Transforming Education for a Rapidly Changing World: Achieving Equity, Rigor, and Relevance through Human-Centered Systems Change

A Prospectus on the Education Program of Carnegie Corporation of New York

About This Document: This prospectus provides an overview of Carnegie Corporation of New York’s current Education Program. Intended for grantees, allied organizations, and other interested individuals, it explains the program’s goals, areas of focus, and strategies for promoting changes to ensure that all young people are prepared to fully participate in a robust democracy and a global economy.

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Today’s young people will need to navigate and contribute to a world that is vastly different from the one their parents grew up in.

Whether they succeed will depend on our ability to transform a system built for the last century into one that prepares them for the next one.

Summary

At no point in our nation’s history have we asked so much of our education system as we do today. We ask that our primary and secondary schools prepare all students, regardless of background, for a lifetime of learning. We ask that teachers guide every child toward deeper understanding while simultaneously attending to their social-emotional development. And we ask that our institutions of higher learning serve students with a far broader range of life circumstances than ever before.

We ask these things of education because the future we aspire to requires it. The nature of work and civic participation is evolving at an unprecedented rate. Advances in automation, artificial intelligence, and social media are driving rapid changes in how we interact with each other and what skills hold value. In the world our children will inherit, their ability to adapt, think critically, and work effectively with others will be essential for both their own success and the well-being of society.

At Carnegie Corporation of New York, we focus on supporting people who are in a position to meet this challenge. That includes the full spectrum of educators, administrators, family members, and others who shape young people’s learning experiences as they progress toward and into adulthood. Our mission is to empower them with the tools, systems, knowledge, and mindsets to prepare all students to fully participate in the global economy and in a robust democracy.

All of our work is geared toward transforming student learning. The knowledge, skills, and dispositions required for success today call for a vastly different set of learning experiences than may have sufficed in the past. Students must play a more active role in their own learning, and that learning must encompass more than subject-matter knowledge. Preparing all children for success requires greater attention to inclusiveness in the classroom, differentiation in teaching and learning, and universal high expectations.

This transformation needs to happen in higher education as well. A high school education is no longer enough to ensure financial security. We need more high-quality postsecondary options, better guidance for students as they transition beyond high school, and sufficient supports to enable all students to complete their postsecondary programs. Preparing students for lifelong success requires stronger connections between K–12, higher education, and the world of work.

The need for such transformation has become all the more urgent in the face of COVID-19. As with past economic crises, the downturn resulting from the pandemic is likely to accelerate the erosion of opportunities for low-skilled workers with only a high school education. Investments in innovative learning
models and student supports are critical to preventing further stratification in learning outcomes due to upheavals in school functioning.

These are not controversial ideas. In fact, they constitute the general consensus about where American education needs to go. But they also represent a tall order for the people who power the system. Practically everyone who plays a part in education must learn to act in new ways.

That we have made progress in such areas as high school completion, college-going rates, and the adoption of college- and career-ready standards is a testament to the commitment of those working in the field. But it will take more than commitment to achieve the changes in student learning that our times demand. We can’t expect individuals to figure out what they need to do on their own, nor should we be surprised if they struggle to do so when working in institutional structures designed to produce different outcomes. The transformation we seek calls for much greater coordination and a broader set of allies than would suffice for more incremental changes.

Our best hope for achieving equity and the transformation of student learning is to enhance adults’ ability to contribute to that learning. That means building their capacity while supporting their authentic engagement in promoting a high-quality education for every child. It also means ensuring that people operate within systems that are optimized to support their effectiveness and that a growing body of knowledge informs their efforts.

These notions comprise our overarching strategy for promoting the systems change needed to transform student learning experiences on a large scale. As illustrated in the figure on the next page, we seek to enhance adult capacity and stakeholder engagement in the service of ensuring that all students are prepared to meet the demands of the 21st century. We also support knowledge development and organizational improvement to the extent that investments in these areas enhance adult capacity, stakeholder engagement, and student experiences.

These views on how best to promote systems change in education guide our philanthropic work. The strategic areas of change we focus on are major themes throughout our five topically defined investment portfolios. Although they are managed separately and support different types of initiatives, each seeks to address its area of focus from multiple angles. A single portfolio may include grants that build adult capacity, enhance stakeholder engagement, and generate new knowledge.

