of its approach and to broaden its impact on school practice.

Founding Big Picture Learning

Big Picture Learning was born from the leadership of Dennis Littky and Elliot Washor, two thought leaders who "merged their 30 years of experience as advisors and leaders and their distinct national reputations to launch this new innovation in education."[24] Littky and Washor developed a strong educational philosophy inspired by progressive educator John Dewey's work,[25] which they systematically implemented in their school vision. Washor explained:

> We really are a takeoff of a John Dewey phrase [in which] he talked about learning through occupations. He talked a lot as well about starting with students' interests, although nobody ever really did that. They left it at the level of a group of students or a class. We said we could get it down to the student.

Beyond wanting to create a school with learning experiences that are centered on students' interests, Littky and Washor fundamentally saw this approach as inextricably tied to equity. Littky explained that equity was fostered in their schools by emphasizing relationships, relevance, and rigor. He stated, "It's about finding a kid's passion, finding their interest—someone who knows them well and stays with them for 4 years. Then we put them out in the real world." Washor noted that these elements, which are often fostered through interest-based learning, had often been staples of learning experiences for affluent students and, furthermore, had been executed in a way that maximized student empowerment and leadership. A senior network leader mentioned that this initial direction had created an organization that attracted people who sought to work with students in urban and rural areas in which issues related to poverty, class, and race meant that "kids aren't given opportunities and people aren't thinking critically and strategically about creating amazing spaces."

To enact their vision, Littky and Washor leveraged a favorable policy window to bring their educational philosophy to fruition. Around 1995, the state of Rhode Island re-examined its educational system. At that time, Littky and Washor had initiated projects through their nonprofit, also named Big Picture Learning, in which they gathered principals and superintendents from across the state to participate in workshops that explored effective principles of career and technical schools, many of which would become the principles codified in Big Picture Learning's 10 distinguishers and its hallmark school design. From this work, Littky and Washor proposed

the design for the Metropolitan Regional Career and Technical Center ("The Met") to the state of Rhode Island. The Met—which ultimately became the first Big Picture Learning school—opened in Providence in 1996.

The cofounders acknowledged that, along with their years in education and academia that lent credibility to their school design, their ability to foster key relationships with policymakers and decision-makers enabled them to enact their approach. Knowing their reputation in the field, the state commissioner of education solicited a school proposal from Littky and Washor, and other state officials, including the assistant commissioner, encouraged them to embed policy waivers in their proposal to ensure the school's operation. Washor also described the favorable relationships the cofounders maintained in creating their innovative school design. He stated, "We had the governor, the commissioner, the largest employer in the state, [and] Stanley Goldstein, [cofounder of] CVS, all backing us, and we worked with the heads of unions and lots of other people to develop this school." With this coalition, Littky and Washor founded The Met and secured key autonomies by operating the school, like all of the other CTE schools in Rhode Island, as its own independent state school district.

In establishing The Met, the school planning team also worked to earn the trust of community members. Big Picture Learning leaders wanted their school to be physically open and welcoming to the surrounding community. To do so, they intentionally designed The Met's campus so that none of the buildings is higher than neighboring houses—making the school "on level" with the community. Additionally, there are no fences sectioning off access to the school—anyone can walk right onto the campus, which was key to garnering support from diverse members of the local community. Support from local stakeholders continued through The Met's early years of operation, ultimately allowing the Big Picture Learning flagship to flourish.

Big Picture Learning's early success drew national attention, ultimately catching the eye of the Bill & Melinda Gates Foundation, which recognized The Met as its favorite high school in the United States in 2001. The Foundation later provided Big Picture Learning with grants to spread its design nationwide in 2001 and 2003. Early expansion of network schools aimed to replicate the whole school design in what Littky described as its "purest form." Yet maintaining fidelity to the Big Picture Learning design in these expansion efforts came with challenges. For example, Littky mentioned that when visiting new school sites, he observed practices that ran counter to the network's original approach. He noted that the cofounders had less control outside of Providence, and in turn, school leaders at these sites grappled with administrative and accountability pressures that led them to implement more conventional class structures and schedules, which undermined his commitment "to showing there was a drastically different way to educate."

These growing pains, aligned with the ending of the initial grant, caused the organization to rethink its approach to expansion. As one network leader stated, "Twenty years ago, we had a significant grant to scale and replicate our schools so they looked very pure, and we called it a Big Picture Learning approach. And now we talk about design principles." The network leader described how the organization has shifted from an emphasis on replicating its full-school approach in new sites to one that enables Big Picture Learning–affiliated schools to adopt all or some of its 10 distinguishers, or design principles, allowing the network to adapt its vision and structure for student learning to the constraints and opportunities in the respective locations.

For example, a recently opened school in Nampa, ID, adopted each of the 10 distinguishers in school practices and structures. Conversely, Bellevue Big Picture in Bellevue, WA, has students engage in internship-based learning and exhibitions but couples this with a structured master schedule and more prescriptive curriculum, making it, as one School Design Coach described, a "hybrid." For schools such as Bellevue, which can feasibly implement only a subset of Big Picture Learning's distinguishers, the network has identified high-leverage distinguishers, including advisory, internships, personalized learning, and authentic assessment, as the fundamental pillars of its approach that schools can adopt to be affiliated with the network.

The flexibility to adopt a set of distinguishers rather than a prescriptive model has allowed the network to spread its schools in ways that are more responsive to community conditions while still sustaining its commitment to deeper learning.[26] Although this revised vision for network growth is a topic of debate within the organization, Big Picture Learning has approached expansion in this manner for several years. Its current Co-Executive Directors, Carlos Moreno and Andrew Frishman, who assumed full leadership of the network in 2015 after a deliberatively phased 2-year leadership transition, maintain this vision as they grow the network domestically and abroad.

Funding Big Picture Learning Schools

Philanthropic seed funding supported the Big Picture Learning network's early growth, and the network has identified an array of funding streams to continue spreading its approach.

At the network level, funds from philanthropic groups and federal and private grants continue to support a significant portion of the network's overall operating budget. Big Picture Learning leaders also indicated that, in many cases, funds secured through contracts with individual schools and districts support the work of network staff and founding school leaders for the year or months prior to opening the school as they engage in professional development and/or site visits to help them in planning their school launches. (These leadership development opportunities are explained in detail in the section "Preparing Big Picture Learning Leaders.")

At the same time, because Big Picture Learning schools are situated mostly in public school districts, schools affiliated with the network typically operate with funding allocations delineated by local, state, and federal statutes. For example, network and school leaders indicated that their schools rely primarily on funding based on their average daily attendance counts, or counts of the number of students in attendance at their school each day that are then averaged on a bimonthly or quarterly basis to determine any midyear adjustments to state aid.

With the large portion of students qualifying for free and reduced-price lunch in network schools, leaders also noted that Title 1 funds were an important additional source of funding in many cases. Yet because Big Picture Learning schools are relatively small compared to other schools in their host district, network leaders indicated that they engage in discussions with district leaders to explain the costs of the approach and the increased expenses associated with staffing.

Less frequently, network leaders described efforts by principals to secure grants or other sources of external funding to provide augmented support to their sites. For instance, a Big Picture Learning school principal in the Pacific Northwest secured federal and private grants to support her alternative school so that it could operate an on-site child care center for the students, 25% of whom were teenage parents.

Collaborating to Build Community Investment and Support

While maintaining a clear vision for student learning, Big Picture Learning works with districts and local communities to establish and maintain schools that incorporate its personalized, workplace-situated, and interest-based learning design. In addition, the network works with local stakeholders to transform existing schools, helping schools to redesign educator practice and providing professional development that aligns with the network's distinguishers. In doing so, the network instantiates its sites in a collaborative process to ensure that the design is responsive to the needs of local districts and communities while maintaining fidelity to the network's deeper learning approach.

Collaborating to establish sites

To establish Big Picture Learning schools, the network engages in a collaborative and deliberate process. The process typically begins organically, with individuals from schools or districts reaching out to Big Picture Learning with an interest in adopting the approach. Big Picture Learning then encourages interested parties to visit an existing Big Picture Learning school to observe which components of the design align with their vision for the school that they hope to create in their community.

The more formal element of the site selection process is the Big Picture Learning *School Success Study*, which sets the stage for Big Picture Learning's work in a district or school. Once school and/or district officials determine they want to formally explore a partnership with the network, Big Picture Learning staff visit the proposed site for 1 to 2 days to assess how the school or district can feasibly adopt the design. During the visit, network staff conduct interviews with multiple stakeholders and observe classrooms. Big Picture Learning staff then analyze the collected data through the lens of the network's 10 distinguishers and prepare a report of tiered recommendations describing how the site can adopt the design. After receiving the report, site leaders have the option of adopting some or all of the recommendations.

In discussing the *School Success Study*, a network staff member said:

> We really look at any new school from an asset-based perspective. What's already in place around real-world learning opportunities? What's already in place around school culture, leadership, professional development, and family engagement? So, I get the chance to interview students, advisors, parents, and other stakeholders, and then share back a report that shows, this is what you are really doing well. We're really excited to be a part of your community as a result. And also, here are some recommendations that we would like to help you with for partnering purposes.

Although potential sites have flexibility in how they implement the design, the network has identified prerequisites, or the key conditions needed to implement its approach to deeper learning in high-quality ways, that the district or school must agree to before partnering with Big Picture Learning. For example, to accommodate student internships, network-affiliated sites must allow students to engage in learning in outside-of-school contexts, which may require that schools secure waivers for mandatory seat-time requirements (i.e., laws that define the minimum amount of instructional time in a subject area[27]), at their sites. Big Picture Learning schools may also require flexibility in how students earn credits and meet graduation requirements. Given

the network's personalized, interest-based approach, school leaders at network schools may seek to have students satisfy credit and graduation requirements by demonstrating content knowledge and good academic standing through completion of transdisciplinary project work, student work portfolios, and performance assessments, which can often deviate from district and state mandates.

Additionally, districts must agree to allow Big Picture Learning network staff to provide input into the selection of founding school leaders, and in some cases, have input in subsequent leadership changes. This prerequisite for partnering with school districts arose directly from challenges the network experienced when subsequent leaders who had been appointed to lead a Big Picture Learning school held key philosophical beliefs that differed from those of founding leaders. In these few instances, conflicting differences and priorities undermined the implementation of key elements of the Big Picture Learning approach, causing a disruption in the school and classroom conditions that challenged the implementation of the network's design.

