

Ensuring Students' Right to Preparation for Competitive Employment:

**The New York State Constitution as a Foundation for Systemic
Improvement of Career and Technical Education**

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Executive Summary

Too many young Americans—disproportionately students from low-income families and students of color—leave high school unprepared to move into the workforce and become productive citizens. In this white paper, we situate the critical issue of preparation for the workplace in the broader context of students’ constitutional right to an education that provides the knowledge, skills, experiences, values and dispositions that are the foundations to be a productive citizen. We tie the renewed concern about preparing students for competitive employment with growing interest among educators, policymakers, business leaders, and the public at large with the need to prepare students to be effective citizens capable of safeguarding our democracy and stewarding our nation toward a greater realization of its democratic values. We propose some necessary reforms to improve students’ access to existing New York’s career and technical education pathways. But, we argue, high quality career pathways, including “9-14” programs that bridge secondary and postsecondary education, only serve our students well if they are constructed on a strong foundation of basic educational opportunity for all, one that does not presently exist in New York or in most other states.

The steps we advocate include ensuring sufficient access to preparation for competitive employment and productive citizenship for all students, adequate and systemic funding, expanded school and workplace linkages and enhanced data collection for monitoring and accountability. These reforms stem from problems and proposals that many school officials, researchers, and advocacy groups have previously identified. We take these prescriptions one step further, though, by connecting the development of skills and dispositions needed for adaptive life time employment that are transferrable across industries with the skills and dispositions necessary for productive citizenship and civic participation, and by situating the need for these reforms as fundamental for fulfilling students’ educational rights. In doing so, we create a more comprehensive vision of public education for the next generation of students.

Historically attention to this issue has ebbed and flowed. In New York, as in many other states, there has been new momentum to improve access to quality career and technical education in the public schools. States have added funding to support career and technical education (CTE) activities, created policies to improve industry partnerships and work-based learning, and adopted policies facilitating dual enrollment and early college programs and the attainment of industry-recognized credentials.

New York State education law requires local school districts to provide students with access to CTE and to develop programming that reflects contemporary workforce needs. In secondary school, individual career and technical education courses and full CTE programs of study can be offered at comprehensive high schools, in special CTE high schools, in career academies within schools, and/or, outside of the Big Five city school districts, through BOCES centers. In addition, some schools provide students access to college-level CTE courses through dual enrollment programs in partnership with local colleges or universities and six-year early-college high-school programs.

Despite these innovations, access to CTE course offerings and other supports is limited and does not meet the constitutional requirement to prepare all students for competitive employment and productive citizenship. Although state regulations require each school *district* to offer students the opportunity to complete a CTE course sequence in its schools or through BOCES, the regulations do not require every high school to provide specific courses in CTE or career development and occupational studies. Few New York high school students actually have access to CTE coursework. In 2014-15, less than 16% of New York high schoolers completed at least one CTE course and about 6% completed two or more CTE courses. Only 5% of 2016 high school graduates in New York State received a Regents diploma with a CTE endorsement (and only 1% received an advanced Regents with a CTE endorsement).

The implications of inadequate access to CTE recently became even graver. As part of an initiative to provide students a broader set of options for meeting graduation standards, the New York Board of Regents adopted new policies that provide “multiple pathways” to graduation. Students are now required to pass Regents exams in four subjects—English language arts, math, science, and social studies and then must choose for their fifth assessment from a number of different “pathway” assessment options. One new pathway allows students who have completed an approved CTE program of study to use an approved CTE assessment, another allows a career development and occupational studies (CDOS) commencement credential, based on a career plan, work experience, and meeting commencement-level CDOS learning standards, as a valid substitute for a fifth assessment. These policy changes were not, however, accompanied by any new requirements that schools actually provide more students access to CTE or CDOS courses or give more students assistance in obtaining work experience or in constructing a career plan.

Recent court cases in New York and 20 other states have declared that students have a constitutional right to an education that prepares them for the workforce. For example, in 2003, the New York Court of Appeals held in *Campaign for Fiscal Equity (CFE) v. State of New York* that the state constitution entitles all students to a “meaningful high school education” that provides them the skills they need to function as capable citizens and prepares them for competitive employment. The court reiterated this holding in 2017. These court decisions, and the rights they confer on students, can dramatically improve the chances for fully implementing the reforms and improvements that CTE practitioners and other career-pathway experts acknowledge to be necessary. The clear mandate to prepare all students for competitive employment in court decisions like *CFE v. State* creates a strong foundation for systemic improvements of career and technical education. Awareness of and emphasis on the constitutional mandate can be a powerful driver for adequate investment.