Our approach of supporting multiple stakeholders by pulling multiple levers is informed by our deep understanding of the system we’re trying to move. American education is a massive, diverse, and highly decentralized enterprise. There is no mechanism by which we might affect more than superficial change in many thousands of communities. The type of change that’s needed cannot come from compliance alone. It requires that everyone grapple with new ideas.

This view is further animated by the Corporation’s long history of promoting large-scale improvements in American education. Over the past century, our investments in programs and research have driven significant shifts in such areas as the professionalization of teaching and the general understanding of the importance of a child’s earliest learning experiences. Those advancements didn’t happen overnight or as the result of one kind of initiative.
Likewise, realizing our vision for 21st-century education will require more than quick wins and isolated successes. Innovation is essential, and a major thrust of our work involves the incubation and dissemination of new models, resources, and exemplars. But we must also learn to move forward with the empathy, flexibility, and systems thinking needed to support people in making the transition. Novel solutions only help if they can be successfully implemented in different contexts.

None of this is to suggest that we must wait a decade or more to see progress. The Corporation expects its grantees to make near-term gains in the number of people with access to needed supports. We should be laying the foundation today for more substantial changes in the future. But only a sustained and concerted effort will shift the center of gravity of a social enterprise that involves millions of adults and many tens of millions of young people.
The challenge of philanthropy is to effect widespread social change with limited resources and without formal authority. This takes more than grantmaking. At the Corporation, we convene, communicate, and form coalitions. We provide thought leadership, issue challenges, and launch new initiatives. Through these multifaceted activities, we maximize our ability to forge, share, and put into practice powerful new ideas.

We encourage everyone who plays a role in education to join us in this work. Our strategy represents more than our priorities as a grantmaker. It conveys our strong beliefs about how to get American education to where it needs to be. The more organizations and individuals we have supporting those working to provide students with what they need, the more likely we are to succeed in this ambitious endeavor.

Our Five Investment Portfolios

**New Designs to Advance Learning.** With this portfolio, we make investments to increase the number of innovative learning models that support personalized experiences, academic mastery, and positive youth development. We also make investments that build the capacity of districts and intermediaries to improve learning experiences for all students as well as grants to investigate relevant issues of policy and practice.

**Pathways to Postsecondary Success.** In this strand of work, we seek to increase the number of young people able to access and complete a postsecondary program, with a major focus on removing historical barriers for students who are first-generation college-goers, low-income, or from underrepresented groups. We also look to expand the range of high-quality postsecondary options and to strengthen alignment between K–12, higher education, and the world of work.

**Leadership and Teaching to Advance Learning.** Here, we focus on supporting educators in implementing rigorous college- and career-ready standards in math, science, and English language arts. We make investments to increase the supply of and demand for high-quality curricular materials and professional learning experiences for teachers and administrators.

**Public Understanding.** We invest in efforts to engage families and other stakeholders as active partners in supporting equitable access to high-quality student learning. We also support media organizations and policy research groups in building awareness among the public and decision-makers about key issues related to educational equity and improvement.

**Integration, Learning, and Innovation.** Finally, we work to reduce the fragmentation, inefficiencies, and missteps that often result when educational improvement strategies are pursued in isolation and without an understanding of the contexts in which they are implemented. Through grants and other activities, we build the capacity of people working in educational organizations to change how they work by emphasizing systems and design thinking, iteration, and knowledge sharing within and across organizations.
Preparing all students for success requires that we fundamentally reimagine our nation’s schools and classrooms. Our public education system needs to catch up with how the world is evolving and with what we’ve come to understand about how people learn. That means attending to a broader diversity of learning styles and bringing what happens in school into greater alignment with what happens in the worlds of work and civic life.

At Carnegie Corporation of New York, we promote these objectives through our New Designs to Advance Learning investment portfolio. Grants and other activities under the New Designs umbrella seek to increase the use of innovative learning models in new and existing schools. A major goal is to build school systems’ capacity to support school communities as they innovate and continually improve, with a particular focus on serving historically marginalized populations.

This work is motivated by the recognition that many traditional modes of learning in school are ill-suited to what today’s students need to know and be able to do. Students’ abilities to collaborate, think critically, and solve novel problems are not well developed by highly structured, teacher-led activities — nor do such tasks engender students’ investment in their own learning. Getting ready for the adult world requires more than standardized assignments that bear little resemblance to what adults actually do.

A more student-centered, future-oriented approach would give young people ample opportunities to practice the skills they’ll need as grown-ups. Learning shouldn’t be limited to what happens in the classroom. To prepare students for college, civic participation, and the workplace, we must blend those worlds into the school experience. Moreover, that experience should flex with and build on students’ innate curiosities and talents so that they develop a deep affinity for what they’re learning.