Once a school decides upon the Big Picture Learning principles it wants to implement, network staff draft a memorandum of understanding (MOU) outlining the relationship between the school, its host district, and the network. This document is significant, as district support is vital for the approach to be established and take root successfully. Engagement lengths vary, with the most extensive lasting up to 5 years. Although MOUs vary significantly, all MOUs delineate the scope and sequence of a multiyear professional development plan facilitated by Big Picture Learning. The professional development is usually a combination of in-person and virtual professional development led by the network's School Design Coaches, who help launch and lead ongoing professional development activities in network schools. It can also include access to Big Picture Learning's online database of best practices, attendance at Big Picture Learning's annual conferences, and visits to other network schools.

In rare cases, Big Picture Learning may cancel an MOU with a district if ongoing challenges or philosophical differences disrupt the implementation of the design. The ending of the partnership is usually agreed upon after ongoing conversations with network staff.

Working With Teachers Unions

Big Picture Learning typically implements its approach in conventional public schools. Therefore, most of the teachers who work at the school are members of the local teachers union, whose working conditions are subject to the local collective bargaining agreement (CBA). Because learning practices in the network schools are substantively different from conventional school settings, network leaders noted that efforts to establish Big Picture Learning schools often involved discussions and negotiations with union representatives. Specifically, when Big Picture Learning partners with school districts to transform or launch a school site, network and school leaders indicated that they work with the union to establish amended CBA agreements and/or MOUs that enable more flexible working conditions and allow their members to implement the Big Picture Learning approach in high-quality yet professionally sustainable ways.

Ongoing engagement with local stakeholders

After Big Picture Learning and a district or school sign an MOU articulating the details of an engagement, school leaders engage in work at the local level to ensure that the design and its variations can be implemented. Much of this work is relational. School leaders engage the community, school district officials, and school board members to develop positive relationships and a shared commitment to deeper learning and equity as they establish their schools in the local landscape. When applicable, they also recruit students, families, and advisors to meet their enrollment and staffing needs.

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Building relationships with communities and local businesses

While network leaders get to know community partners in a well-executed *School Success Study*, efforts to build positive relationships with local stakeholders are ongoing for Big Picture Learning school leaders. Specifically, former and current school leaders indicated that they used their relationship-building skills to engage local communities and businesses to educate stakeholders about Big Picture Learning and its contributions to the community.

Interviewees most often described these engagement tactics: (1) holding open houses and information sessions at local venues; (2) having one-on-one meetings with community partners and business owners; and (3) going door-to-door in the neighborhoods immediately surrounding the school's facility. In hosting informational sessions, school leaders indicated that a wide net for attendance is cast by circulating flyers for the events at local businesses and on social media. In the other instances, Big Picture Learning school leaders stated that they leveraged their relationships with community members and businesses to organize gatherings. A Learning Through Interests and Internships (LTI) coordinator explained, "I have a great relationship with a lot of people in the community, and so going out and speaking to these different companies was pretty natural."

Through these interactions with the community, Big Picture Learning school leaders hope to achieve several goals. These efforts have allowed leaders to introduce themselves and the network's approach to the local community. Site leaders suggested that through these informational exchanges, they hoped to eliminate ambiguities and to minimize any stigma associated with the design, particularly when it was partnering with alternative schools. One staff member at Union High School in Nampa, ID, a network-affiliated alternative school, explained this dynamic:

> We were labeled an alternative school, and we didn't want that stigma coming to the Big Picture Learning school because it's an innovative school. It's a different way of looking at them [alternative schools]. It's not that typical alternative setting.

Practitioners at Big Picture Learning schools indicated that these outreach efforts aim to make local communities and businesses more knowledgeable of and amenable to the network and its approach.

Outreach to local businesses also has an additional purpose—to create a supply of potential internship sites for their students. The school leader at Union High School described one such interaction and its impact on the newly opened Big Picture Learning school:

> We took students with us to the Nampa Chamber of Commerce Business Women Luncheon.… The kids were most impacted by small-business owners who talked about how they started with nothing. Those are the stories our kids remember, and we really made some awesome connections. Then we started having internships at all these places, and more and more community members joined in.

Through efforts such as these, Big Picture Learning school leaders have been able to grow partnerships with local businesses that provide the foundation for students to engage in interest-driven, workplace-situated learning.

Building allies in the district and on the school board

Big Picture Learning school leaders also continue to build relationships with local district officials and school board members after the *School Success Study* process is completed. Like community outreach efforts, much of this involves familiarizing central office leaders with the network's design to demystify its approach and its contributions to students and the district. One former Big Picture Learning school leader explained that these efforts aimed to "create a space where everyone is embracing the fact that we're doing something different, and if we're going to create these spaces, it means we bump against a lot of policies." Because network-affiliated schools require some flexibility and autonomous decision-making to enact their vision, it is critical to build support for Big Picture Learning at the central office and on the school board in an ongoing manner.

Because network-affiliated schools require some flexibility and autonomous decision-making to enact their vision, it is critical to build support for Big Picture Learning at the central office and on the school board in an ongoing manner.

To secure district and school board support, current and former Big Picture Learning school leaders explained that they typically hold one-on-one meetings with district and board officials and conduct formal presentations at board meetings. A senior district official at Highline Public Schools, a home district for a Big Picture Learning site, explained the positive effect that one Big Picture Learning leader had in these efforts: "He really got board support and made it very easy for the superintendent because the board was so excited and wanting to invest in that innovative space." School visits have also been part of these ongoing engagement efforts. One district official at Nampa School District noted how board members are encouraged to visit existing Big Picture Learning schools to familiarize themselves with the design. He noted, "What they don't know is what they don't know, so they need to see things" in describing the effectiveness of this strategy.

Through these efforts, Big Picture Learning school leaders develop relationships with individuals in the central office who ultimately serve as allies and liaisons. District officials we interviewed at Highline Public Schools and the Nampa School District described instances in which they sat down

with school board members or stood side by side with Big Picture Learning school leaders during board presentations to convey their support and enthusiasm for the approach. These district allies have also provided Big Picture Learning school leaders with important insight on what constraints or obstacles they should anticipate in the process. In this case, district partners have helped school leaders anticipate and navigate potential conflicts as they enact the network's vision.

Recruiting students and families

Because Big Picture Learning supports the launch of new schools and transforms existing ones, its approach to recruiting students and families varies. In some instances when the network works with a community to restructure an existing site, student and family recruitment is minimal. Instead, outreach focuses on educating parents and students on what the transformation entails and what changes they can expect in day-to-day learning. A network leader provided an example of how she engaged students and families in her own efforts to restructure an alternative school:

> When I was in Newark, we did one-to-one interviews. We grandfathered students in from an alternative program that was phasing out. Ultimately, we hit a lot of kids who were under-credited, and that was a big issue. We wanted to make sure that their parents understood that we weren't going to be fast-tracking or accelerating their credit recovery, and that the students were going to be out in the real world. We wanted them to understand part of that expectation is that students are going to be out, and we're not supervising them. We're not going to be with them, and are you comfortable with that? Do you think they can handle that responsibility of being out on their own?

Through these exchanges and other informational sessions, families are better able to make informed decisions about enrolling in the school.

To supplement enrollment numbers at pre-existing sites or to recruit students to new schools, Big Picture Learning site leaders facilitate a range of activities. Interviewees suggested that administrators of long-established Big Picture Learning schools host parent nights, open houses, and informational sessions intermittently throughout the year, at which families and students can learn about the school and tour the facility. In addition, school leaders of emerging and mature network-affiliated schools noted that they had recruited students by giving presentations at local public schools and/or often relied on word-of-mouth and door-to-door recruitment efforts to secure enrollment.

In these recruitment efforts, Big Picture Learning school leaders stated that they cast a wide net to secure necessary enrollment numbers. Yet network leaders, most of whom had served as Big Picture Learning school leaders, consistently stated that most network-affiliated schools have student populations in which a significant portion of students face social and economic challenges and have been underserved in larger and conventional school settings.

Recruiting and hiring faculty

As with its approach to student and family engagement, Big Picture Learning approaches staff recruitment differently depending on whether it is restructuring an existing school or starting a new one. If transforming an existing school, school leaders indicated that, in most cases, teachers are offered the choice of staying at school or leaving. To inform their decision-making, teachers

from the school slated for transformation are educated on the shifts in instruction and mindset that implementing the Big Picture Learning approach will entail so that they can determine their willingness and fit. For instance, Union High School in Nampa, ID, consolidated the student and educator populations from four alternative schools that had been closed in the surrounding area. As one school leader recalled, "When we originally opened, I offered all the teachers at those schools a job here first. I did have 50% [of teachers] leave, but they were well aware of the mindset they needed to be able to come into this with."

Since teachers are given the option of staying on as advisors at transforming school sites, there are instances in which no decisions or teacher recruitment are needed. Yet if vacancies arise in this process or when staffing new Big Picture Learning schools, school administrators partner with network staff to recruit faculty. Current and former site leaders reported that they engaged in a variety of efforts to recruit prospective advisors, including social media campaigns, active webpages with job postings, and attendance at career fairs and teaching conferences. Leaders also mentioned the importance of Big Picture Learning staff's social networks in recruitment. A former advisor and current vice principal at Highline Big Picture recalled how he had been recruited to the school through this process:

> I was overseeing a crisis program for children, and the wife of one of the therapists that I supervised worked here. She said, "You keep talking about your teaching. Why aren't you teaching?" I said, "Nobody's going hire me now. I'm over 50."… He said, "I know somebody who probably would." And that was Jeff Petty [former Highline Big Picture Principal and current Regional Director]. I came to see what the school was all about, and I fell in love with it.

In addition to the word-of-mouth element described in his personal recruitment story, he highlighted another frequently used recruitment tool—site visits. Network and school leaders often noted that interested or prospective advisors were encouraged to visit existing Big Picture Learning schools to learn more about the design and its principles.

In advisor recruitment, interviewees emphasized the importance of recruiting diverse staff who reflect their student populations, and of recruiting locally based individuals. Washor explained that this vision had been in place since the network's beginnings: "We knew that it's also the who. Who you learn from matters inside the school as well. So, we hired people from the community, and we were very serious about that.… We're not outside communities. We're inside communities." A senior network leader also described her vigilance in recruiting diverse personnel:

> It's not just looking for one token something. It's looking for a lot of different ways that a staff can be balanced, so that might be in the experiences people have. If they've worked with transgender teens, seeing that on a resume is an important asset around bringing equity to the schools. We're searching in that way.

Hiring

Once advisors apply to work at Big Picture Learning schools, each site conducts a multifaceted interview process. Although the process varies and is subject to parameters established in local collective bargaining agreements, leaders described a range of activities that they used to augment the hiring process to tap teacher candidates who had the potential to thrive in a network school.

