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Advancing Cross-State Conversations

Issue Brief

2019 | EDUCATION RETREAT

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EARLY LEARNING

The Goal of Public Education

The public education system seeks to develop a citizenry of well-rounded individuals who have the skills, knowledge, and character to engage successfully in the workforce, democracy, and society. Reaching this goal—for every student—requires coordination and success at every level of our system, from early learning through postsecondary education.

Leaders across the country have been relying on K-12 public education to level the playing field and to ensure that every child in America has an equitable opportunity for success. While a free public K-12 education is a cornerstone of our democracy and has helped countless citizens find success in the workforce and life, we know it has not solved social and economic inequities, and it has not kept pace with other developed countries.

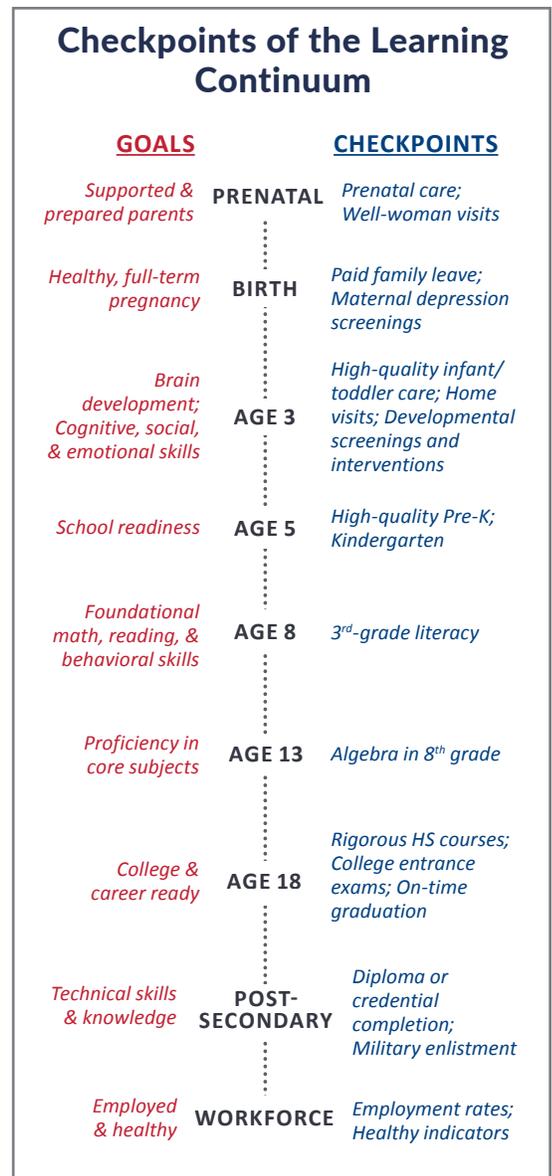
As a society, we have critically overlooked the importance of early development before children even enter school. As a growing body of research continues to substantiate, investments made early—beginning with prenatal care and continuing into elementary school—produce returns across the K-12 system and improve a number of life outcomes. Without a high-quality early foundation, education in the United States will continue to lag behind our competitors, and inequities will continue to persist.

Why is Early Learning Important?

The Developing Brain

The first three years of life are incredibly important to the architecture of the brain. As infants take in the world around them, their brains respond to stimulation by creating and strengthening neural connections. **In the first few years of life, developing brains form more than one million new neural connections every second.**¹

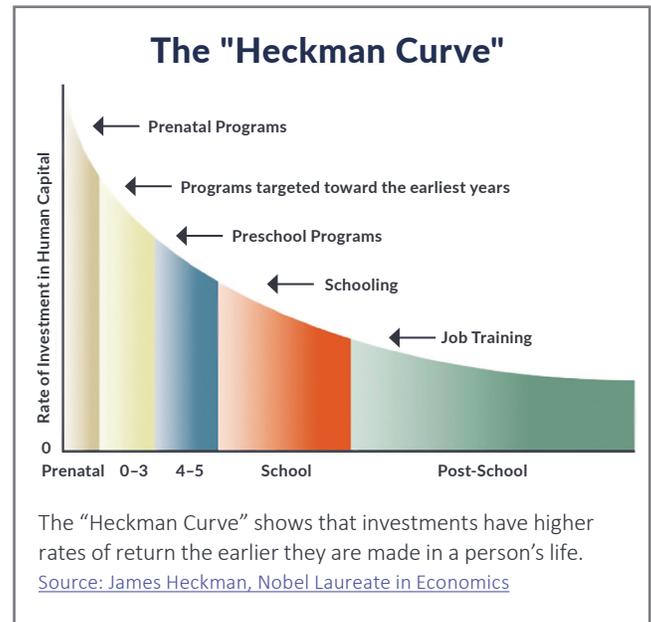
Because the brain is so responsive to experiences and interactions during early development, the role of the caregiver in providing positive interactions and a stimulating environment is critical for a child’s cognitive, social, and emotional capabilities.² Positive interactions have come to be known as “serves and returns”; for example, an infant babbles (serves) and the adult responds with the same kind of vocalizing and gesturing back at them (returns).³ Consistently serving and returning supports healthy brain development. Factors such as parental depression, economic hardship, and working multiple jobs can limit parents’ abilities to provide regular engagement of this nature. **The absence of adult responses can disrupt brain development, and persistent absence of adult responses results in activation of the body’s stress response.**



