











The Urgency of Now

Impact of Pandemic on Learning

- Trauma and isolation for many children
- Lost instructional time
- Decreased engagement for many
- Greater opportunity and achievement gaps in terms of both life circumstances and educational access

The Anatomy of Inequality

Inadequate understanding of learning, development, and pedagogy leads to:

- Poorly organized instruction often focused on low-level skills
- Inability to teach heterogeneous classes
- Failure to understand students' social, emotional, and academic needs



Dysfunctional schools

Unequal access to curriculum

Inequitable distribution of well-qualified educators

Unequal school resources

Poverty and segregation

Implicit bias adds:

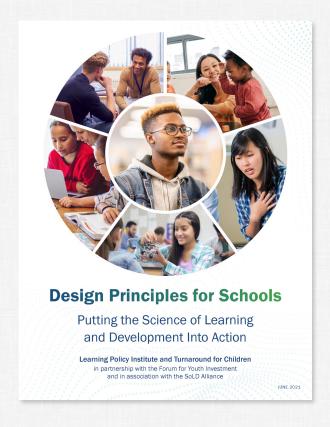
- Assumptions that students are incapable and poorly behaved
- Assumptions that families don't care and will not support their children
- Activation of stereotype threat, undermining confidence, growth mindset, & performance

Why Reinvent?

Current schools, designed in the early 1900s, were not designed to support:

- Relationships
- ▶ Higher-order thinking skills
- Flexible supports
- Equitable achievement

How can we use this time to support systemic change?



The Science of Learning and Development (SoLD)

The Science of Learning and Development



Malleability, Plasticity, and Individuality: How Children Learn and Develop in Context

Pamela Cantor, M.D., David Osher, Juliette Berg, Lily Steyer & Todd Rose

Drivers of Human Development: How Relationships and Context Shape Learning and Development

David Osher, Pamela Cantor, M.D., Juliette Berg, Lily Steyer & Todd Rose

Implications for Educational Practice of the Science of Learning and Development

Linda Darling-Hammond, Lisa Flook, Channa Cook-Harvey, Brigid Barron and David Osher

Principles from the Science of Learning & Development

- The brain and the development of intelligences and capacities are malleable across the entire lifespan.
- Human capacities grow across the developmental spectrum (physical, cognitive, affective) in interactive ways. What happens in one domain influences what happens in others.
- The brain develops as a function of experiences that activate neural pathways which permit new kinds of thinking and performance. The kinds of experience matter greatly.
- Emotions have physical consequences that can trigger or block learning.



The Development of Neural Networks

Is enhanced by:

- Social interaction
- Rich environments
- Physical activity
- Emotional well-being
- Cultural well-being

Is impaired by:

- Constant stress
- Anxiety
- Loneliness
- Sleep disruption
- Dietary deficiencies
- Toxins
- Identity threats

The Centrality of Relationships

Development is catalyzed & shaped by human relationships

Key Elements of Adult-Child Relationships:

- Secure attachment
- Positive regard
- Buffering stress
- Supporting sense-making



Reimagined Pedagogy



Teaching for Learning Ability

The abilities to:

- Transfer and apply knowledge
- Analyze, evaluate, weigh and balance
- Communicate and collaborate

- ▶ Take initiative
- > Find and use resources
- ▶ Plan and implement
- Adjust and persevere
- Learn to learn

What Kinds of Schools are Needed?