For example, network leaders described the use of group interviews during the initial hiring phases, in which a pool of candidates engages in a discussion or team-building activity, similar to ones they will have to facilitate in their advisories. Other performance tasks are more individualistic, such as engaging candidates in one-on-one coaching sessions with students around goal setting, a skill that advisors need when guiding students through writing learning plans. A senior network leader described this approach:

> We'll give a template to help them think through a coaching session and maybe even some starter questions, and then we'll bring in students for them to maybe set a goal with for the end of the school year.

Another individual task relates to project development, wherein candidates interview students for a few minutes about their interests, individually craft a project, and ultimately pitch it back to the student.

Beyond these performance-based interview tasks, Big Picture Learning leaders also reported that conventional in-person or phone interviews are conducted as follow-ups or as initial screening mechanisms. Even in these more conventional approaches, site leaders report posing "situational questions" that reveal candidates' ability to problem-solve, their ability to interact with students, and their belief that all students can succeed. (See Table 2 for examples of interview practices.)

Table 2
Big Picture Learning Advisor Interview Experiential Activities

Activity	Description
Team-building activity or group discussion (group interview)	Staff and students observe attitudes and behaviors and debrief afterward.
Student mini-interest project	Candidates have a 5- to 10-minute conversation with a student about their interests and then independently develop a project for the student and pitch the project to the student to evaluate.
Coaching session with student	Candidates have a 5- to 10-minute conversation with a student to guide student inquiry and help them establish goals.
Advisory plan	Applicants plan a week's worth of an advisory based on student interest and need.
Demonstration lesson	Applicants lead one or more lessons they planned.

Source: Interviews with Big Picture Learning leaders and staff.

Big Picture Learning leaders explained that these activities reflect the skills and competencies that would be necessary if working as an advisor. They noted that each activity provides evidence of each candidate's communication style, collaborative orientation, and ability to engage in cross-cultural dialogue. In addition, the activities provide an opportunity to understand how candidates deal with ambiguity. In describing the use of one-on-one coaching sessions, a network leader explained, "We know people will require professional development, but it's more about how does it feel, what is their tone, and how comfortable are they engaging in something that is unknown to them."

Finally, Big Picture Learning leaders noted that this process was a fairer approach, as it allowed for "multiple styles of learners" and forms of participation that allowed prospective advisors to demonstrate their assets and strengths.

Participation of multiple stakeholders, including prospective site leaders, advisors, and students, is a staple of Big Picture Learning interviews. In each of the aforementioned activities, individuals are observing, taking notes, actively posing questions, and participating in the interview activities. Network leaders explained that the inclusion of other faculty members demonstrates how the organization has created a culture "that values collaboration and values each other's input." Big Picture Learning staff also stated that including students in the interview process is a particularly helpful and relevant strategy that provides a window into how prospective advisors would build rapport with students and the degree to which advisors would focus on student interests in their interactions.

Implementing a System of Learning Supports to Ensure High-Quality Instruction

To instantiate their design in local settings, Big Picture Learning school leaders lay the important foundation for their schools through their thoughtful and targeted outreach to community members, local education leaders, families, and advisors. At the same time, the network complements these efforts with a set of professional learning supports that develop educators and staff so that they can bring the Big Picture Learning vision to life.

The approach to learning enacted at network-affiliated schools calls for advisors to create meaningful tasks that ask students to make sense of content; build on what students know; use tools and routines that support collaboration and communication; offer authentic forms of assessments; and emphasize productive struggle.

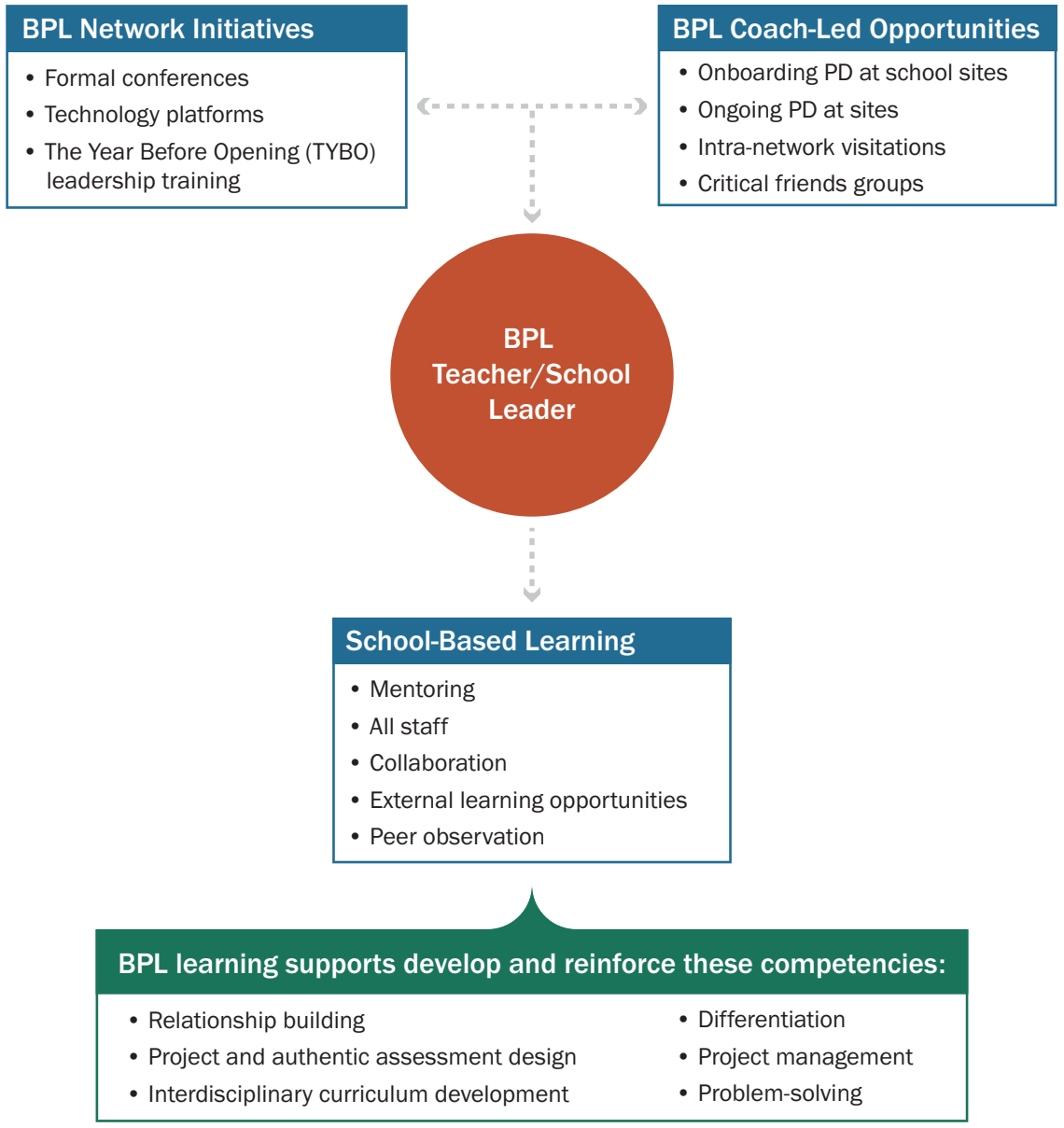
The approach to learning enacted at network-affiliated schools calls for advisors to create meaningful tasks that ask students to make sense of content;[28] build on what students know;[29] use tools and routines that support collaboration and communication;[30] offer authentic forms of assessments;[31] and emphasize productive struggle.[32] These practices are not the norm in most school settings—partly because teachers themselves have not experienced these forms of learning, and preparation programs rarely provide them opportunities to do so.[33] In addition, these practices often run counter to the "grammar of schooling"—the entrenched norms around social interactions in schools and beliefs in student ability that enable more conventional forms of teaching and learning to persist.[34]

Consequently, Big Picture Learning has developed systems to hone educator capacity to ensure the high-quality implementation of its deeper learning and equity vision. These professional development efforts include opportunities for teachers to learn the instructional strategies and structures associated with deeper learning practices and to develop the mindsets and orientations necessary for sustaining and growing the approaches.

Figure 5 provides an overview of the varied professional learning opportunities that advisors and leaders at Big Picture Learning schools engage in to help them enact the network's approach to learning. As the approach indicates, professional learning at Big Picture Learning is facilitated by three different actors: the network itself, the network's School Design Coaches, and Big Picture Learning school leaders. Under the purview of each of these actors, advisors and leaders engage in a range of learning experiences that allow them to hone necessary skills and competencies that support the network's approach. These professional supports are ongoing and often overlap, allowing ample opportunities for advisors and leaders to engage in professional learning with varied peers.

Advisors and leaders often engage in these activities simultaneously, and we call attention to how these learning supports are used strategically to onboard new staff members or to support new Big Picture Learning schools when applicable. We also indicate if and how Big Picture Learning developed these learning supports over its 24-year history to improve the implementation of its unique approach to learning.

Figure 5
Big Picture Learning's System of Professional Learning Supports



Source: Interviews with Big Picture Learning leaders and staff.

Onboarding Staff to the Big Picture Learning Way

When opening a new site or transforming an existing one, Big Picture Learning engages its advisors and leaders in a range of activities to prepare staff to implement its deeper learning approach. These onboarding efforts include a formal annual conference, held by the network, as well as professional development led by a School Design Coach prior to school opening.

Big Bang

The Big Bang is Big Picture Learning's annual conference and is the network's primary structure to onboard new staff and network partners. Held each July, the conference brings together network staff, students, advisors, principals, and, at times, district and state officials. Stakeholders interested in the Big Picture Learning design are also encouraged to attend.

The 4-day conference engages adult learners through full conference convenings and smaller breakout sessions. Attendees select breakout sessions to attend based on their individual interests and school needs. The conference serves as an integral time during which attendees are introduced to the network's key components. Topics at breakout sessions include an introduction to advisor competencies, launching a school and internship programs, interest-based learning, authentic assessments, student-centered learning, and school climate. Conference participants also engage in Leaving to Learn activities, mirroring what is expected of students in Big Picture Learning schools.

At Big Bang, attendees leave the conference venue to learn directly from students and communities. For example, during the 2017 Big Bang conference in St. Louis, MO, a Leaving to Learn activity included a tour of the neighboring community of Ferguson, where attendees engaged in a "case study" discussion to teach educators, leaders, and community organizers strategies to respond to racialized incidents and identify and combat vestiges of structural racism.[35]

In addition to conference sessions, all attendees are also assigned to an advisory. The advisory convenes two to three times throughout the conference for approximately 3 hours total and is facilitated by network staff, School Design Coaches, and seasoned school leaders. During advisories, facilitators demonstrate advisor competencies, facilitation techniques, and signature network culture–building activities such as a circle, a space for vulnerable discussions; pick-me-ups, during which participants appreciate each other for their insights; and "Who Am I?" activities, during which participants share words that describe themselves and engage in a number of other activities that foster self-discovery and relationship building.