Toxic stress, which can be the result of neglect and physical and emotional abuse in the absence of a caring adult to mitigate stress, can program young brains to become hyperalert for danger and throw off development. Furthermore, the body’s stress response releases chemicals that can have detrimental effects on children’s ongoing development, self-regulation, and ability to fight disease.⁴ Adverse childhood experiences, or “ACEs,” which can create toxic stress, are incredibly common. Nearly two out of every three children experience at least one ACE during their childhood (birth through age 17) and one in five experience three or more ACEs.^{5,6}

Return on Investment

With early brain development having a lifelong impact, economists have been interested in understanding the returns on investments to support infants, babies, and families. **In a randomized-controlled experiment following participants from birth through adulthood, economist James Heckman found that high-quality birth-to-five programs for disadvantaged children can deliver a 13.7 percent return, per child, per year.** In addition to better education, health, social, and economic outcomes for the children, mothers were also able to return to the workforce and increase their earnings.⁷ Building on a body of work in the economics of human development, Heckman has proposed an empirical model showing annual returns on investment are at their highest when invested prenatally and early in a child’s life (see “Heckman Curve graphic”).



Despite these findings, current public investments are concentrated on school-aged children. A 2012 analysis showed that total spending on children from birth to age two averaged only \$5,415 per child, compared to \$14,641 for children ages six to 11.⁸

Coordinating Services & Supports

It is important to understand the needs of children and families in your state and communities. The U.S. Departments of Health and Human Services and Education collectively awarded Preschool Development Grant Birth Through Five (PDG B-5) to states to conduct statewide birth through five needs assessments and develop, update, or implement strategic plans that facilitate collaboration and coordination among existing early learning programs.⁹ **Funds are for states to help coordinate early care and learning programs and services that already exist and must not be used to create new early care and learning programs.**

By understanding the needs within the state and the corresponding services provided, state leaders can begin to identify gaps in support and natural areas for collaboration between agencies and programs in order to increase efficiency. From there, states can set goals and measure progress to ensure children are “on track” at every checkpoint along the learning continuum.

Services & Supports | Prenatal to School Entry

<p>PRENATAL CARE</p>	<p>Medical care during pregnancy, ideally beginning within the first three months, monitors fetus growth and development and mother’s health. Babies of women who don’t get prenatal care are three times more likely to have a low birth weight and five times more likely to die, according to the U.S. Department of Health and Human Services.¹⁰</p>
<p>PAID FAMILY LEAVE</p>	<p>Mothers, and in some cases fathers, receive a portion of their salary for a defined length of time following birth to bond with their newborn. Research suggests that paid family leave may reduce parental stress and depression.¹¹ Six states (including D.C.) have passed paid family leave legislation.¹² Additionally, 35 percent of women in the private sector work for companies that provide paid leave to all or most female employees.¹³</p>
<p>MATERNAL DEPRESSION SCREENING & TREATMENT</p>	<p>Doctors use questionnaires or other screening tools to identify depression in new mothers. It is recommended that screenings occur with each well-child visit during the first year of the child’s life (approximately three to four visits). An estimated 10 to 20 percent of new mothers experience depressive symptoms.¹⁴</p>
<p>DEVELOPMENTAL SCREENING, REFERRAL, & TREATMENT</p>	<p>Most often completed by a medical professional, developmental screenings seek to identify cognitive, physical, behavioral, and emotional developmental delays or issues. The American Academy of Pediatrics recommends developmental screenings at ages nine months, 18 months, and 24 or 30 months.¹⁵ An estimated one in six children ages three to 17 have a developmental delay.¹⁶ Identifying delays and providing intervention before the age of three can help children learn important skills and “catch up.”¹⁷</p>
<p>CHILD ABUSE AND NEGLECT PREVENTION & INTERVENTION</p>	<p>Interventions vary according to the situation but could result in programs to provide parents with support to improve the quality of care they provide for their child, housing assistance, child removal, and/or foster care.¹⁸ A number of home visiting and prevention models have been shown to reduce child maltreatment in high-risk families.¹⁹</p>
<p>HOME VISITS</p>	<p>Pregnant women and/or families receive resources and develop skills to support healthy child development from a trained professional. There are currently 16 different federally-approved home visiting models, each addressing different needs, that have demonstrated effectiveness.²⁰ Because nearly all new parents face challenges, home visiting can provide benefits across all socio-economic levels.</p>
<p>INFANT/TODDLER CARE</p>	<p>When care is not provided by a parent, infants and toddlers are placed in center-based care, licensed family-based child care homes, or informal family, friend, and neighbor care provided in a home-based setting. Quality infant/toddler care can be difficult to come by and is often not affordable to most families.²¹ One in four children under the age of six are from low-income working families.²² In 33 states and D.C., center-based infant care costs exceed the average cost of in-state college tuition at public four-year institutions.²³</p>
<p>PRE-KINDERGARTEN & CHILD CARE</p>	<p>Children ages three and four may remain in their child care setting or may enroll in a more formal setting that focuses on school readiness. The federal Head Start program and state pre-K programs provide funding for enrollment in programs and set quality guidelines and standards. High-quality pre-K programs have been shown to have short-term impacts on school readiness and self-control, as well as long-term impacts on graduation rates and other life outcomes.²⁴</p>