This vision of learning brings together several important related ideas that have gained currency in recent years. One is that learning must be deeply personalized, offering more than a limited range of possibilities for differentiation. Another is that instruction should focus on the mastery of core skills and knowledge while allowing flexibility in the manner and contexts in which students hone and demonstrate them. A third is that holistic youth development should be woven into the student experience. Social-emotional learning is essential for navigating life; students will ultimately need to be able to set their own goals, self-manage, persist through difficulty, and understand others. Part of how students develop those skills is by shaping their own education in meaningful ways. Holistic youth development means putting students in the driver’s seat of their learning journey.

While some schools and districts have put some of these ideas into practice, bringing them together in communities across the country will take more than isolated acts of innovation. Achieving transformation at scale takes supportive networks of people working toward similar ends. Hence, a major thrust of our New Designs portfolio is to increase the capacity of districts, charter management organizations, and other networks to enable school communities to realize new visions for student learning.

Intermediary organizations have a particularly important role in connecting groups of people as they seek to understand such concepts and implement them in ways that make sense in their local contexts. This is not a matter of replacing old cookie cutters with new ones; communities need flexibility to prepare all students for a rapidly changing world. But they also need guidance as they reimagine the use of time, technology, and other resources to do so.
Finally, this work necessarily has a significant knowledge-building component. School communities need to know what 21st-century learning looks like. There are problems of practice and policy that must be explored for stakeholders to succeed in adopting new models for learning with all students. Accordingly, this is another important focus of our grantmaking.

We recognize that this vision for how schools and classrooms should operate represents a major departure from longstanding practice. It calls into question many of the basic structures and arrangements that we take for granted in American education. It asks that we fundamentally rethink the kinds of activities students participate in and the roles they play in them, as well as who they learn from and where.

We have no illusions about the time and effort required for such changes to be widely embraced. But we also know that to get there, we need to make continual progress. In the near term, our goal for the New Designs portfolio is to increase the number of schools using innovative learning models while also building the capacities and conditions they need to thrive. This way, more students may experience such models, and more stakeholders may be inspired to take action.

We have already made strides in this regard. Over several years, our investments and collaborations with allied partners have helped move the field from designing solutions to piloting them in schools and broadly sharing lessons from those pilots to further promote innovative learning models. Over time, we can make such innovation the norm and, in doing so, maximize the benefits of students’ time in school so that all young people are well prepared for the future.

**Example Investments**

**Building District Capacity to Support School Transformation**

The New Designs portfolio supports Education Resource Strategies, a nonprofit consulting group, in partnering with districts to better enable school redesign. Through this work, districts in Oklahoma and Tennessee are retooling key planning and budgeting processes to direct more resources to schools for implementing new models of teaching and learning. Education Resource Strategies is also forming a community of practice among system leaders to build greater expertise in the field around district supports for school transformation.

**Integrating Social-Emotional Learning with Academic Instruction**

A New Designs grant is allowing the Institute for Student Achievement to create instructional models that embed social and emotional development within the teaching of regular academic content. The organization, which has extensive experience in educator coaching, has piloted an approach that engages students in regular goal setting, self-assessment, and metacognitive practice. ISA is now working to scale the model through district partnerships and the dissemination of tools and resources.
Pathways to Postsecondary Success

Life-long success in the United States has never been more dependent on educational attainment than it is today. Completing some education beyond the 12th grade has virtually become a necessity for financial security and meaningful work. But for that possibility to exist for everyone, we need to address the historical barriers that keep many students from pursuing and completing a postsecondary program, and we must strengthen the options available to all students for education after high school.

Tackling these challenges is the work of our portfolio called Pathways to Postsecondary Success. Grants and other activities in this area seek to enhance and expand opportunities for postsecondary education that combine academic and workplace learning. A key goal is to significantly increase postsecondary program completion among students who are first-generation college-goers, low-income, or from underrepresented groups.

In supporting these aims, the Pathways portfolio extends the work of our New Designs portfolio. While New Designs makes investments to increase the use of innovative learning models through grade 12, the Pathways portfolio does the same at the postsecondary level. Together, the two portfolios seek to provide a variety of ways in which students can advance their education throughout their lives.