As an emerging practice to improve onboarding, the network places new advisors and new leaders in advisories with their assigned School Design Coach, who will facilitate professional development at their school site for the duration of their engagement with the network. With these placements, attendees' Leaving to Learn activities and breakout sessions are more intentional, allowing them to introduce advisors and leaders to elements of the design and its necessary competencies.

For example, the 2016 Big Bang featured a session geared toward leaders, "Deeper Learning Leadership: Cultivating a Culture of Innovative Teaching and Learning." Using "design-based inquiry practices," the session allowed "participants [to] build upon their success and consider the 'next level of work' to expand the equitable implementation of deeper learning for all students in

the face of various policy and/or structural challenges." Through these learning experiences, Big Picture Learning staff are better able to differentiate professional development and target it to the needs of new leaders and advisors.

Several network staff explained that a major benefit of the conference is that "you feel Big Picture Learning" and get a sense of the unique culture. Big Bang also helps advisors and leaders develop intra- and inter-network relationships. With the network's national and international span, Big Bang provides opportunities for network schools, staff, and educators to engage with and learn from one another. For example, a session on ImBlaze, the network's new technology platform to support the management of internship placements and projects, included attendees ranging from educators to school office managers from across the country. Groups shared and recorded challenges to implementing internship programs and shared best practices for finding internships and training new staff to support student internships. Researchers also observed several attendees exchanging ideas and contact information throughout the session.

A major benefit of the conference is that "you feel Big Picture Learning" and get a sense of the unique culture.

Overall, Big Bang creates a space for advisors and leaders to experience deeper learning while also gaining an understanding of the Big Picture Learning approach. Network staff, School Design Coaches, and students lead sessions that emphasize differentiation, interest-based learning, project-based learning, student projects, rubric creation, exhibition preparation, and collaboration.

Onboarding at school sites: Learning with Big Picture Learning coaches

Big Picture Learning also supports advisors and leaders through targeted professional development at school sites. School Design Coaches, who are network staff members who spearhead professional development in Big Picture Learning's various regions, lead these efforts and engage school staff in learning experiences for 2 to 5 days prior to school opening.

School Design Coaches and Regional Directors explained that these learning experiences are organic and contextualized, often allowing staff need to dictate the agenda. A current Regional Director, who had also been a School Design Coach, explained:

> I think our design is really about creating new spaces in a context where people are able to start where they are.… We think about: How do you transform your pedagogy and how do you just think about kids differently? We start where they are and then help them modify and create in their context.

Another Regional Director shared a similar sentiment, suggesting that professional learning depends on how well-versed a principal is in the design and its vision, how functional the staff is, and how well advisors understand the shifts from conventional pedagogy to a Big Picture Learning approach.

Although these context-sensitive approaches can lead to variability in onboarding efforts, network staff suggest that the gatherings typically focus on shifting or establishing culture. To this end, School Design Coaches often begin by helping advisors and principals understand teaching and

learning in a new way. For example, one School Design Coach explained that she uses text-based discussions to help staff unpack their beliefs and move toward student-centeredness "so that they're not so pigeonholed on this one single way of doing things." Other coaches highlighted team-building activities that allow staff to build trust and camaraderie. A Regional Director explained how this approach varies depending on whether the school is a new or transformation site. The Regional Director stated, "If it's a blank slate [a new site], you're trying to build culture among people who don't know each other." When transforming a site, the Regional Director explained that the onboarding activities are more targeted on a specific issue.

Circles are an instructional tool that Big Picture Learning advisors use with their students to create an opportunity to share personal information in a positive classroom environment. The Regional Director highlighted the importance of circling as a tool for professional learning as well by explaining, "Circling and getting people in situations where they're sharing intimate stuff … [builds] trust by learning about each other in a safe space." Advisors often use circles at the beginning and end of each day to facilitate discussions on a range of academic and personal topics. When circles are used during professional development, advisors not only experience and observe a well-facilitated circle, but also build rapport and community among themselves to support them in their work.

In addition to culture building, coach-led onboarding efforts typically include two activities: the development of advisor learning plans and introduction to Big Picture Learning's learning cycle. Like their students, advisors at Big Picture Learning develop individualized learning plans. Advisors' plans follow the same format as the ones for students. One School Design Coach explained, "In the schools I work with, teacher learning plans look like developing a personal vision that cuts across academic or personal life and thinking about how you're trying to have your life go. Then we break that down into annual goals, and then from those, build a project list." To develop advisor learning plans, coaches also model best practices, often by engaging one or two advisors in a "fishbowl"[36] to approach the kind of conversations that advisors can have with students.

The development of advisor learning plans also helps introduce the network's learning cycle, which begins with learning plans and moves to interest-based learning experiences, project work, workplace-situated learning, and exhibitions. Coaches aim to help advisors understand the various phases of the cycle in experiential ways and often have staff engage in condensed cycles themselves. One former School Design Coach explained:

> I ask staff, "What's something you're interested in? Now let's have you try to find someone in the area who does that and reach out to them and contact them and either interview them right there during PD or maybe as a Leaving to Learn thing." Then they come back and share that learning with colleagues to model what we're trying to have students do.

Another School Design Coach facilitated this experiential introduction to the learning cycle by having students attend an initial professional development session. To help advisors and leaders understand the process, he engaged in conversations with students in front of staff to model the development of learning plans and projects as well as the ability to maintain a student-centered focus in this process.

Preparing Big Picture Learning leaders

Through Big Bang and initial onboarding at school sites, advisors have rich opportunities to learn about the network's deeper learning design in collaborative and experiential ways. While new school leaders engage in these learning activities, Big Picture Learning has principals participate in additional activities to prepare them for their roles.

Specifically, the network asks principals to participate in individual and collaborative trainings with network staff and to visit established, high-fidelity Big Picture Learning schools to see best practices. Ideally, this process, often deemed The Year Before Opening (TYBO), is 1 year in length, but principals can engage in a truncated version depending on district–network partnership negotiations. A former principal described his own experience going through the process: "When I went through a TYBO process, it was connecting with other principals and doing site visits to pose challenging questions about technical and adaptive parts of our work."

During this process, principals, occasionally with their small-school design teams, develop a school learning plan that helps them prepare for their first year. A School Design Coach described the school learning plan:

> Most school learning plans have three components: visions, goals, and projects. They [principals] will spend most of the time on the vision section and trying to connect it to our distinguishers and core values—both of our organization and of the people that are in the community of the school. Then, from that vision, they determine goals and aims that they have that will likely support that vision. Then they identify the projects they need to do to support the goals and to support the vision.

To develop their plan and vision, School Design Coaches pose open-ended questions to guide principals during monthly in-person or virtual school design meetings. Principals also draw upon their TYBO site visits and individual conversations with seasoned leaders to inform the process.

To assist principals in the logistical elements of opening or transforming their schools, network leaders have also created a school launch timeline that includes a list of tasks related to staffing, student recruitment, training, budgeting, and technology. After conversations with school leaders and their school design teams, principals set task completion goals to ensure attention to these important operations.

Big Picture Learning has consistently tapped its successful advisors to move into positions of school and network leadership throughout its history, and the TYBO process supports both seasoned staff members in their new roles and new leaders who join the network.

Big Picture Learning has consistently tapped its successful advisors to move into positions of school and network leadership throughout its history.

Learning Structures Throughout the Year

Big Picture Learning advisors and school leaders engage in a range of professional learning activities throughout the year to reinforce and advance their understanding of the network's approach to learning, helping to support the ongoing instantiation of their approach.

Ongoing support from School Design Coaches

Throughout the duration of the school's engagement with the network, School Design Coaches provide ongoing professional development for school leaders and staff with the aim of building the school's capacity to sustain the design independently. These gatherings allow School Design Coaches to provide advisors and leaders with ongoing support. Because engagements with the network differ, the number of times coaches facilitate these learning opportunities varies substantially, but current and former Big Picture Learning coaches estimated that they typically provide between 10 and 20 days of in-person professional development over the course of a year.

As in the onboarding sessions, these coach-led gatherings convene advisors and leaders to further their understanding of Big Picture Learning's learning cycle and its key distinguishers in collaborative and experiential ways. Building on their knowledge of the network's learning cycle, School Design Coaches guide school staff in targeted deep dives into interest-driven project development and authentic assessment. They also lead staff in ongoing discussions of creating inclusive and productive advisory cultures.

In these gatherings, coaches often approach questioning and other best practices with Big Picture Learning students, who are frequently invited to these professional development sessions, or ask staff to engage in these activities in fishbowls to receive feedback. In addition to collective learning experiences, School Design Coaches described meeting advisors and leaders one-on-one to provide individualized support during these gatherings. One School Design Coach explained: "Coaching is sometimes a full day of one-on-ones with an instructor, a full day of one-on-ones with the principal, or just helping to connect people to people who have way more expertise than I do."

Goals for ongoing professional development are generated in preconference phone calls or videoconferences with the school leader and/or the leadership team after reflecting on the school's progress and challenges since the previous visit. Although predetermined aims are often set, School Design Coaches also mentioned that these learning sessions can be free-flowing conversations that focus on advisor and leader needs. A former School Design Coach explained, "It's also a space where I'm really listening—asking a lot of questions to help people focus on what they want to learn and then try to facilitate that."

Through their ongoing professional development, School Design Coaches also generate reports that serve as formative assessments of the progress made toward the school's learning plan and its strengths and struggles in implementing Big Picture Learning's distinguishers. One School Design Coach described how he engaged staff in this progress assessment during one of his professional development gatherings: "In February we had a 3-day retreat at a school. We exhibited their work through the learning plan they created in August. We checked in on the goals and community assessments and reflections and established more goals moving forward."

Other network convenings

Big Picture Learning also convenes affiliates and those interested in learning about the network's design at several gatherings throughout the year. Unlike its annual Big Bang gathering, which covers an array of topics and onboards staff to Big Picture Learning's culture and practices, these conferences are thematically based (e.g., senior thesis project, restorative justice) or aimed at particular audiences to support professional learning.

Notable among these gatherings is Big Picture Learning's annual leadership conference, which is held each year in early December. The conference gathers school and district leaders from network-affiliated schools, interested parties, and other leaders in the field who are passionate about student-centered learning. At the conference, Big Picture Learning engages leaders in a variety of learning experiences. The conference provides several workshops, or "deep dives," that allow leaders to target their professional learning needs. For example, topics at the 2017 Leadership Conference included student recruitment and communication strategies; building relationships with the broader community; the network's instruction, curriculum, and professional development; Big Picture Learning's digital initiatives (e.g., Learning Big Picture, ImBlaze); and leading with conviction and courage. During these workshops, network staff lead conversations around the respective topics and share best practices with attendees so that they can utilize or adapt them at their home sites.