Beyond this, court decisions clarify what schools must actually provide to fulfill students’ educational rights. In New York, the Court of Appeals rejected a lower court’s conclusion that schools need only prepare students for jobs that will allow them to stay off the welfare rolls. Instead, the court forcefully stated that “[m]ore is required.” In its 2003 decision in *CFE v. State*, the court held,

a high school education is now all but indispensable....[M]anufacturing jobs are becoming more scarce in New York and service sector jobs require a higher level of knowledge, skill in communication and the use of information, and the capacity to continue to learn over a lifetime. The record showed that employers who offer entry-level jobs that do not require college increasingly expect applicants to have had instruction that imparts these abilities, if not a specific credential.

Accordingly, in order to provide students the “meaningful high school” education that the state constitution requires, the court held that schools must provide *all* students access to the kind of instruction and experiences that will adequately prepare them for 21st-century jobs. The court specified that the state must ensure that adequate resources are available in “every school,” so that all students will have access to the personnel, courses, and pathways that are needed for these purposes. It further ordered the state to determine the “actual cost” of providing all students these opportunities.

Approaching the issue of effective career preparation from a constitutional-rights perspective also provides a roadmap for reconciling the perennial tension between academic and vocational programming. State constitutional definitions of the right to an “adequate,” “thorough and efficient,” or “sound basic” education have almost invariably emphasized that schools are responsible for preparing productive citizens, which entails *both* preparation for competitive employment and preparation for capable civic participation.

These courts indicate that preparation for the workplace cannot be isolated from general academic preparation; the constitutional guarantees of civic and career preparation are interrelated, inextricably linked, and must be approached in tandem. Research shows that many of the same 21st-century social and communication skills, critical- and creative-thinking and problem-solving habits, and key dispositions toward hard work, obeying the law, and collaborating with diverse groups are fundamental to workplace and civic preparation. In an increasingly diverse, complex, technological, and global society, civic preparation and career preparation are more important to each than ever before.

To prepare students adequately for capable citizenship requires schools to provide them with knowledge of government, law, history, economics, and civics, as well as basic English language arts, mathematics, and science. Students need ample opportunities to build media literacy and discuss local, national, and international issues they feel are important to their lives. Plus students must learn critical analysis, interpersonal, communication, and adaptation skills and be provided with a range of experiential learning opportunities both during school time and after school to practice these skills in their communities. Virtually all of these learning experiences are also essential to prepare students for competitive employment.

Education officials at both the state and city levels have made efforts to enhance school-to-work pathways in recent years, but the rate of progress in providing access to career and technical education has been relatively slow. From a rights-based perspective, incremental progress does not suffice. New York must adopt appropriate policies and practices and make suitable investments to provide students “meaningful” programs that will prepare them for

productive employment. Currently, state policy and investments are not adequate to provide the basic resources necessary to meet the constitutional guarantee and to ensure that all interested students can take advantage of the many benefits of CTE and career-pathway options. New York's data, reporting, and accountability systems do little to illuminate problems, inform students and their families of their entitlements, or incentivize improvements.

This report details current inadequacies in constitutionally required resource areas for CTE and suggest what would be required to resolve them. Any new mandates must be tied to adequate funding and other assistance needed for their effective implementation. Approaching the issue of effective CTE implementation from a constitutional-rights perspective not only provides a firm basis for adequate funding, but it also offers an important new perspective for addressing the tension between academic programming and career preparation. In court cases throughout the country, including New York, the constitutional definitions have nearly all emphasized both preparation for competitive employment and preparation for capable citizenship.

The job market for both college graduates and non-college graduates will continue to evolve and, with it, the specific technical knowledge and skills that employees will need to acquire. Therefore, communication, information gathering and critical analytic ability and other adaptive skills that facilitate life-long learning that are needed for both civic participation and competitive employment provide better preparation for future employment than the types of training for particular skills and professions that exist now.