Design Principles for Schools

Putting the Science of Learning and Development Into Action

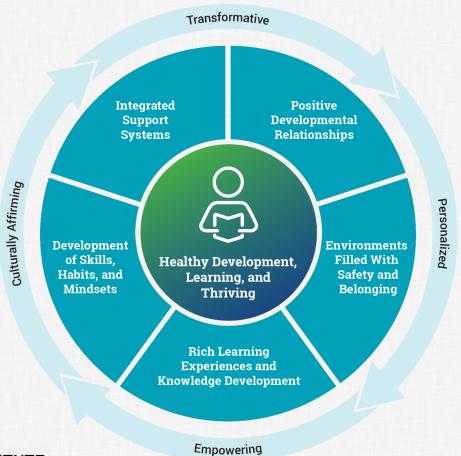
Learning Policy Institute and Turnaround for Children

in partnership with the Forum for Youth Investment and in association with the SoLD Alliance

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Guiding Principles for Equitable Whole-Child Design



Building Positive Relationships

- With students
 - O Small family groups (e.g., advisories)
 - O Community circles
 - O Looping
- Among staff
 - O Collaboration time
- With families
 - Family conferences
 - O Home visits





Rich Learning Experiences

- Inquiry-based learning
 - Project-based learning
 - O Hands-on learning
- Scaffolding for success
- Building on student knowledge and culture
- > Feedback and revision
 - Formative assessments



Developing Skills, Habits, and Mindsets

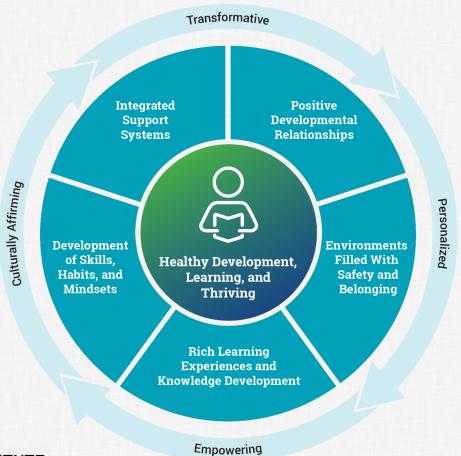
Explicitly teaching and integrating opportunities for building:

- Self awareness and empathy
- - Collaboration
 - Conflict resolution
- Sense of agency and purpose
- Growth mindset



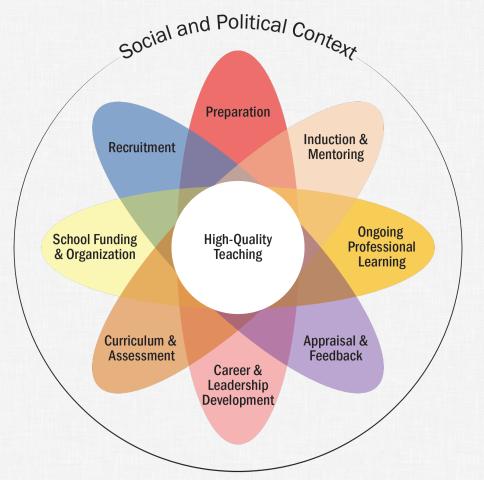


Guiding Principles for Equitable Whole-Child Design



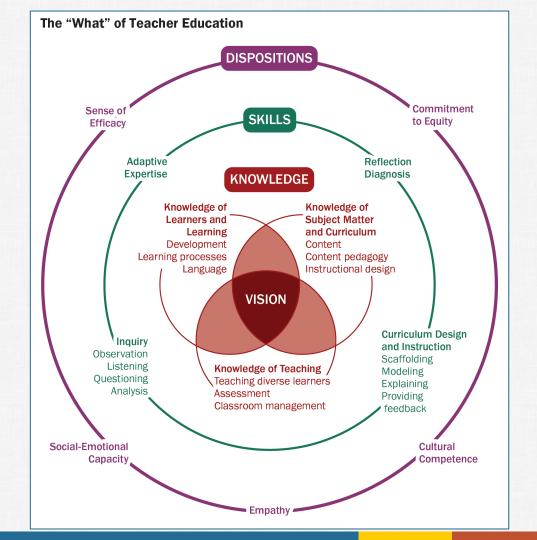
What does this mean for practitioners?