This work is motivated in large part by the steady decline in the number of good-paying jobs available to those with only a high school diploma. This trend promises to continue as changes in technology further erode the need for low-skilled labor. In addition, ideals of fairness and the value we place on diversity demand that we rectify the longstanding underrepresentation of marginalized populations in many careers that require a college degree or higher credential.

By transforming postsecondary education, we can position all students to take advantage of opportunities in the emerging global economy. We can also help all young people develop the critical thinking skills and agency that civic participation requires. To do this, we must recast a fragmented and limited set of postsecondary options and supports as a coherent system that meets everyone’s needs, regardless of background, resources, and career goals.

Much of this work is already underway, as postsecondary institutions are seeking to serve students with a broader array of educational objectives and life circumstances. Many programs have also sought to better integrate classroom learning with work skills development. What we need is for such innovation efforts to be scaled and spread so that no one is left behind. This needs to be an all-in endeavor.

In the vision that drives our postsecondary work, high school graduates aren’t limited by either-or choices. They should be able to earn a technical certificate while attending college. If they take time off from their education to work, they should be able to return without facing unnecessary obstacles. Working while earning a credential should be a viable option. On-ramps and off-ramps should be a dominant feature in the landscape of postsecondary possibilities.

At the same time, we need to ensure that what students do at each stage of their education adequately prepares them for what comes next. Currently, too many begin postsecondary education needing reme-
diation, and too many leave school without the combination of academic, technical, and soft skills that desirable jobs demand. Supporting smoother transitions is the shared work of our Pathways and New Designs portfolios.

Enabling more people to enroll in and complete postsecondary education entails removing the numerous practical hurdles that often keep them from doing so. Students who are the first in their families to attend college need extra assistance with the many financial, social, and administrative challenges that college-going and career preparation present. While in a postsecondary program, students need access to healthcare, housing, and food.

Our aspiration is not for all people to attain a four-year degree. The fact that a high school diploma is no longer sufficient for success in the workplace doesn’t mean everyone must complete a bachelor’s program. No one should be denied the opportunity simply due to their circumstances, but these programs should be viewed in the context of a wide array of alternatives — including apprenticeships, certificate programs, and associate degrees that lead to career-path jobs.

The Corporation has already supported progress in addressing many of these issues. We have funded projects to remove barriers to careers in science, technology, engineering, and mathematics by transforming college math instruction to better serve students who were not succeeding in traditional post-secondary math courses. We have invested in initiatives that bring together employers and educational institutions to explore new ways to provide students with early exposure to work.

Additionally, Corporation grants support research on the challenges faced by different populations as they seek to access and complete a postsecondary program. Our interest in innovative models has more recently extended to novel approaches to student advisement, including experiments that tap recent graduates as mentors. These and other investments are meant to build a greater appreciation among families and young people of the full range of postsecondary options before them.

These investments build on the Corporation’s long history of supporting efforts to open the doors to higher education to more Americans. Financial aid initiatives and other programs launched with the organization’s help have played a major role in the tremendous growth in the number of young people taking part in postsecondary education over the second half of the 20th century. Our prosperity as a nation owes much to that progress.

Our Pathways strategies are meant to further those advancements by improving the alignment of K–12 and higher education with the labor market, increasing postsecondary enrollment and completion rates, and creating a more robust variety of high-demand postsecondary options. In this way, we can make social mobility possible for all learners and secure our country’s future economic health and civic well-being.
Example Investments

Positioning First-Generation College-Goers for Strong First Jobs
The Corporation supports Braven, a national nonprofit, in bringing to New York City its proven career-readiness program targeting college students from underrepresented groups. Braven partners with local colleges and employers to provide skills-development courses, work experiences, and access to professional networks so that graduates can secure a first job that pays a competitive salary, requires a four-year degree, and offers a pathway to promotion.

Preparing Youth in New Orleans for Life After High School
The Corporation invests in several initiatives of the Tulane University–based Cowen Institute that aim to improve the employment prospects of young adults in New Orleans. One is an apprentice-style earn-and-learn program for youth who are neither in school nor employed. Another is a collaborative of school counselors working to improve advisement and mentoring. Cowen also conducts research to better understand the needs of area youth and local labor market demands.

Leadership and Teaching to Advance Learning
At its core, learning is about the interplay between teachers, students, and content. How teachers and students engage with each other and with their curriculum plays a predominant role in determining what students learn and how well they learn it. That’s not to say that factors outside of school don’t also greatly impact student learning. But the research is clear that among the factors a school might control, nothing outweighs the teaching that students experience.

