



Teacher Preparation for Whole-Child Design

State leaders have a role in ensuring that educator preparation both models and reflects the science of learning and development.

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Many educators and policymakers have long recognized the need to transform schools and classrooms to better support students' academic, social, and emotional needs. The increased stress, mental health challenges, disconnection and disengagement, and inequities observed during the pandemic have reaffirmed the need to create safe, welcoming learning environments for students and educators alike. A whole-child approach, which prioritizes the full scope of a child's developmental needs—academic, social, emotional, cognitive, physical, and psychological—is an

important step toward this end. This approach can improve student and school outcomes. When it becomes part and parcel of educator preparation, it can also overcome major hurdles such as the teacher shortages nearly every state is facing.

Advances in neuroscience and the science of learning and development back this shift in thinking about what learning environments and experiences should look like.¹ These advances point to a new understanding of how schools and classrooms should be designed to maximize every child's potential (figure 1),

Figure 1. Guiding Principles for Equitable Whole-Child Design



Source: Learning Policy Institute and Turnaround for Children, *Design Principles for Schools: Putting the Science of Learning and Development into Action* (Learning Policy Institute, 2021).

including structures and practices that promote the following:

- **positive developmental relationships**, which help children develop positive attachments to caring adults and their peers;
- **environments filled with safety and belonging**, which are physically, emotionally, and identity safe and where all children feel valued and have consistent norms and routines;
- **rich learning experiences that support deep knowledge development** through authentic activities that allow learners to build on their prior knowledge and cultural contexts and enable them to work collaboratively with peers to develop higher-order thinking skills and transferable knowledge;
- **development of social, emotional, and cognitive skills, habits, and mind-sets** that

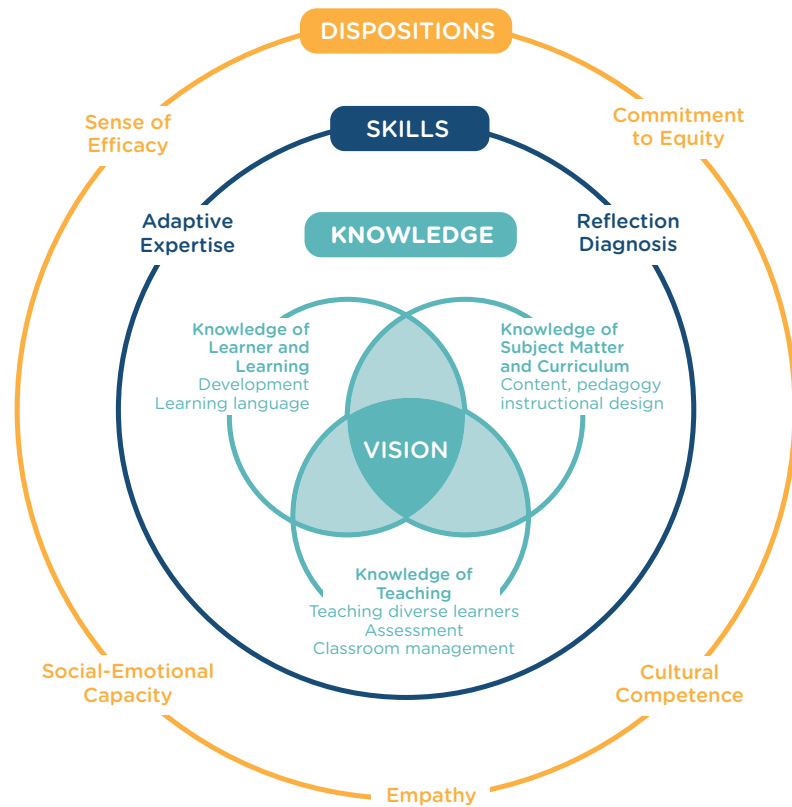
foster social, emotional, and cognitive competencies, which support children’s development of self- and social awareness, empathy, resilience, and perseverance; and

- **integrated support systems** that provide easily accessible academic, health, mental health, and social service supports that remove obstacles to learning and promote healthy development.