Policies in a teaching and learning system

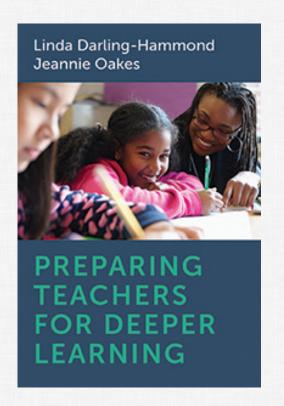


The "What" of Teacher Education:

Knowledge Skills Dispositions



How Can Practitioners Learn These Skills?





Educator Learning to Enact the Science of Learning and Development

Linda Darling-Hammond, Lisa Flook, Abby Schachner, and Steven Wojcikiewicz in collaboration with Pamela Cantor and David Osher



IANIIARY 2022

How Practitioner Learning Happens



Create hands-on experiences



Model, mentor and provide feedback



Create
Communities of
Practice

Everything students need for their learning, teachers need

Effective Capacity-Building Programs

Coherent learning across courses & clinical experiences

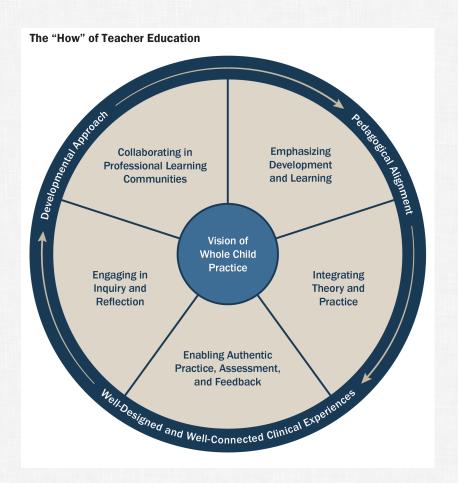
Immersion in whole child clinical settings

Application of theory to practice

Modeling & clinical study of whole child settings

Demonstrations of practice & performance assessments

Ongoing feedback, consultation, and collaboration



The "How" of Teacher Education

- Emphasis on Development and Learning as the Foundation of Teaching Decisions and Methods
- Integration of Theory and Practice
- Authentic Practice, Assessment, & Feedback
- Ongoing Inquiry & Reflection
- Collaboration in Professional Learning Communities

Design Principles for Educator Prep

Design Principles to Inform Educator Preparation for SoLD

- Curriculum Rooted in a Deep Understanding of Learners and Learning
- 2. Explicit Development of Skills and Dispositions for Equitable Educators
- 3. Rich, Experiential Learning Experiences
- 4. Pedagogical Alignment and Modeling
- 5. Supportive Developmental Relationships in Communities of Practice



Ensuring Equitable Access to a Strong, Stable, and Diverse Teacher Workforce

Broad Access to High-Quality Preparation

- Support for high-retention preparation pathways (e.g., residencies, Grow Your Own)
- Scholarships and forgivable loans that subsidize preparation
- School-university partnerships that support professional development schools
- Funding and incentives for intensive (or year-long), high-quality clinical training
- Mentoring for candidates and novice teachers tied to career ladder roles for accomplished teachers

State Systems to Guide **High-Quality Practice**

- Standards that reflect what we know about how people learn
 - Performance assessments that assess what educators can do in practice
 - Accreditation that looks at what programs provide and what candidates learn
- Data reflecting the recruitment, distribution, and retention of qualified educators
- Induction systems that enable accomplished educators to mentor novices

How Do We Get There?

Professional educator standards Licensure and accreditation Residencies & Clinical Partnership Recruitment and Retention



"This is the time to see if something can be different. To reset the system, we have had to take loss, but we can recoup the loss if we actually get kids excited about education and create a more positive space for them to learn."