SCHOOL LEADERSHIP

Highly effective principals are critical to driving student achievement. School leaders are estimated to account for one-fourth of school-based effects on student achievement, making them second only to teachers.²⁵ With the onset of more robust teacher evaluation systems and the increasing importance of personalization and differentiation, the role of the school leader has shifted dramatically. **Principals are stretched beyond their decades-old roles as building managers and disciplinarians as they work to foster school culture, serve as instructional leaders, and support leadership development among school staff.** Recent research from the Wallace Foundation finds that effective principals shape a vision of academic success for all students, create a climate hospitable to education, cultivate leadership in others, improve classroom instruction, and manage people, data, and processes with the goal of school improvement.²⁶

Principal Preparation

As the role of the principal changes, so too must principal preparation programs and the policies that guide them. In order to ensure that our schools have a strong supply of dynamic leaders who are adequately prepared for the demands of 21st-century schools, there is a growing need for innovation and improvement in principal recruitment, preparation, and professional development. The functions that dominate the day of a modern principal – student affairs, instructional leadership, personnel issues, interpersonal relations, etc. – cannot be mastered through theoretical coursework alone. Modern school leadership preparation programs must offer aspiring principals an opportunity to practice these skills with robust supports.

New principals who enter their roles underprepared are less likely to improve student outcomes and are more likely to leave their schools. An average of 20 percent of principals leave their schools each year, and in urban districts it can be upwards of 30 percent.²⁷

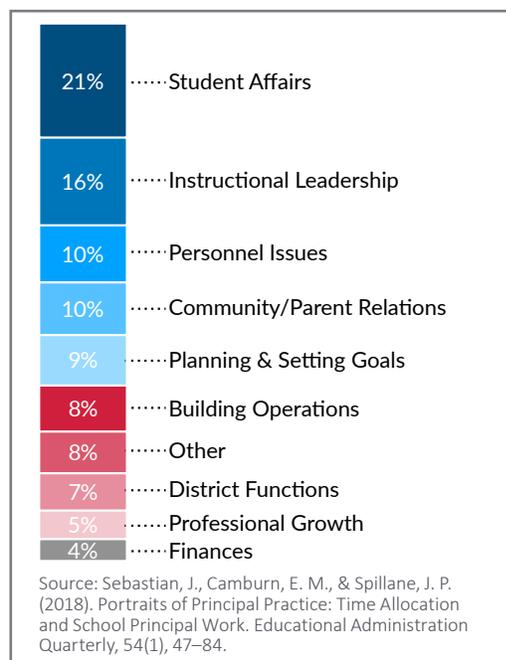
High principal turnover results in a negative impact on student achievement and brings about higher teacher turnover.²⁸

Additionally, there is a direct, negative relationship between principal turnover and school culture.²⁹ These effects are more pronounced in high-poverty schools, which experience higher rates of principal turnover than low-poverty schools.³⁰ It is also worth noting that when principals move between schools, they tend to move into schools with less poverty due to the expectation that increased local funding will result in higher compensation and better resources.³¹

Nationally, efforts to measure the success of principal preparation programs have been inconsistent. As of 2013, 29 states did not collect or require principal preparation programs to collect data regarding the success of their graduates; while this statistic is dated, it highlights the fact that most states have not historically taken outcomes into consideration as a measure of program effectiveness.³² Significant research has sought to identify elements of a strong principal preparation program.