At a time of seismic shifts in what students need to know and be able to do, the centrality of teaching in education has presented America’s educators with a tremendous challenge. More than any other stakeholder group, teachers and school leaders have to make significant changes in how they go about their daily work. Teachers are changing how they plan and facilitate instruction, and school leaders are working to create the conditions needed to support those shifts.

Ensuring that educators can meet current challenges is the focus of our Leadership and Teaching to Advance Learning portfolio. Grants and other activities in this portfolio seek to provide teachers and school leaders with the knowledge, skills, resources, and support structures needed to prepare all students for the demands of the 21st century. Major areas of investment include educator preparation, professional learning, curriculum materials, and instructional leadership.

Our Leadership and Teaching work is closely related to our portfolio on New Designs for Learning. Both seek to improve students’ learning experiences through grade 12. But while New Designs is concerned with reimagining the contexts in which learning takes place, Leadership and Teaching is more focused on helping educators transform their instructional practices. Together, these portfolios aim to ensure that all young people graduate from high school ready for postsecondary education and the world of work.
Our investments in Leadership and Teaching are driven by a recognition of the level of effort required to transform instruction. The academic standards adopted by almost all states in recent years represent a critical step forward in the push for higher levels of learning in America’s schools. Their focus on deep mastery of core concepts and skills, though, creates the need for a different approach to teaching — one that builds habits of mind as well as knowledge of the world.

Changes in teaching practice can only occur when educators are equipped with the necessary teaching tools and given opportunities to learn how to use them. That so many teachers have sought out resources aligned to new standards is a credit to their professionalism and dedication. But they should not have to shoulder the burden of change by themselves — nor should we expect them to be experts in discerning which strategies and materials are best suited for teaching in ways that are new to them. They need guidance and support to change practice at scale.

That guidance and support must start well before educators are responsible for their own classrooms and leadership positions. Teacher preparation needs to include a significant amount of time spent in real classrooms with content-expert mentors to learn how to teach all students with high-quality instructional materials designed for rigorous academic standards. The development of school leaders should focus on adult learning, effective instruction, high-quality curriculum, and ways to enable teachers’ professional growth.

Teachers and school leaders need access to high-quality instructional materials aligned to new expectations for student learning, including lesson and unit plans, culturally relevant activities and application problems, assessments, and investigations of natural phenomena. Such materials shape what teachers and students do in their classes. They also save teachers from having to create materials themselves, giving them more energy to focus on adjusting their practice based on students’ individual needs and responses to their instruction.

Practicing educators also need ongoing, job-embedded opportunities to improve. Professional learning for teachers is most effective when it is part of their regular work and allows them to address the specific challenges of teaching their own students. Curriculum-based professional learning for teachers mirrors the activities students engage in using high-quality instructional materials. Teachers gain a better understanding of new teaching approaches that support student-centered learning when they can experience the curriculum themselves as learners.

The Leadership and Teaching portfolio addresses these needs by investing in the development and promotion of effective models for curriculum-based professional learning and resources that support them. To increase access to high-quality curricula, we invest in the design and implementation of K–12 instructional materials in the core subjects of science, math, and English language arts. A central aim is to increase the supply of and demand for freely available, high-quality, full-course instructional materials. We also fund professional learning efforts that support educators’ ability to analyze and select high-quality instructional materials and develop a common vision for instruction.

Other grants support groups working to reinvent teacher preparation and professional learning, including by providing funding for preparation programs with enhanced practicums grounded in the use of
high-quality instructional materials to engage all students in higher levels of learning. Additionally, we invest in organizations that partner with schools and districts to build their capacity to support teachers in learning to plan and facilitate rigorous and equitable instruction.

In the near term, we expect these activities to measurably increase the number of teachers and school leaders with access to curriculum-based professional learning focused on using high-quality instructional materials. Further ahead, our vision is for these innovative approaches to prompt widespread improvements in the field, helping educators improve instruction. When all teachers have the capacity to plan and facilitate high-quality instruction, schools can maximize their impact on learning for all the students they serve.

Example Investments

**Increasing Access to High-Quality Instructional Materials in Science**

The Leadership and Teaching portfolio’s investments in high-quality instructional materials include significant support for developing resources to facilitate the implementation of rigorous new science standards. Through this work, the Corporation has spearheaded OpenSciEd, a consortium of states, districts, science professionals, and learning experts working to design, test, and make freely available a comprehensive set of instructional materials aligned to the Next Generation Science Standards.