As is typical in the network's professional learning structure, all conference attendees are assigned to an advisory, which is composed of six to nine participants who meet intermittently throughout the conference under the guidance of a seasoned network leader who serves as their advisor. During conference advisory, facilitators pose open-ended questions and elicit driving questions, concerns, and motivations that bring leaders to the conference. At times, leaders and advisors from separate advisories might collaborate to grapple with common issues. In one such instance at the 2017 conference, an impromptu gathering of leaders who ranged from experienced to new Big Picture Learning school principals aimed to develop a community of practice that could extend beyond the conference and supplement the support that School Design Coaches provide. Through this engagement, they shared their primary goals and challenges to find commonalities that could drive future conversations and resource sharing.

Leaders also engage in Leaving to Learn activities and observe Big Picture Learning schools and students in action during their attendance. This includes visits to network-affiliated schools in the host city, which gives leaders an opportunity to learn in different contexts. One former Big Picture Learning principal described the impact of having the 2006 Leadership Conference in his city, noting that having leaders gather and visit his site changed the school's trajectory and enhanced professional development activities at the school. In addition to school visits, attendees have the opportunity to visit students at their internships to see how mentors and students work together in bringing real-world learning to life. To illustrate, at the 2017 Leadership Conference in Providence, RI, attendees had the option of visiting an auto repair shop, a mustard seed farm, a resources and human development office, or a trophy-making business, to name a few. During their visits, conference attendees were able to speak not only with students about their internship experiences but also with mentors about how they develop students' skills, knowledge, and dispositions in the workplace.

Seeing schools in action: Intra-network visitations

In addition to holding thematic conferences for practitioners, network coaches and site leaders provide advisors with opportunities to see best practices in action. This is done through the coordination of intra-network site visitations, which allow advisors and leaders who are new to the network to visit mature Big Picture Learning schools to conduct observations and learn from their counterparts.

In visiting mature sites, new Big Picture Learning advisors learn to implement teaching and learning practices unique to the network. For example, they observe advisories, seeing how advisors build relationships with students to foster inclusive classroom communities and how staff support students in their independent, transdisciplinary interest-based learning. Conversations with their counterparts provide additional insight into these processes so new Big Picture Learning advisors can become stronger project managers and effectively problem-solve to support students in learning and authentic assessments.

A special education teacher from Union High School in Nampa, ID, discussed the impact of intra-network visitations during her site visit to Highline Big Picture. She explained that although she had several years of experience as a special education advisor in conventional public schools, she was grappling with Big Picture Learning's "unschoolified" approach and hoped to gain insight during her visit about supporting students with special needs in the Big Picture Learning context. During the visit, she met with her counterpart at Highline Big Picture to discuss how to write Individualized Education Plans (IEPs) that met legal requirements while still enabling students to learn in ways that aligned with the Big Picture Learning approach. She ultimately learned how to support students through inclusion practices and to write IEPs through students' individualized learning plans.

While enhancing the professional learning of advisors who are new to the network, site visitations also help mature network-affiliated schools sustain and improve their own practice. The dean of students at Highline Big Picture, one well-established network school, described Highline as a "fishbowl"—meaning that wherein the frequency of visitors coming to learn from Highline Big Picture has encouraged the school to reflect and ensure that practices are effectively implemented. As a result, the school community constantly reflects on how to improve practice and implementation. He explained that the "cross-pollination" that these visitations facilitate enhances professional learning and school practices for both newly established and mature Big Picture Learning schools.[37]

Intra-network visits are also a key part of implementing Big Picture Learning's approach to evaluating school operations. Network-affiliated schools participate in a peer review process in which experienced principals at high-fidelity Big Picture Learning schools visit sites in their 3rd or 4th years of operation to provide feedback. During the visit, veteran school leaders evaluate the school based on a rubric of the network's 10 distinguishers; observe classrooms; and conduct interviews with key staff, students, mentors, and coaches—all in the service of enabling the school to continuously improve.

Professional Learning at School Sites

Big Picture Learning schools supplement network-facilitated professional learning experiences with a variety of practices that support advisors on a day-to-day basis. These efforts continue conversations on instructional topics and often follow processes similar to those of network-led professional development.

Mentoring and peer observation

Advisors most often cited mentorship and the ability to observe their colleagues as key supports in implementing the Big Picture Learning approach. New advisors are paired with seasoned staff who mentor them, serving as primary thought partners in implementing the network's practices, including advisory and project design and management. For example, a Learning Through Interests and Internships (LTI) coordinator at Highline Big Picture described working with a veteran advisor during her initial year with Big Picture Learning:

> When I came in, even though I had done my residency and I had taught abroad for a year, I was still like, what am I doing here? … Being able to lean on more veteran advisors and think about, "What activities can I plan to bring [in more of] my students' voices?" … helped me a lot.

At Union High School, school leaders have institutionalized mentorships as part of their onboarding process. The Union principal noted that several advisors served as grade-level mentors and helped new staff develop a strong advisory culture and implement interest-based learning with aligned projects. This point was corroborated by several advisors at the school, including a new advisor who explained how mentoring had supported his learning, particularly around student exhibitions. Because he and his mentor worked in side-by-side classrooms, he explained, she frequently shared classroom resources and was readily available for check-ins as questions emerged.

Advisors also described peer observations as critical in helping them learn and enact the approach. For example, at Highline Big Picture, one advisor described attending student exhibitions to familiarize himself with the performance assessments and best practices for their facilitation. He noted that although he never received formal training on exhibitions in teacher preparation programs or district-hosted professional development, the observations taught him to pose questions to students "about why they did the work or chose that route" to assess their learning and growth. Other Highline Big Picture staff described conducting observations to learn about advisory and instructional methods, including Socratic seminars. To formalize these observations, Highline Big Picture administrators tapped LTI coordinators, school leaders, and experienced advisors who had more flexibility in their schedules or more fluency with the approach to provide advisors with these opportunities.

Other site-based structures

As in other schools, Big Picture Learning school leaders use structured time for professional learning. Examples of professional learning activities include weekly staff meetings, professional learning communities (PLCs), and grade-level team meetings.

Full staff meetings cover a range of topics that help advisors implement Big Picture Learning distinguishers and the network's learning cycle in their advisories while providing a space for staff to discuss problems and successes of practice. These topics include ongoing development and reflection on advisor and student learning plans and other aspects of the network's design, such as project design, development of transdisciplinary curriculum, and student exhibitions. For example, during an observed staff meeting, the principal asked staff members to sit in a circle and reflect on the school's current round of student exhibitions. In asking them to share traits of high-quality exhibitions, the principal facilitated a discussion about the centrality of learning goals, project development, and evidence in student presentations, as well as the adult behaviors that contribute to these results. This learning activity simultaneously allowed staff members to further their understanding of exhibitions as a fundamental Big Picture Learning practice and share challenges and successes with regard to its implementation.

School-based grade-level team meetings and professional learning communities also provide space for advisors, specialists, and support staff to convene to discuss problems of practice, discuss academic supports, and monitor individual student and group performance across the grade. For example, during an observed grade-level meeting, advisors, a librarian, and social workers reviewed data from a recent benchmark assessment. An advisor explained that students use the data to inform their learning plan and to craft goals. The group also discussed academic supports to aid and encourage reluctant readers who struggled during independent reading in advisory. Advisors explained strategies they have used to engage students and support them in developing efficacy in reading. In this way, the group brainstormed solutions and shared effective practices. The meeting ended with each person identifying specific next steps.

Big Picture Learning staff also seek external professional learning opportunities to enhance their understanding of deeper learning. For example, multiple advisors expressed that they had attended project-based-learning trainings facilitated by external organizations to understand this approach to learning and the ability to make it more student-driven. Additionally, Big Picture Learning staff mentioned their attendance at learning sessions on restorative justice practices at the Eagle Rock School and Professional Development Center in Colorado. Advisors, often accompanied by their students, were expected to return and share these strategies in their school communities. Finally, in fewer instances, advisors and school leaders at Big Picture Learning schools mentioned attending workshops led by their host districts, but they often stated that these trainings were less informative and not relevant to the network's pedagogical and curricular approach.

Refining Learning Systems to Improve Design Implementation

With its network growth, Big Picture Learning realized that it needed to better supplement its annual gatherings and intermittent coach-led professional development to meet the professional learning needs of its growing movement and workforce. To this end, the network has expanded its learning supports through technological tools that enable advisors and school leaders to access critical resources on its deeper learning approach and by holding regional gatherings that increase the frequency of network-facilitated professional learning.

Using technology to support Big Picture Learning staff

Big Picture Learning has pioneered two technological platforms to enhance the frequency and quality of its professional learning across its network: "ImBlaze" and "Learning Big Picture."

ImBlaze. ImBlaze is an online platform that enables educators to better manage and support student internship experiences. In the past, Big Picture Learning advisors and LTI coordinators engaged students in identifying, securing, monitoring, and supporting their internship placements in a way that was labor intensive and challenging. ImBlaze provides educators and students with a streamlined and easily accessible platform that diminishes the administrative burden and facilitates the complex process of supporting every student as they find a unique internship that aligns with their interests.

The platform was piloted in 12 schools during the 2016–17 school year and implemented in over 40 schools (both within and outside the network) during the 2017–18 school year. Currently, more than 80 schools use the platform. ImBlaze serves as a management tool allowing students, mentors, advisors, and internship coordinators to monitor internship searches, placements, attendance, and ongoing communication. The platform gives schools the ability to curate a data set of potential internship sites and, in turn, allows students to search for internships by interest, professional goals, and location. It also supports students in setting up informational interviews and shadow days at potential internship sites. Once an internship is secured, the platform allows students to record their attendance and keep an ongoing journal to share their reflections on workplace-situated learning experiences with their site-based mentors and school-based advisors.

ImBlaze also assists with state compliance, as it provides documentation for out-of-school learning and can house compliance documentation such as mentor background checks. Because the platform is available as a mobile application, ImBlaze "empowers constructive student agency, ownership, and choice, and accelerates place-based and academic learning that is accessible on demand."[38] The implementation of this tool has helped educators hone their project management competencies, giving them concrete tools and strategies to monitor students' work-based learning and its varied components.