These components include rigorous recruitment and selection, professional standards focused on instructional leadership and school improvement, strong partnerships with districts, integration and reinforcement of leadership models, and the provision of significant resources.³³ Other studies cite rich internship or residency programs as well as support from an expert or mentor in the field as playing critical roles in building effective principal preparation programs.^{34, 35}

Share of Principals' Time by Function



POSTSECONDARY ATTAINMENT

Education can be a pathway to economic and social mobility for people across the country, and higher education is a crucial link in that pathway. The education continuum starts from birth, continuing through early learning opportunities, pre-kindergarten, and K-12 education. Higher education, also called postsecondary education, is the bridge that students need to move from K-12 education into the workforce.

At one time, people with a high school diploma could secure stable employment that paid a living wage and provided career stability that enabled them to buy homes and raise families. However, because of the increasing importance of so-called “middle-skill” jobs in the modern economy, many sustainable career pathways now require some form of education beyond high school, with 99 percent of jobs added between December 2007 and January 2016 being filled by workers with at least some postsecondary education.³⁶ These economic developments have made higher education more important than ever.

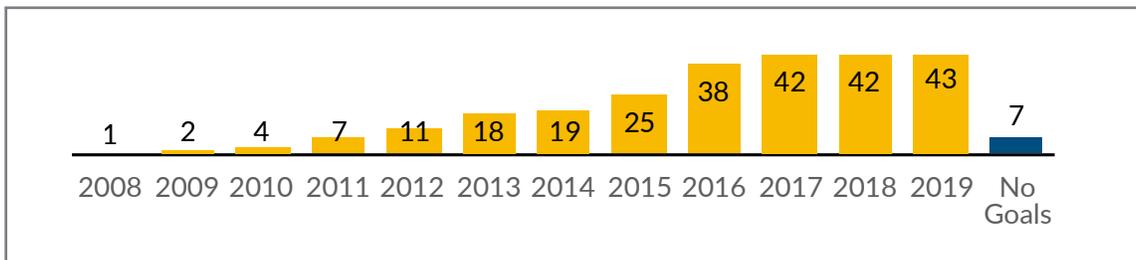
In response to disappointing results on national and international assessments of student learning and a decline in the United States’ standing in international education attainment rankings, both President Obama and the Lumina Foundation announced ambitious national postsecondary attainment goals in 2009. The purpose of these goals was to raise awareness of the need to bolster economic competitiveness by increasing the number of Americans earning some form of credential beyond a high school diploma.

The federal initiative called on the country to increase the number of 25- to 34-year-olds with an associate or bachelor’s degree to 60 percent by 2020. The Lumina Foundation also set a 60 percent target, but it identified a broader range of ages (25-64) and credentials (including high-quality certificates) and set 2025 as the target year.^{37, 38}

This push from the federal level, along with Lumina’s grant-making and advocacy, led to a flurry of state activity. Aside from Hawai’i, which first set its target in 2008, and South Carolina, which set its goal in 2009, state attainment goals were largely absent until 2010. Since that time, however, all but seven states — California, Delaware, Michigan, Mississippi, Nebraska, New York, and West Virginia — have set postsecondary attainment goals that have been formally adopted by a statewide leadership group.

While most states used similar criteria in their goals, the 43 state-level attainment goals vary in a number of ways, including the definition of postsecondary attainment, time frame, and ambition. Some states have chosen to focus on young people (e.g. 25- to 34-year-olds) and to focus only on associate and bachelor’s degrees; other states focus on working-age adults aged 25-64 and include high-quality certificates. On average, states are hoping to grow their attainment levels by roughly 18 percentage points over a period of 10 years. States have targeted anywhere from eight to 40 percentage points in growth.

Number of States with Postsecondary Attainment Goals, by Year, 2008-19



Outcomes-Based Funding Formulas

One prominent strategy that states have used to raise attainment rates has been to establish an outcomes-based funding formula, where a portion of state funding for public institutions of higher education is tied to certain information about its graduates – such as student loan debt or post-graduation earnings. These funding formulas incentivize institutional leaders to take a hard look at their policies and ensure that proper supports are in place to help different subpopulations of students attain a degree or certificate in a reasonable amount of time.

In most states, the share of public funding that is tied to graduate outcomes is relatively modest – approximately five percent.³⁹ There has also been an increasing recognition that outcomes-based funding formulas should account for different types of higher education institutions and the different populations the schools seek to serve.

Outcomes-Based Funding Formulas | State Examples

In 2010, the state of **Tennessee** established an outcomes-based funding formula that allocates the vast majority of public funding for higher education based on a variety of outcome measures that are aligned with the state's goals. One hallmark of Tennessee's formula is its flexibility – there are different sets of outcomes used for two-year institutions and four-year institutions, and the weights used for those outcomes are tailored to each institution's mission.

California recently enacted the Student-Centered Funding Formula, a new outcomes-based funding formula for community colleges that bases 20 percent of an institution's funding on a variety of graduate outcome metrics. In order to ensure that colleges continue to accept underserved student populations, an additional 20 percent of each institution's funding will be based on the proportion of low-income students that enroll each year.

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