What Teachers Should Get from Preparation Programs

To support the shifts needed to foster whole-child school design, teacher preparation programs need to develop teacher candidates with the knowledge, skills, and dispositions that support and engage children and their families in culturally competent and equitable ways (figure 2).

Figure 2. Knowledge, Skills, and Dispositions for Teaching



Source: Linda Darling-Hammond et al., “Educator Learning to Enact the Science of Learning and Development” (Learning Policy Institute, 2022).

Knowledge. Preservice teachers need to develop three general areas to be successful:

- knowledge of learners and how they learn and develop within social contexts;
- subject-matter and curriculum knowledge, to be taught in light of the social purposes of education; and
- knowledge of teaching, which includes understanding diverse learning styles, classroom management skills, and assessment for continuous improvement.²

Sociocultural and motivational factors strongly influence students' ability to learn, so teachers also need deep understanding of learners' prior knowledge, experiences, motivations, interests, and language and cognitive skills, as well as a chance to reflect on their own experiences and cultural influences.³

Skills. The science of learning and development also underscores teacher candidates' need for opportunities to develop important skills:

- **adaptive expertise** so they can develop appropriate instruction for diverse learners, which encompasses making plans based on students' needs, analyzing student learning, and developing and revising curricula;
- **metacognitive ability** to reflect on their practice and on student learning and ask what they could be doing better;
- **inquiry** about their students' different ways of learning, prior experiences and knowledge, and cultural and linguistic capital;
- **culturally sensitive listening and questioning** so they will learn about students and their families and create environments where students feel they can take on academic challenges;
- **observation and analysis** of what is going on in the classroom and how best to respond;
- **curriculum design and instruction**, including the ability to scaffold lessons (i.e., breaking up new concepts to help students grasp new materials) to respond and adapt to a variety of student needs and ensure personalized support; and
- **reflection and diagnostic skills** to assess where students are in their learning and how to support their growth and development.

Dispositions. Teachers also need certain dispositions and attitudes about themselves and their students that preparation programs can help them develop:

- **empathy and building trusting relationships** so that they are able to view children's behavior through the lens of child development and with an understanding of the effects of trauma;
- **social-emotional competencies**, both to support the development of these skills in students as well as tend to their own mental health and well-being;
- **cultural competence and affirming beliefs** in all students' abilities to succeed; and
- **a sense of efficacy**, a belief in their ability to apply their knowledge and skills in the classroom.

Redesigning Educator Preparation

Educator preparation programs should give new teachers opportunities to build the knowledge, skills, and dispositions described above. To center on whole-child learning and development, those who redesign these programs should apply these strategies:

Pedagogical alignment around a coherent whole-child vision. Teacher candidates need to learn in the ways they are expected to practice, and thus they should experience the same kinds of teaching strategies they will use with their future students. To ensure that prospective teachers have these experiences, educator preparation programs must align coursework, knowledge development, and clinical practice to instill key capacities in new teachers that they are being asked to develop in their students: the ability to think critically and solve problems; apply knowledge to new situations; and engage and communicate effectively with others. Therefore, "learning *about* pedagogy derived from the science of learning and development also means learning *with* and *through* such pedagogy."⁴

Well-designed clinical experiences. Similarly, educator preparation programs need to engage teacher candidates in clinical work designed to ensure they can put into practice the pedagogy they are learning in their coursework. Unlike alternative certification programs, which provide

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little or no opportunity for supported practice, high-quality programs provide synchronous opportunities for new teachers to apply what they are learning in carefully selected and designed settings, such as long-term student teaching or residency placements. These settings allow candidates to observe expert teachers; relate coursework to work in a classroom; and reflect on the influence of specific practices on student learning. Many U.S. educator preparation programs have established partnerships with schools and districts to create sites for clinical learning in which best practices can be developed, observed, and studied in an authentic learning environment.