Learning Big Picture. In 2017, the network created Learning Big Picture, an online platform that houses instructional courses and archives of materials curated from over 20 years of effective practices that help advisors support student-centered learning. Specifically, the platform serves as an exchange of information between the network, school leaders, and educators by sharing videos, classroom resources, and research from the field.

Learning Big Picture also contains online course modules that can help advisors hone their practical knowledge of the network's approach to learning. In addition to courses that support the use of ImBlaze and the implementation of internship programs, Learning Big Picture launched with an introductory course targeting new advisors. The course consists of modules that focus on the basics of advisory. A network leader described the current stage of this professional learning tool:

> Right now, we've got our introductory course already launched, which is mostly setting the stage. The first module is mindsets and helping advisors understand that it's something very different. The last module in the first course is about being planful.

Learning Big Picture was primarily designed for advisors and staff to access and use the Big Picture Learning tools and resources in between coach-facilitated professional development sessions, working to provide immediate support for educators' emerging challenges and questions.

Regional convenings

Regional convenings of school leaders, advisors, and LTI coordinators have also emerged as learning supports in the Big Picture Learning network. These convenings, often referred to as Critical Friends Groups, Communities of Practice, or Network Improvement Communities by the network leaders and School Design Coaches who facilitate them, gather smaller cohorts of Big Picture Learning staff intermittently throughout the year to engage in learning experiences with those in similar positions and geographic regions. Some of these convenings are held in person, often rotating locations so advisors and school leaders have the opportunity to visit other sites. Others are held via videoconference or over the phone, allowing staff to convene more regularly. Big Picture Learning staff reported that each of the network's regions have convenings in place, but that professional learning in these venues varies in frequency and form based on the needs of those in the region.

Regional convenings emerged in the network in the late 2000s to support the continued growth of professional communities for advisors and leaders. These convenings have become spaces in which educators and leaders from network schools share resources to support students in interest-based and workplace-situated learning, often doing so in response to participants' questions and ongoing challenges. Agendas for in-person regional convenings are often predetermined based on the needs and goals of the group, but network leaders typically characterized in-person and virtual gatherings as free-flowing dialogues in which participants respond to this central question: "What are some struggles and successes you've been having?" In response, attendees candidly share their stories and others respond with ideas for improvement. For in-person gatherings, participant needs can also provide the lens through which attendees provide feedback to host sites. One network leader provided an example:

> You focus on a specific area or dilemma or multiple dilemmas around a topic.… A school leader might say, "I'm really struggling with my students who are learning English. I want you to come in and observe an advisory and focus on this specific thing." … We would take the dilemma and then we would investigate the dilemma and then post potential solutions.

As regional convenings provide Big Picture Learning staff with opportunities to discuss and improve the implementation of the network's approach, they also give leaders and advisors opportunities to discuss the relational and emotional nature of the work. As one network leader noted, working at a school in the Big Picture Learning network requires that advisors "are ready to go all in," suggesting that "it's not just hard work. It's heart work, and that's hard." Because of the challenges associated with working in Big Picture Learning schools, regional convenings have also become spaces in which staff candidly discuss the social-emotional dimensions of their work to get support from their colleagues.

Regional convenings largely provide Big Picture Learning staff with more frequent and collaborative professional learning opportunities that enable them to garner more immediate support for the day-to-day challenges that emerge in implementing the design. These professional learning spaces also enable staff to develop a community of learners that provide support on multiple dimensions of the work.

Refining Network Structures to Support Quality and Diffusion

Big Picture Learning has developed and refined its professional learning structure to address the ongoing needs of its growing workforce in the implementation of its deeper learning approach. In assessing the quality of learning in their schools, leaders at Big Picture Learning also identified ongoing challenges in its network and schools over its 24-year history and have taken steps to remedy these issues to ensure that quality is sustained as it grows its network.

Specifically, it has increased personnel and encouraged schools to adopt structural changes at school sites to support transdisciplinary learning. At the network level, Big Picture Learning has restructured its organization to include more network staff to support the high-quality spread of its approach. The network has also strategically sought to grow its impact on practice by making its ImBlaze platform available for schools and districts interested in implementing a workplace-situated learning approach and by creating communities of learners that support the development of innovative and equity-oriented leaders.

Improving Pedagogical and Curricular Supports

Many Big Picture Learning schools have hired math specialists to support students' quantitative reasoning learning goal—an identified area for growth for the network. Beginning in the mid-2000s and coinciding with federal mandates around accountability, Big Picture Learning began to respond to the mounting national pressure on math achievement as measured by standardized tests. During this era, many network-affiliated schools hired quantitative reasoning specialists to provide coaching and support to advisors so they could enable their students to better examine the mathematic dimensions of their interests. Currently, math specialists are on staff at many Big Picture Learning schools, helping to reinforce and build upon students' foundational skills through conventional or specialized math courses. They also work collaboratively with advisors to infuse math content into student projects.

In addition to hiring specialized staff, many Big Picture Learning schools have created curricular structures to ensure that students have access to specialized content that aligns with their interests. The aforementioned challenge around math instruction and its difficulty in building students' quantitative reasoning has caused some schools to create dedicated math classes that take place outside of advisory. During this math block, students engage in more conventional modes of instruction.

Many network-affiliated schools have also partnered with local community colleges to create dual enrollment opportunities for Big Picture Learning students so they can develop specialized knowledge around their interests and projects. Examples of community college courses include statistics, photography, and business administration.

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Several Big Picture Learning schools also have blocks of time during which students can attend in-house seminars and electives to enhance student-driven and interest-based learning. Advisors and students facilitate weekly seminars based upon student interests and to fill in gaps in the curriculum. For example, Highline Big Picture offers a wide array of seminars, including math support, web design, biology, earth/space, and music production.

Through these common curricular adaptations across the network, Big Picture Learning schools have been better able to ensure that students have access to high-quality instruction and content that allows them to develop transdisciplinary knowledge.

Improving Infrastructure to Support the Network's Approach

In its 24-year history, Big Picture Learning has sought to influence the educational sector both domestically and internationally. With its record of success in the United States, educators and policymakers from countries including Australia, Italy, and the Netherlands have partnered with the network to create or transform new schools and, in some instances, to influence national education policy. For example, Big Picture Education Australia (BPEA) has partnered with a number of universities to develop a pathway for students to use their performance assessments to satisfy university entrance requirements. In turn, BPEA is working in partnership with universities to transform Australian policy with regard to the use of learning artifacts.

In the United States, network leaders also point to their influence at the state level. For example, Big Picture Learning has helped lead the charge on competency-based education and personalized learning plans in Vermont, which led to the adoption of a state law in 2015 that requires all students be provided "a personalized-learning plan as well as opportunities to graduate by illustrating proficiency, rather than simply collecting course credit."[39] The network's Regional Directors also explained that many districts are increasingly emulating Big Picture Learning by applying for credit or seat-time waivers at the state level to secure conditions that would allow them to bring workplace-situated learning programs to their schools and districts.

At the local level, Big Picture Learning has also worked with school districts to inform district practice and philosophy. For example, a Regional Director in the network's Northwest region stated that he had participated in a host district's strategic planning process and that the district's vision now included elements that are characteristic to Big Picture Learning. He explained:

> Highline [Big Picture] is a great example of this. If you look at their strategic plan that was developed shortly after the superintendent took leadership, there are multiple pieces of the strategic plan that sound very Big Picture Learning and that I think were influenced by the Big Picture Learning school there. One of them is that the strategic plan says every high school student should have an internship at some point.... Another one is knowing every student by name.... There are a few places where it touches on student interest, and then there's another piece about assessing in different ways, and there's a reference to competency.

Site leaders and district officials in Highline confirmed that district schools were increasingly engaging in real-world learning and often turning to Big Picture Learning staff to help them launch systems and programs at other high schools. An increased focus on project-based learning has also taken hold in Highline, which one district official attributed to Big Picture Learning's presence, describing it as "seeding" this practice.

In another example, the Regional Director in the network's West region noted that Big Picture Learning leaders were working with eight districts in California to reframe the dialogue around alternative education and to better assess student progress. In partnership with the Stuart Foundation and UCLA, network leaders are developing holistic metrics that account for alternative education students' varied learning experiences, including internship-based learning. The Regional Director described these efforts:

> The idea is that it's going to be a 3-year implementation phase where we would be bringing the school leaders and district leaders together throughout the course of these 3 years to get the community share factor and different viewpoints.... It is a partnership because there is no reliable way to measure the success of students in alternative education students in LA or California.

He explained that the newer metrics sought to answer the following questions: "Are they learning outside? Are they presenting their learning to a group of adults and peers? How many hours are they involved in internships?"

Finally, Big Picture Learning leaders also shared that host districts and community-based organizations were increasingly adopting advisory approaches and restorative practices to support students' social-emotional needs. In this way, Big Picture Learning is further expanding its best practices to schools outside of the network.

Network leaders provided these examples to demonstrate the network's influence on broader practice but acknowledged that its influence was variable and context-specific. As one Regional Director noted, collaboration and influence often depended on leaders' ability to foster and maintain positive relationships with decision-makers. He explained:

> I think our authority around districts and schools is probably completely relationship based.... Having been part of leadership transitions here a few times, I think we're involved in and at the table to the extent that we have a strong relationship with the district, including individuals in it.

When leaders were unable to sustain strong relationships, Big Picture Learning schools often operated as "silos," as one network leader explained.

To make its impact more systematic and widespread, Big Picture Learning has developed structures that enable the dissemination of its pedagogical approach and create broader communities of advisors and leaders who are committed to advancing equity through access to deeper learning.

Organizational restructuring and specialization

To support the growth and spread of its deeper learning approach, Big Picture Learning has restructured its organization, adding network staff and revising roles and responsibilities to ensure that schools are better supported and that partnerships are nurtured and maintained. Network staff

has increased substantially over the past 3 years. Big Picture Learning now has more programmatic staff, all of whom have worked as school leaders or advisors in network-affiliated schools. In growing its personnel, the network has focused on increasing the number of network School Design Coaches and Regional Directors to support the quality and diffusion of its deeper learning approach, professional learning structure, and geographic spread.

Currently, Regional Directors initiate and design new and transformed Big Picture Learning schools within their geographic area. They also oversee school visits and lead school success studies. Prior to establishing this position, Big Picture Learning supported growth in a more opportunistic and emergent fashion. Through definitively demarcating the roles and responsibilities of Regional Directors, Big Picture Learning improved its ability to manage site selection and design implementation—a critical element that supports the continued proliferation of the network. However, Regional Directors will also sometimes help schools with professional development if they have particular areas of expertise that are of benefit to school sites.