**Focusing Professional Learning on Curriculum Implementation and Equity**

Through a grant to Teaching Lab, the Leadership and Teaching portfolio is meeting the need for curriculum-based professional learning focused on teaching diverse learners. The national nonprofit is using the funds to create professional learning content and models in English language arts and math with the goal of ensuring that traditionally underserved students have the opportunity to fully engage with grade-level, curriculum-based instruction. Teaching Lab also is working with districts and regional educational service providers to create the right conditions to support such professional learning.

Public Understanding

As central as they are to the education process, school professionals are hardly the only people with a critical role to play in student learning. Students spend far more time with family and other community members than they do at school. And numerous stakeholders outside of the education system have the potential to strengthen and shape what happens within it. The success of our nation’s schools depends on far more individuals than are employed by them.

Engaging these individuals as informed advocates and meaningful partners is the focus of our Public Understanding portfolio. Grants and other activities in this area seek to involve a broad array of stakeholders in making sure every student is fully prepared for civic participation and the evolving labor market. In
doing so, these investments complement our portfolios focused on innovative learning models, instructional improvement, and postsecondary success.

The strong link between public involvement and educational outcomes is well recognized and supported by research. Student learning and youth development improve when families are actively engaged in their children’s education. A healthy home–school connection helps parents to augment their children’s learning and teachers to understand their students’ progress and needs. A mutual understanding of goals and issues works to the benefit of everyone involved.

Public engagement is also a major factor in the success of wide-scale educational improvement efforts. Changes in such a massive public enterprise necessarily affect huge numbers of people. Transformations in schooling can only happen if families, students, and community members are invested in the objectives and process of change. Listening and dialogue are essential for garnering public support and developing solutions that work.

Unfortunately, the current lack of strong family engagement in American education is a major contributor to educational inequities. Such inequities are maintained and exacerbated when some families have the resources and know-how to navigate, support, supplement, and shape their children’s educational experiences and others do not. Adding to this challenge is the lack of understanding that often occurs when students, teachers, and school leaders have very different backgrounds. We also lack the kind of informed and inclusive public dialogue that’s needed to develop solutions that can work in the contexts and communities where they are implemented. We saw this with the rollout of new college- and career-ready standards. Parents were, for the most part, left out of the loop on the standards’ purpose and approach, and many educators received little guidance on how to implement them. The result was far more confusion and difficulty than was necessary.

To address these issues, the Public Understanding portfolio works on both sides of the engagement equation. We seek to build the capacities of families and education professionals to engage with each other, particularly for the sake of better serving low-income students and students of color. A major goal is to elevate the voices of diverse families and community members in matters related to their own children, as well as in broader questions of policy and practice.

At the same time, we work to catalyze productive dialogue by enhancing the capacities of trusted forums. Through a broader exchange of ideas and insights, we can build a more widespread understanding of the importance of providing all children with high-quality, student-centered learning experiences. We can help families, educators, students, and other stakeholders appreciate the why, how, and what of educational transformation.

Finally, the Public Understanding portfolio strives to elevate family and community engagement in educational improvement efforts in the United States. Increasing stakeholder involvement should be a key focus for funders, nonprofit organizations, businesses, and policymakers as well as education leaders. Getting the most out of family and community engagement will take the work of many innovators from many sectors.

The activities we support to achieve these goals are directed at research and development, collaboration, and communication. Organizations we fund are working to design and scale the use of tools and
techniques for strengthening the home–school connection and for empowering families to play a more active role in their children's education via technology, community organizing, and educator professional learning.

Our investments in collaboration bring together funders and other organizations to explore new ways to advance the field. The networks we have formed are essential to understanding the landscape of family and community engagement and what opportunities exist for improving it. While the benefits of stakeholder involvement have long been understood, the field has much to learn and share about how to increase that involvement.

To foster more productive public dialogue, we make grants to media outlets and other knowledge-sharing organizations. Through these forums, we aim to broaden the audience of individuals with regular and ready access to credible information on issues of policy and practice in education. Another aim is to share more stories about the role that family and community engagement can play in the transformation of teaching and learning.

The investments under Public Understanding represent a relatively recent area of significant focus for the Corporation. The emergence of this focus signals our deepened understanding of the importance of stakeholder involvement in educational improvement. Over time, we expect that understanding to spread throughout the field and the public as a result of our grants and partnerships. Ultimately, we expect effective family and community engagement to be the norm in American education.