-Michelle Ampong

Atlanta parent and school volunteer



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Curriculum Rooted in a Deep Understanding of Learners and Learning

This curriculum fosters knowledge of:

- a. Child, adolescent, and adult development across domains (cognitive, social, emotional, moral, ethical, physical, psychological)
- b. The learning process as it unfolds in sociocultural context
- c. Brain development, neurodiversity, effects of trauma, and how these should inform designs for learning and teaching
- d. Language and literacy development
- e. Content pedagogy and its implications for structuring instruction, representing ideas, and designing disciplinary inquiries
- f. Authentic curriculum and assessment that builds on students' knowledge and experiences
- g. Culturally and linguistically responsive pedagogy using asset-based instruction

Explicit Development of the Skills and Dispositions of an Equitable Educator – Part 1

Explicit development (including "equity-minded dispositions and mindsets") so that candidates develop the:

- a. Capacity to 'see' students fully and come to know them well through an asset-oriented lens.
- b. Diagnostic skills for evaluating, understanding, and addressing students' strengths and needs
- c. Ability to use research and critical equity lenses in engaging all aspects of teaching (planning, design of instruction, analyzing student learning, etc.)
- d. Authentic curiosity about oneself and others, and a positive disposition about learning and equity that supports compassion, care, and elimination of biases
- e. Skills in conceptualizing and translating knowledge of children and curriculum into rich tasks with appropriate scaffolding and supports

Explicit Development of the Skills and Dispositions of an Equitable Educator – Part 2

Explicit development (including "equity-minded dispositions and mindsets") so that candidates develop the:

- a. Dispositions to support all students well and equitably, including empathy, social and emotional skills, cultural competence, and ability to support children's healthy identity development as well as a professional teaching identity rooted in these capacities
- b. Ability to negotiate school policies toward equitable ends.
- c. Communication skills for representing ideas in teaching and for engaging in productive discussions with colleagues and parents.
- d. Dispositions and skills for engaging in trauma-informed, healing-oriented practice
- e. Capacity to organize, collaborate, and build partnerships with families and other educators around children's learning needs
- f. Self-awareness and skills of inquiry and reflection to guide continuous learning

Rich, Experiential Learning Opportunities

- a. Immersion in settings that support cultural and pedagogical learning that supports effective and equitable practice for diverse learners
- b. Opportunities for joyful, engaging, compelling, authentic, collaborative learning experiences for candidates, so that they can create the same for students.
- c. Use of cases, action research, and inquiry to support purposeful analysis, reasoning through complex practice situations, and reflection on teaching and learning
- d. Support of candidates' motivation, efficacy, purpose, self-direction
- e. Authentic performance-based assessments

These should be part of a scope and sequence for teacher preparation that allows for learning, practice, feedback, skill development, and more practice that grows the capacity for adaptive expertise on behalf of the whole child.

Pedagogical Alignment and Modeling

- a. Coherent SOLD-aligned vision of learning and development across all university courses and clinical settings
- b. Experiences in both courses and clinical settings that model equitable, culturally responsive, and empowering practice
- c. Integration of theory and practice around a holistic vision for practice as well as the elements of practice
- d. Intentional opportunities to connect learning across courses and clinical settings and to understand how each experience supports their development
- e. Close relationships with PK-12 schools and districts with aligned commitments, a shared vision of practice, and sufficient training for mentor teachers that teacher candidates can observe, practice, receive feedback, and continually grow toward that vision throughout the clinical experience.

Supportive Developmental Relationships in Communities of Practice

- a. Close "whole-school" partnerships that are focused on development of teachers and teaching, as well as learning, with support for pre- and in-service teachers through professional learning communities, ongoing professional development, and attention to social-emotional learning and wellness.
- b. Ongoing consultation, collaboration, and feedback among faculty, mentors, and candidates to support inquiry and growth (ability to provide and use feedback, pose problems and think through solutions together, plan lessons/units, and share insights, strategies, and challenges)
- c. Engagement in shared research and reflection about practice

Other program elements may include:

- Clear values and resources to support them
- Recruitment of diverse candidates and faculty, enabling cultural learning and sharing
- Full-year of clinical practice in a residency model

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