The strong connection between the two basic purposes of education also plays out in the opportunity gap that denies many students in poverty and students of color the resources they need to develop appropriate skills both for competitive employment and for capable citizenship. Youth who drop out before finishing high school are less like to vote, run for office, and be otherwise civically involved and they also are much more likely to be unemployed. The schools these students attend often lack the basic building blocks of an adequate education—qualified teachers, reasonable class sizes, up-to-date instrumentalities of learning, and so on. These schools provide few the real-world learning experiences that are especially important for increasing motivation and unlocking the talents and interests of these students.

If we are to provide this preparation systematically to all students, states must provide the necessary resources. The constitutional foundation for this preparation also requires further consideration of the respective roles of schools, other public institutions, community-based organizations, and of the private sector in this endeavor. Future research must study the range of viable alternatives, including expanding the role of public investments and institutions, identifying cost-effective ways to provide constitutionally required programs and services for students, creating more formalized public/private partnerships; and significantly expanding and refining local cross-sector collaborations among school systems, community-based organizations, employers, and government agencies.

Introduction

There is broad and longstanding agreement that, for decades now, too many young Americans—disproportionately students from low-income families and students of color—leave high school unprepared to move into the workforce and become productive citizens. The many negative consequences of this inadequate preparation include the individual and social costs of poverty and inequality, a rate of youths out of school and out of work that is considerably higher than in many advanced industrial countries, and widespread disconnection and disenfranchisement of many Americans from our economic, political, and social institutions.¹ These challenges have become even more acute as the modern economy demands an ever-more-educated workforce to fill available jobs.

Unlike many European nations, the United States has never had a formal system for preparing most of its young people with specific labor-market skills. Many other advanced industrial countries provide their students access to comprehensive apprenticeship programs while in secondary school and, for those who qualify, free higher education, among other supports that contribute to successful life outcomes. Our country has opted instead to invest primarily in general academic preparation and has assumed that young people would get whatever additional career training they needed on the job. Researchers have suggested that American's early investment in universal high school education drove the U.S. economic advantage throughout the 20th century.² However, most other advanced industrial countries have now equaled or surpassed our high school graduation rates.

¹ Franko, Kelly, & Witko, 2016; Gaventa, 1982; Levin, 2011; Organisation for Economic Co-operation and Development, 2017.

² Goldin & Katz, 2009.

Historically, attempts to link public schools systematically to the demands of the workforce have waxed and waned. Educators, policymakers, and the private sector have periodically directed their attention to developing new strategies and allocating additional investments to better equip students for productive employment, but these efforts have not been sustained or brought to scale. Moreover, discussions and debate about career and technical education (CTE) and workforce preparation for employment have traditionally been siloed from broader discussions of education policy and largely remain separate.

Because workforce preparation has not been considered a core mission of schools, attempts to improve access to and delivery of career and technical education not been coherent or comprehensive. Instead, they have been characterized bursts of activity and investment, resulting in layers of poorly coordinated policy initiatives; insufficient investments; inadequate and underutilized programs (sprinkled with pockets of excellence); and a major dependence on an often-unresponsive private sector. Policies, oversight, and funding to prepare students for competitive employment are complex, fragmented, inadequate, and variable. For lack of a formal or reliable system of preparation, young people in the U.S. largely rely on informal systems to provide them with the knowledge, skills, experiences, and dispositions they need to negotiate their pathways to productive adulthood.

Once again the goal of improving students' pathways to careers has moved to the front burner of public-policy concerns. Globalization, rapid technological change, vanishing career paths for unskilled laborers, employers' need for workers with more sophisticated skills, and wide ongoing educational achievement gaps have fueled the growing realization that large numbers of young people are not being adequately prepared for many jobs that exist today and for the jobs that will exist in the future. The dismal job prospects and life chances of those who

are not properly prepared for today's economy has led to a renewed and more ardent interest in employment preparation issues among many educators, policymakers, employers, school officials, and antipoverty and equal-rights advocates.