**Example Investments**

**Enlisting Employers to Empower Families with School Information**

The Corporation is a lead sponsor of the organization EdNavigator, which partners with local employers to provide families in urban areas with important information on how best to support their children's education. Through these efforts, families receive mentoring at their workplace and personalized guidance on how to keep track of their children's educational progress and help them succeed. Parents also learn how to utilize available resources to advance their own educational goals.

**Getting Families and Educators on the Same Page about Student Learning**

Through the Public Understanding portfolio, the Corporation helped seed and continues to fund Learning Heroes. With its annual survey, the nonprofit has revealed stark differences in parent and teacher perceptions of students' achievement and educational aspirations. The organization also works to foster national dialogue around the need to close that gap in understanding, and it develops resources to better equip parents to evaluate and support their children's learning.
Integration, Learning, and Innovation

Those of us who work for change in education need a new set of habits to achieve our vision of 21st-century learning. It will take more than a factory-model mindset to transform our education system into one that prepares all learners for an increasingly complex world. We must approach this task with flexibility, empathy for the people involved, and an understanding of how to learn from what’s working and what’s not.

Promoting new ways of working for change in education is the focus of our Integration, Learning, and Innovation portfolio. Grants and other activities under this umbrella are meant to empower education leaders with an understanding of how to advance improvements within a complex social system. A major goal is to achieve a better fit between improvement efforts and the contexts in which they happen — and, as a result, achieve better outcomes for students.

This portfolio of work serves a critical cross-cutting function in the Corporation's education program. Whereas our four other portfolios are concerned foremost with what needs to change in education to better serve students, the Integration, Learning, and Innovation portfolio is focused squarely on how to pursue such changes. Managing change is a complex endeavor, and how we work toward transformation plays a significant role in determining whether we succeed.

Our work in this area is meant to ensure that leaders at all levels of the education system are well equipped to plan, implement, and improve initiatives to enhance student learning. That entails building the knowledge and skills of those who work in schools, districts, charter networks, and state agencies — and in community groups and other organizations with a stake in educational quality. And it requires making sure they operate within organizational environments that support their success.

Underpinning this work is an acknowledgment of the nature of what it is we are trying to transform. The school system in the United States is highly decentralized, encompassing extraordinary diversity, competing demands, and numerous interdependencies. It's no exaggeration to say that changes of any significance will have major implications for millions of people — teachers and administrators, students and families, and business leaders and politicians, among many others.

We're also acutely aware of what it means to transform such a sophisticated and human-centered discipline as education. Learning to do things differently — and well — takes much more than being made aware of new expectations. For both adults and children, learning takes time and practice, as well as feedback from someone who can draw out a learner's current thinking and build upon it or gently challenge it. Accomplishing this on the scale we're talking about represents an enormously complex undertaking.

The way the field has typically pursued improvements in the past is a poor match for such a challenging endeavor. Linear and narrowly focused implementation strategies — like many of those we've seen in recent decades — work best when the consequences of change are predictable, contexts are similar, and there are a small number of easily measured, agreed-upon outcomes. In education, where none of that is true, this approach results in more missteps and conflict than expected or necessary.

A better approach would be to embrace complexity. That means working to discern the interdependencies involved, understanding how people adapt to change, and allowing for repeated adjustments based on ev-
idence and experience. It also means asking questions that can produce useful answers and then sharing what’s learned so that others may benefit. Most importantly, it means understanding the problems to be solved by listening to the people who experience them directly.

To build the field’s capacity to work in this way, the Integration, Learning, and Innovation portfolio seeks to identify and spread effective organizational structures, processes, cultures, and mindsets. This involves drawing on existing disciplines for implementing change that may be in use in isolated places but have yet to become the norm for how improvement efforts unfold in education, including systems thinking, human-centered design, improvement science, and equity orientations.

Much of how we promote such strategies is through knowledge sharing, which includes both professional learning and dissemination. To fully understand what it means to work in new ways, practitioners need to learn by doing — and with the right support. In the meantime, the field needs to know what it looks like when efforts to improve student outcomes are designed to improve how students, educators, and parents experience the education system.

For these reasons, we support organizations in adopting new problem-solving approaches to address specific challenges. We fund networks of schools and institutions devising improvement strategies by investigating the barriers that keep many young people from succeeding. We also make grants to intermediaries that work with state and local agencies to increase their capacity to design and implement new initiatives.