A developmental approach to the development of educators. In designing preparation programs, care should be taken to use a developmental approach to consciously support educators as they learn and grow as teachers. Just as students need a scaffolded approach to learning, teacher candidates need thoughtful guidance and experience to move from a focus on self to a focus on the student; from questioning unexamined assumptions about teaching learned from their own experiences to understanding of teaching through professional knowledge and studying student experiences; from attention to their own teaching practice to their students' processes of learning. Supporting teacher growth in this way can advance candidates' abilities from simply managing a classroom to promoting learning. And much like students need opportunities to apply new knowledge in practice, receive feedback, reflect, and practice again to gain proficiency, so too do teachers need chances to connect pedagogy to practice in meaningful ways that allow them to build adaptive expertise and fully develop best classroom practice.

Implications for the Workforce

Strong certification and preparation systems rely on essential elements that help all teachers acquire the knowledge, skills, and dispositions needed to support students' social, emotional, and academic development. On the one hand, state systems establish standards that define high-quality practice, teacher preparation accreditation, and program approval processes that support continuous improvement. They

ensure candidates receive standards-based learning experiences and performance-based assessments to demonstrate that they meet the standards. On the other hand, strong certification and preparation systems also support broad access to candidates, through incentives such as service scholarships and loan forgiveness programs. They draw candidates into their programs and offer mentoring and coaching to support novice teachers' continued growth and long-term retention. Taken together, these two areas of focus—guiding practice and ensuring access—function as “two hands clapping,” working together to ensure that all the essential elements are in place (figure 3).

Recommendations for State Policymakers

The following recommendations aim at helping state education agencies and boards of education take steps to build a strong, diverse, stable teacher workforce that can support whole-child school design.

- **Support research-aligned, performance-based systems of teacher licensure and preparation program approval.** Strong systems of licensure and teacher preparation work in tandem to broaden students' access to high-quality teaching practice. To build and reinforce these systems, states can do the following:
- **Revise teacher licensure and accreditation or program approval standards to reflect current knowledge about student learning and development.** In 34 states, state boards of education approve teaching licensure standards, which regulate entry into the profession; define the knowledge, skills, and dispositions needed by teachers; and thus influence the practices and curricula of teacher preparation programs. Revising licensure standards to incorporate the science of learning and development communicates to the teacher preparation field that these classroom-ready knowledge and skills are a necessary part of teacher preparation programs and preservice experiences. For example, California has transformed its educator certification and preparation program accreditation over the past decade, revising its teacher and leader preparation

Figure 3. Ensuring Equitable Access to a Strong, Stable, Diverse Educator Workforce



Source: Steven L. Wojcikiewicz, “Preparing Wisconsin Teachers: Research and Recommendations for Licensure and Program Approval” (Learning Policy Institute, 2022), <https://doi.org/10.54300/380.707>.

standards to align more closely with whole-child development.⁵

- **Design licensure assessments to assess what candidates can do in practice and preparation program approval systems that look at what programs provide and what candidates learn.** In addition to revising its teacher and leader preparation standards, California also requires all candidates to pass a teacher performance assessment as a condition of licensure and operates a more performance-based system of program approval and accreditation.⁶ This system includes, for example, regular surveys of teacher preparation program completers, mentors, and employers to more fully understand how well programs are preparing teacher candidates.
- **Support broader access and use of teacher supply and demand data to inform policies at the state level and recruitment efforts at**

the local level. Such data should include clear, detailed teacher workforce demographics, the pathways through which individuals enter the classroom, and the movement of teachers within and outside a district. Illinois and Michigan publish annual supply and demand reports on the teacher workforce. Michigan’s report is notable for its detailed reporting across the career continuum, including preparation, early-career teachers, overall retention, teacher experience, teacher longevity in districts, and National Board Certification.