With Regional Directors focused primarily on site management, Big Picture Learning has had to increase its number of coaches to support the professional learning needs of its growing network. As outlined in the MOUs, Big Picture Learning's School Design Coaches train school staff and leaders on student-centered learning and design distinguishers. In this way, coaches serve as the primary ongoing support for schools. Coaches' sole focus on professional learning allows the network to ensure that its robust system of professional learning remains supportive and responsive.

To grow its personnel, Big Picture Learning has strategically tapped its successful and effective personnel to enter leadership roles. A network leader described this network practice:

> We're constantly, as an organization, looking for talent within our schools. When starting a new school, we can say, this person is a great match for your school because of the equity lens that they like to look at the work through, or their deep knowledge of project-based learning. We try to match our coaches' expertise with the needs of specific schools.

Highly effective coaches sharing their experiences and successful practices with new and transformed schools helps the network maintain and improve quality as it continues to grow.

Structures for growing impact and partnership

Big Picture Learning seeks to grow its impact beyond its school walls by developing technologies that support deeper learning and making them available to interested practitioners and by fostering communities of innovative-minded and equity-oriented practitioners and leaders.

ImBlaze: Supporting real-world learning beyond network schools

Big Picture Learning has acknowledged that a major challenge in implementing workplace-situated learning is the complexity of managing students' personalized experiences. Some of the challenges they identify are maintaining records, tracking attendance, and managing student-school-mentor connections. Some Big Picture Learning educators have acutely experienced these obstacles, and network leaders note that practitioners in other school settings will likely encounter these challenges if and when they implement this approach to deeper learning.

Thus, while ImBlaze was launched in spring 2017 to support internship management at network-affiliated schools, the technological platform has also been made available for any school or community-based organization that seeks to implement or refine this real-world learning. Currently, Big Picture Learning is partnering with school districts, including the Oakland Unified School District, to use ImBlaze to support the ambitious growth of real-world learning experiences in conventional schools.

Developing innovative-minded practitioners

Big Picture Learning also aims to create a community of practitioners and decision-makers who are committed to the advancement of educational equity and the transformation of learning environments through deeper learning practices. The network is doing this through a number of initiatives, including its Deeper Learning Equity Fellowship and its Puget Sound Consortium for School Innovation in the Pacific Northwest.

In 2015, Big Picture Learning and the Internationals Network for Public Schools partnered to found and launch the Deeper Learning Equity Fellowship. The fellowship, which selects and engages cohorts of 10 to 20 mid-career leaders in a given year, aims to provide fellows with tools to expand deeper learning leadership in public schools through "face-to-face and online dialogue, school visits, conversations with prominent senior education leaders, and independent or partnered Fellow capstone projects."[40] The fellowship also emphasizes the equity dimensions of deeper learning and seeks to "amplify voices and perspectives underrepresented in the Deeper Learning movement."[41] To date, the fellowship has convened three cohorts of leaders, which have included teachers, school leaders, district leaders, professors of education, and education nonprofit leaders, and created cross-sector collaborative learning experiences that build knowledge and support for deeper learning and its ability to advance equity.

In addition to cofounding the Equity Fellowship, Big Picture Learning created the Puget Sound Consortium for School Innovation in the Northwest region. Under the leadership of Regional Director Jeff Petty, the Consortium aims to "develop a scalable, regional school innovation zone that combines the design and transformation of schools with a learning network of teachers and leaders within schools, districts, and partner organizations."[42] To do so, the Consortium hopes to "shift the structures and practices of schools, districts, universities, and community partners to immerse every student in highly personalized, relevant, and engaging learning connected to a compelling postsecondary pathway for which they are well prepared."[43]

To create an innovation zone, the Consortium has a three-pronged approach. First, the Consortium's leaders and advisors work with district and charter school leaders to develop new schools or transform existing ones to facilitate student engagement in real-world, interest-driven learning. In doing so, Consortium leaders use Big Picture Learning's 10 distinguishers as a framework that can inform this process.

Second, the Consortium offers innovative professional development that cultivates staff understanding of key design attributes by connecting staff across schools to engage in collaborative learning and by anchoring the work in site visits. The aim of this learning "is not to grow a large organization of non-school-embedded consultants or external providers" but rather to "develop a regional network of technical assistance"[44] that can grow practitioner knowledge and investment in the network's deeper learning practices through experiential learning experiences.

The final component includes a School Foundry, a "leadership incubator" to develop new leadership pathways that create and sustain deeper learning designs in their schools. Through a yearlong fellowship, the Foundry brings together innovative-minded principals "to encourage new breakthrough school designs and immerse principal candidates in the Consortium's growing regional network of non-traditional schools and school leaders."[45] Through the Foundry, Big Picture Learning leaders describe how they prepare leaders to think beyond compliance as a guiding principle. A network leader in the Northwest explained:

> In connection with the school foundry, we hear a lot of advisors and principals give either explicitly or implicitly the feeling that, "Our situation's different. Our hands are tied." Whether that's saying [for example], "You know we have 47 kids at our school with IEPs" or "Oh, in our district we have grades and you don't," almost always, the person who's saying that has the exact same context at their school as does the Big Picture Learning school near them, where there's total accommodation within those constraints. Sometimes the fidelity [to the design] is as simple as somebody saying, "We have that too, and this is how we deal with it." Or, "We just go for it." Sometimes it's a little more complex and it's like, "This is what we've changed. This is how we're going about it." Then you are hearing all these efforts that are being made to really implement Big Picture Learning in a high-fidelity way. If you are continually being exposed to those ideas, then at some point you feel like you can do it or should hop on board.

These efforts to develop a community of practitioners committed to education equity through deeper learning practices coexist with the global growth of the Big Picture Learning network. The Equity Fellowship and the Consortium are deeply connected to the network's vision for change, network leaders indicated. One Regional Director explained how these more recent initiatives align with the network's original vision:

> It's not just creating schools…. The other part of our vision is transforming schools one school at a time, districts one district at a time, and the world one country at a time. It started off with One Student at a Time, and now the goal is how do we really influence education in general…. We're trying to push people to create spaces that matter—not creating things that are easy for them or the status quo of what they've been doing all along.

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Conclusion

Big Picture Learning is an organization committed to deeper learning as a vehicle for equity and for the transformation of teaching and learning practices in schools. Through its interest-driven and personalized learning approach, Big Picture Learning seeks to advance equity, allowing students to cocreate and engage in relevant learning experiences that extend beyond conventional classroom walls. Notably, the network has done so by engaging with students and families who face social and economic challenges in these learning experiences and, in turn, challenged persistent inequities that often reserve deeper learning opportunities for students from advantaged backgrounds.

Despite the challenges of implementing a pedagogical approach that deviates from conventional teaching and learning practice, Big Picture Learning has found ways to instantiate its practices in school districts, overcoming many of the institutional barriers that typically inhibit deeper learning approaches from taking hold.

To spread its vision for student learning across the country, **Big Picture Learning maintains a vision for equity and deeper learning that guides all aspects of school design, practice, and culture and supports the network in spreading its design.** It has developed a well-defined set of structures and practices that allow its approach to take hold. These interdependent structures, known as distinguishers, clearly demarcate how network schools bring together an array of deeper learning practices, including interest-based learning, performance assessments, and workplace-situated learning, to make learning relevant, personalized, and accessible for all students, regardless of their socioeconomic status and opportunities. At the same time, the network's distinguishers ensure that as students engage in deeper learning they are holistically supported through the development of strong relationships and the use of advisories to foster inclusive learning environments. In summary, Big Picture Learning seeks to immerse students in personalized, validating, and supportive environments that attend to their holistic development as learners and individuals.

This vision for student learning is not just aspirational at Big Picture Learning. Instead, it drives how the network designs its schools. To bring its interest-based, workplace-situated learning approaches to life, Big Picture Learning designs schools in which advisors can build meaningful relationships with students and support their individualized and transdisciplinary learning throughout their secondary school years. The network's school leaders also build master schedules that allow for outside-of-school learning, specialized courses of study, and extended learning blocks so students can explore the multiple dimensions of their interests. Overall, in defining a clear vision for deeper learning and equity, Big Picture Learning has used its distinguishers to guide the creation of its learning environments throughout the country, allowing the network to spread its distinct approach in local contexts.

Big Picture Learning's commitment to its vision holds lessons for district and school leaders seeking to implement deeper learning at their sites. Findings from this case study suggest that districts and schools can develop a well-articulated vision for deeper learning—a vision that does not remain abstract but rather uncompromisingly guides the design and implementation of deeper learning schools and classrooms.

Big Picture Learning collaborates with stakeholders to implement deeper learning, ensuring that its model is feasible, sustainable, and engaged with the community. It establishes schools and instantiates its vision for teaching and learning in its schools through collaborative processes that ensure the design is feasible and responsive to the community. At the same time, the network maintains a set of prerequisites, or conditions and policies that must be secured in MOUs in order for its approach to be implemented. These include the ability of network-affiliated schools to craft master schedules that allow for advisory and prolonged learning blocks and flexibility in how students meet seat-time, credit, and graduation requirements.

The process of establishing a Big Picture Learning school is not unidirectional, however. Instead, the network engages in ongoing, collaborative discussions with district leaders and local educators about the feasibility and fit of the design to ensure that it is a welcomed and responsive addition to the district. Moreover, districts have the option of adopting either the comprehensive Big Picture Learning approach or a range of its distinguishers, allowing the network's deeper learning approach to be spread in ways that are responsive to the local policy context.

Big Picture Learning's collaboration with local stakeholders is not limited to the process of establishing a school. Rather, Big Picture Learning school leaders engage in ongoing efforts to engage with the community, local businesses, and district officials to build investment in their approach and to implement their deeper learning approach. Building relationships with local stakeholders allows school leaders to educate communities about their school's pedagogical approach and to demonstrate its educational and equity value. In turn, these outreach efforts have built support for network-affiliated schools in local communities and districts and helped sustain their design.

At the same time, local outreach has assisted Big Picture Learning schools in implementing their workplace-situated, individualized, and interest-based learning approach. Through ongoing outreach to local businesses and community-based organizations, site leaders curate a steady stream of internship opportunities that can enhance student learning while contributing to local industries and community initiatives.

Big Picture Learning's ongoing collaboration with local communities suggests that deeper learning approaches are better supported when varied local stakeholders are involved in establishing and sustaining deeper learning schools. School and district leaders who are implementing deeper learning approaches should understand the policies and structures they need to realize their visions. They should also consider how to partner intentionally and authentically with the local communities. These collaborations can build knowledge and investment in deeper learning, provide concrete opportunities for student learning, and enhance the responsiveness of the network's approaches.