Other investments are aimed at codifying and communicating a growing body of knowledge on how groups transition to more productive ways of working. We need a broader awareness of the need to approach educational transformation as a complex, human-centered project — and a broader understanding of what that means. Changing how we work toward change means grappling with new ideas.

In the near term, we expect these efforts to increase the availability of promising approaches and the number of organizations making good use of them. Further out, we envision a time when there’s a more general appreciation in the field for how to foster system coherence and system learning. When our innovations are better integrated with their contexts, less energy will be spent on resolving conflicts and more on meeting students’ needs.
Example Investments

Improving How States and Local Communities Transform Education
A major initiative of the Integration, Learning, and Innovation portfolio is the Integration Design Consortium, in which participants at the state and local levels are learning to apply productive approaches toward planning and implementing educational improvement initiatives. Teams from state agencies, school districts, and community organizations work through the process of addressing improvement challenges using strategies meant to produce more coherent and effective solutions.

Transforming Educational Leadership through Improvement Science
We also support efforts to prepare and develop education leaders who are able to employ improvement science through a grant to the Carnegie Foundation for the Advancement of Teaching. The iLEAD initiative is a network of 11 partnerships in which districts and schools of education are working together to infuse school and system leadership with a deep understanding of the core tenets of improvement science, such as systems analysis and user-centered problem-solving.

Conclusion

Attending to the Whole

A common refrain in education is that there are no silver bullets — that there is no one lever to push to make the whole system respond as desired. And yet, we keep grasping for these perfect solutions. As a field, we place most of our bets on a single strategy and then move to another, and then another. With each new wave of reform, the ebb and flow erode confidence in our ability to achieve better outcomes for students.

We continue in this way largely out of habit. Our experience with educational improvement has generally been of programmatic adoption, focused more on compliance with isolated initiatives than on making things work for the people involved. Were the emphasis on enabling people to do their best work, we would see a great shift in energy toward understanding all that comes into play in such a significant human endeavor.

At Carnegie Corporation of New York, our education program is built on this premise regarding how transformation occurs in a complex social system. Although varied in focus, the investments within our five portfolios are designed to be mutually supportive. Each seeks to change aspects of the system that if left unaddressed would greatly reduce our chances of success.

Attention to coherence is both our primary strategy and a core organizational value. It guides not just what we choose to invest in but also how we function internally. Breaking down the fragmentation that so often plagues school improvement efforts means breaking down silos within organizations that work in the service of school improvement. Staying in our lanes may make things easier, but creating a lasting and positive impact takes a different approach.
Only by attending to the whole can we as a nation hope to achieve our aspirations for 21st-century teaching and learning. Transforming the student experience for all young people will require the right organizational conditions, adult capacities, stakeholder engagement, and new knowledge to advance the field. A narrow focus on one or two strands of work won’t be enough to overcome the force of longstanding traditions, structures, and gaps in understanding.

While our vision is ambitious, we approach this work with all due humility regarding our ability to know all that needs to be done. Our education system encompasses too many interrelated dependencies to foresee at the outset all the implications and consequences of a particular change initiative. But we can train ourselves to look for such relationships and account for them when they emerge. Education is a highly dynamic enterprise, and so must be our strategy.

Finally, all of our work must be guided by the belief that one’s opportunities in life should not be determined by skin color, ethnicity, gender, or family income. If we fail to keep this foremost in our minds, we run the risk of exacerbating current inequities by raising the quality of education most for those who are already the most advantaged. Living our values as Americans means ensuring social mobility is possible for everyone.

This is a long-term venture. Our investments are made with an eye toward what their impacts might be in several years, or even decades. Certainly, many young people have already experienced real benefits as a result of our grantmaking, and we expect the number to increase in the immediate future. But after more than a century of investing in educational improvement, the Corporation understands the compounding effects of a durable strategy.

In the meantime, we urge all stakeholders to consider how they might contribute to the transformation. It begins with an honest and thoughtful conversation about what young people need and the kind of system that could provide it. It requires that we keep an open mind about what we might change and clarity about what we most value. With this as our starting place, we can move toward the future we need, for our county and its people.
Carnegie Corporation of New York was established by Andrew Carnegie in 1911 to promote the advancement and diffusion of knowledge and understanding. In keeping with this mandate, the Corporation’s agenda focuses on the issues that he considered of paramount importance: international peace, the advancement of education and knowledge, and the strength of our democracy.