- **Promote recruitment and retention strategies that increase teacher supply, diversity, and quality.** As teacher shortages have become more widespread, many states have learned that hiring individuals with minimal to no preparation for teaching undermines whole-child school design and the ability of schools to adequately meet the needs of

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their students. Underprepared teachers often struggle in the classroom because they lack strategies to create safe, productive classrooms and leave at high rates, creating significant churn that further destabilizes school climate and student achievement.⁷

States can provide comprehensive supports for a stable, well-prepared teacher workforce in these ways:

■ **Support institutions of higher education and districts in designing clinically focused and high-retention preservice preparation for teachers.**

Supervised clinical experiences in schools should model the creation of positive, developmentally supportive learning environments and experiences for all students. To support design and implementation of these types of preparation programs, policymakers can expand high-retention pathways into the profession, including research-aligned teacher residencies and grow-your-own programs.

For example, New Mexico recently expanded its teacher residency grant program. Funded in 2020 at \$2 million and expanded in 2022 with an additional \$15.5 million appropriation, the program provides a stipend of no less than \$20,000 per year for teacher residents who commit to three years of service in the sponsoring district after they complete their program. Programs awarded funding must be designed to diversify the state's teacher workforce and fill high-need teaching positions.⁸

States can also support funding and incentives to sustain reciprocal university and district preparation partnerships, which can develop intensive clinical training for candidates.

■ **Adopt or expand forgivable loans and service scholarships that broaden access to high-quality preparation.**

When of sufficient size to address the high costs of preparation, service scholarships and loan forgiveness programs can open a professional pipeline for a more diverse, representative generation of educators and help solve persistent teacher shortages in high-need fields and schools. West Virginia recently expanded the renamed Underwood-Smith Teacher Scholars program in 2019 to provide up to \$10,000 a year for teacher preparation in exchange for five years of teaching service in a critical shortage subject area.

■ **Ensure access to high-quality mentoring and induction for all novice teachers.**

Research-aligned programs for new teachers include mentoring, coaching, and feedback from experienced teachers in the same subject area or grade level; opportunities to observe expert teachers; orientation sessions, retreats, and seminars; and regularly scheduled collaboration time with other teachers. Educators who were involved in effective induction programs are more than twice as likely to remain in the profession compared with educators who were not.⁹ Induction programs have also been linked to improved instructional effectiveness and positive impacts on student achievement in the years following the program.¹⁰ Delaware, for example, requires all new teachers to participate in a four-year induction and mentoring program to advance their initial license. ■

¹Linda Darling-Hammond and Pamela Cantor, *Design Principles for Schools: Putting the Science of Learning and Development into Action* (Learning Policy Institute and Turnaround for Children, 2021).

²Linda Darling-Hammond and John Bransford, eds., *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do* (John Wiley & Sons, 2005).

³National Academies of Sciences, Engineering, and Medicine, *How People Learn II: Learners, Contexts, and Cultures* (Washington, DC: National Academies Press, 2018).

⁴Linda Darling-Hammond et al., "Educator Learning to Enact the Science of Learning and Development" (Learning Policy Institute, January 2022).

⁵California Commission on Teacher Credentialing, "California Teaching Performance Expectations" (Sacramento, CA: Author, 2016), <https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/adopted-tpes-2016.pdf>.

⁶California Commission on Teaching Credentialing, "Teaching Performance Assessment," web page, <https://www.ctc.ca.gov/educator-prep/tpa>.

⁷Desiree Carver-Thomas and Linda Darling-Hammond, "Teacher Turnover," in Daniel Losen, ed., *Closing the School Discipline Gap: Equitable Remedies for Excessive Exclusion* (New York: Teachers College Press, 2014).

⁸Partnership for the Future of Learning, *Teaching Profession Playbook: Building a Strong and Diverse Teaching Profession* (Washington, DC: Author, 2021).

⁹Richard Ingersoll and Thomas M. Smith, "Do Teacher Induction and Mentoring Matter?" (University of Pennsylvania Scholarly Commons, 2004); Anne Podolsky et al., "Solving the Teacher Shortage: How to Attract and Retain Excellent Educators" (Learning Policy Institute, September 2016).

¹⁰Richard Ingersoll and Michael Strong, "The Impact of Induction and Mentoring Programs for Beginning Teachers: A Critical Review of the Research," *Review of Educational Research* 81, no. 2 (2011): 201–33.