To realize its vision in schools, **Big Picture Learning has developed and implemented multifaceted and experiential professional learning to build the capacity of leaders and educators to implement deeper learning**. Because many educators have not experienced deeper learning in their own schooling or in their teacher preparation programs, they may be underprepared to teach in Big Picture Learning schools. Therefore, the network has worked to build practitioners' skill sets and transform their mindsets around teaching and learning to enable student-centered and interest-driven learning to spread to new places.

To that end, the network facilitates professional development that introduces its educators to the foundational elements of its design and builds a community of practitioners committed to deeper learning and equity. It does so through formal and regional conferences, virtual access to instructional resources, and ongoing access to School Design Coaches who provide advisors with opportunities to experience the network's deeper learning practices and to address questions that have emerged in its implementation. In addition, Big Picture Learning leans on the expertise of its experienced educators to inform professional learning, encouraging intra-network visitations so educators and leaders can learn from their counterparts in established sites.

Through these network-driven professional learning structures, Big Picture Learning sites are encouraged to adopt similar development practices—those that allow educators to experience deeper learning similar to what students will experience in their schools, lean on the expertise of experienced staff, and learn through collaborative processes. As network and site leaders facilitate these varied forums for professional learning, they make adult learning experiential, conducting professional development in ways that mirror what students will experience in Big Picture Learning classrooms.

Big Picture Learning's multifaceted approach to supporting advisors and leaders offers lessons to district and school leaders who want to implement deeper learning in their schools. Findings from this case study suggest that they consider investing in professional development with specific characteristics: a focus on deeper learning, opportunities to engage with practitioners who are experienced and skilled in deeper learning practices, and opportunities to visit schools that are implementing deeper learning pedagogies.

As its schools have spread across the United States, Big Picture Learning is a learning organization. **It has evolved its practices and structures to improve the quality of its approach and the spread of deeper learning**. The network has recognized its areas for growth and has taken steps to address its shortcomings so that student learning is enhanced.

It has expanded and restructured its organization so network staff can better support educators at the local level and sustain partnerships in its various regions. It has adjusted its curricular approach, finding creative ways to enhance students' specialized and transdisciplinary knowledge. Furthermore, Big Picture Learning has been proactive in seeking ways to further its impact beyond its schools. Through its efforts to make tools and resources accessible to districts and schools and its participation and leadership in deeper learning communities of practice, the network seeks to grow and collaboratively engage with practitioners who are committed to deeper learning and equity.

As schools and districts seek to implement or refine deeper learning approaches, they can consider how to establish structures that allow leaders and practitioners to routinely reflect on, evaluate, and iterate their practice. By maintaining a learning orientation, schools and districts can evolve their practice to support students and the implementation of deeper learning.

Appendix A: Methodology

This single-case study was conducted as a part of a multisite investigation of networks that have partnered with conventional public-school districts to disseminate deeper learning pedagogies to serve the needs of underserved students. The purpose of this research was to identify the systems and structures that have enabled these educational organizations to replicate their sophisticated and equity-oriented learning approach in a high-quality manner. To this end, this investigation sought to answer the following questions:

1. What are the pedagogical and school design features that develop students' deeper learning competencies in Big Picture Learning schools?
2. What changes to school structures, policies, and operations have Big Picture Learning's pedagogical practices required or triggered? How are changes in school structures, policies, and operations enabled and supported?
3. What professional learning structures and practices does Big Picture Learning use to support high-quality teaching and learning across the network?
4. How do networks partner with districts, external organizations, and local communities to implement their models in ways that meet students' holistic and learning needs?
5. What challenges have networks faced in spreading their approach to different sites? How have they overcome these obstacles to ensure that students have equitable access to deeper learning experiences?

Because the study sought to identify best practices related to high-quality implementation and dissemination of deeper learning, researchers used purposeful sampling to identify networks that could be "information-rich cases."[46] Rather than designing a study that could provide generalizable findings or demonstrate variation between and among schools, the research team sought to learn from networks that have demonstrated success in scaling up deeper learning practices in partnership with school districts to support their students' academic, social, and emotional growth, particularly among historically underserved students who have faced adverse circumstances. Identifying the structures that have facilitated the success of these exemplar cases provides insights into the promising systems that can enable a sophisticated deeper learning approach to take hold, thereby highlighting lessons that can inform policy and practice.

Big Picture Learning is an example of an information-rich case and was thus selected as one of three networks for this investigation. The network has an exemplary track record for partnering with school districts to expand deeper learning, as evidenced by its large geographic presence and span. Furthermore, evidence suggests that students attending Big Picture Learning schools—most of whom are farthest from social and economic opportunity—are excelling academically and in noncognitive domains. (See pages 18–19 for discussion of Big Picture Learning's outcome data.) Given its vast presence and promising results, investigating Big Picture Learning allowed researchers to understand how the network has successfully instantiated its deeper learning and equity-oriented practices in unique and disparate contexts.

To answer the study's research questions, investigators conducted an in-depth case study, allowing them to generate a holistic understanding of network practices and their interplay with the local environment.[47] This case study methodology also enabled researchers to analyze a variety of data sources, which allowed them to assess the networks as they were, rather than exert control over the research sites.[48] Because case studies are sensitive to context and allow researchers to capture multiple processes and data sources, this research design was an appropriate and ideal method to elucidate the dynamic and emergent ways in which Big Picture Learning disseminates its practices.

Data Collection

Data was collected from July 2017 to May 2018. Primary data sources for this study include interviews, observations, and documents.

Interviews

The research team conducted 36 interviews with 26 stakeholders affiliated with Big Picture Learning, including network founders, network senior leaders, principals, advisors, and district officials in cities with Big Picture Learning schools. (See Table 3 for a complete list of the study's participants.) Interviews were conducted in multiple rounds. For the initial wave of interviews, the team used purposive sampling to identify network founders and senior leaders who could speak to the network's history, its evolving practices and approaches to growth, and the challenges and successes it has faced in spreading its deeper learning approach in unique locales. After this first set of interviews, researchers used snowball sampling[49] to identify additional study participants, asking network leaders to recommend individuals at the network or school level who could fill in knowledge gaps and further address the study's research questions. This strategy used the knowledge and experience of Big Picture Learning staff to identify respondents who could best speak to systems and structures that the network develops and implements to disseminate its teaching and learning practices across the country.

Interviews were semistructured and lasted 45–90 minutes. Interview prompts asked participants to describe the network's key pedagogical and equity practices, its replication and onboarding processes, its approach to collaborating with districts and communities, and its professional learning structures. Interviewees were also asked to discuss challenges that have emerged in the development and implementation of network systems and how the network has addressed and overcome emerging concerns. At times, the researchers tailored the protocol based on the role of the interviewee and their tenure with the network. This differentiation ensured that particular questions could be explored in more depth with the respondents who were most likely to hold relevant knowledge on the topic. Each interview was audio recorded for transcription purposes if the respondent agreed to be recorded.

Observations

Observations comprise the second primary data source. The research team attended two observations of events. The first observation collected data from Big Picture Learning's annual Big Bang conference, which convenes advisors, principals, network leaders, and affiliates each July. The second observation gathered data from the Leadership Conference, which is held each December to meet the specific needs of site leaders, district affiliates, or interested parties. Attendance at

these events provided insight into the network's approach to and dissemination of professional development. It also allowed researchers to triangulate data retrieved from interviews and documents on the network's professional learning supports.

The team also conducted two site visits to Big Picture Learning schools. They visited an established network school and one that had recently adopted the approach to observe practices and to interview school leaders and advisors in more convenient locations in their school settings. Visiting network sites at different stages of implementation also allowed researchers to garner a range of perspectives and insights from individuals who varied in their affiliation with the organization and/or familiarity with its deeper learning approach. These visits were not intended to provide generalizable evidence of the network's approach to implementation and scale, but rather to see different manifestations of the network's vision and the degree to which shared principles and systems guided the work at the local level.

Documents

The research team collected and reviewed 140 organizational documents, including:

- **Administrative documents**: Big Picture Learning policy statements, memorandums of understanding, organization charts, webpages, presentation slides, strategic plans, and evaluation and performance reports
- **Curriculum and assessments**: training materials, curriculum overviews, classroom visuals, and rubrics for advisor feedback and performance assessment

Researchers reviewed these documents to understand the network's history, its mission, its evidence of success, and its programmatic approach for advisor and student learning. Curriculum and assessment materials also helped researchers triangulate data with regard to the continued implementation of the network's deeper learning approach and its system of professional learning supports.

Analysis

To analyze the data, the researchers engaged in a multistep process. First, they created a preliminary code list based on the ideas present in the semistructured interview protocol. They then refined the codebook after site visits to include themes, structures, and practices that emerged from the data around the network's deeper learning and diffusion approach. In this process, researchers clarified, added, or deleted codes from the initial list to improve code definitions, minimize redundancy, and capture district dynamics.

Once the codes were refined, researchers applied them to interview transcripts, field notes, and documents using Dedoose qualitative analysis software, a web-based application for qualitative analysis. To increase inter-rater reliability, researchers met weekly or biweekly to discuss and compare their code applications in order to refine their analyses and their findings' consistency. Once coding was completed, researchers triangulated findings across multiple data sources, seeking confirmatory and disconfirmatory evidence, and developed memos describing the well-substantiated points that emerged from the evidence.

Table A1
List of Study Interviewees

Network Founders (n = 2)	• Dennis Littky • Elliot Washor
Network Leaders (n = 9)	• Loren Demeroutis, School Design Coach • Andrew Frishman, Co-Executive Director • Jennifer Ghidiu, School Design Coach • Javier Guzman, Regional Director • Dana Luria, Director of Special Initiatives • Eunice Mitchell, Regional Director • Carlos Moreno, Co-Executive Director • Jeff Petty, Regional Director • Wilson Platt, Collaborative Coordinator and School Design Coach
Principals and Vice Principals (n = 4)	• Lisa Escobar, Principal at Highline Big Picture • Stan Harrison, Dean of Students at Highline Big Picture • Darrell Jackson, Vice Principal at Union High School • Carleen Schnitker, Principal at Union High School
Advisors and Advisor Leaders (n = 7)	• All-Staff Focus Group, Union High School • Kat Armstrong, LTI Coordinator at Union High School • Derek Johnson, Advisor at Union High School • Melisa LaPrath, Instructional Coach at Union High School • Gwen Lennox, LTI Coordinator at Highline Big Picture • Chris Owens, Advisor at Union High School • Steve Uydess, Advisor at Highline Big Picture
District Officials (n = 4)	• Dr. Susan Enfield, Superintendent of Highline Public Schools • Steve Grubb, Chief Talent Officer at Highline Public Schools • Scott Parker, Executive Director of Secondary Education in the Nampa School District • Doug Peterson, Former Superintendent of Nampa School District

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