Finally, in the wake of the 2016 election, recognition of the relationship between preparation for employment and preparation for civic participation has grown. Youth in poverty and youth of color, the subgroups of young people who are most likely to be disengaged from schooling and career pathways, are also among the least civically and politically engaged subgroups of youth.³ These young people are often cut off from civic activities like volunteering and group membership that correlate positively with school and employment success.⁴ They are also less likely to be civically engaged as adults.⁵ The disenfranchisement of so many Americans from our economic, political, and social institutions has left our nation more fractured and vulnerable perhaps than ever before.⁶ Our nation can no longer ignore the importance to our democracy of preparing all young people for the modern economy and for active civic participation.

William Symonds, Robert Schwartz, and Ronald F. Ferguson, authors of the influential 2011 report, *Pathways to Prosperity Meeting the Challenge of Preparing Young Americans for the 21st Century*, identify many contemporary barriers to comprehensive preparation for employment.⁷ Among other sticking points, they cite

³ Kawashima-Ginsberg, 2011; Philanthropy for Active Civic Engagement (PACE), 2010.

⁴ Opportunity Nation, 2014.

⁵ Levinson, 2012.

⁶ Kahne & Middaugh, 2008.

⁷ Symonds, Schwartz, & Ferguson, 2011, pp. 26-30.

- inconsistent quality in career and technical education programming “rooted in CTE’s troubled history, and compounded by local control of education, which has enabled huge variations in the quality of programs at the high school and community college level”;
- the lack of sufficient access to counseling, which is an “essential component of any effective pathways system.... In the U.S., our goal should be to assist every young adult beginning at the end of middle school to develop an individualized pathway plan that would include career objectives”;
- cultural barriers, based on the troubled history of vocational education, where career and technical education is “demeaned and disparaged”;
- the lack of a system of linkage between high school and postsecondary training/schooling; and
- the need for “a sea change in the role of business and other employers... most importantly, in providing greatly expanded opportunities for work-linked learning.”

While New York State is tackling some of these issues, the state could and should do much more. New York is one of 21 states in the country where courts have ruled that the state constitution entitles students to an education that prepares them for competitive employment (see appendix). In 2003, the New York Court of Appeals held in *Campaign for Fiscal Equity (CFE) v. State*, that Article XI of the state constitution entitles all students to a “meaningful high school education” that provides them the skills they need to function productively as capable citizens *and* to prepare them for competitive employment.⁸ The court reiterated this holding in 2017.⁹

Officials at both the state and local levels have made efforts to enhance the school-to-work path, but these efforts have been inconsistent, limited in their reach, and inadequately

⁸ *Campaign for Fiscal Equity v. State of New York*, 2003; *Aristy-Farer/NYSER v. State of New York*, 2017.

⁹ *NYSER v. State*, 2017.

funded. The system today falls far short of meeting the constitutional requirements for providing students “meaningful” programs necessary to give students the skills they need for productive employment. Moreover, New York’s education accountability system does not provide the data, monitoring, and reporting necessary to inform students and their families of their entitlements, illuminate problems, or incentivize or compel improvements.

In joining this conversation, we aim to situate the issue of preparation for the workplace in the broader context of students’ constitutional right to an education that provides the knowledge, skills, experiences, and values that are the foundations to be a productive citizen. We tie the renewed concern about preparing students for competitive employment with growing interest among educators, policymakers, business leaders, and the public at large with the need to prepare students to be effective citizens capable of safeguarding our democracy and stewarding our nation toward a greater realization of its democratic values. We propose some necessary reforms to improve students’ access to existing New York’s career and technical education pathways. But, we argue, high quality career pathways, including “9-14” programs that bridge secondary and postsecondary education, only serve our students if they are constructed on a strong foundation of basic educational opportunity for all, one that does not presently exist in New York or in most other states.

By linking preparation for work with the constitutional mandate to provide all students with the opportunity for a sound basic education that prepares students for productive citizenship, we hope to open this issue to a broader audience of educators, parents, school officials, researchers, advocates, and policymakers. For new audiences who have not already been in the trenches of policy and advocacy seeking authentic career pathways for all students, we provide an overview of the field, together with our rights-based perspective and

recommendations. For those who have been actively engaged in pushing research and policy ahead in career and technical education (CTE), we hope our rights-based perspective will add a new dimension of understanding and will help garner broad support for acceptable solutions to longstanding problems. The goal of this work is to improve New York’s system for preparing students for competitive employment and productive citizenship and as part of the education system that the state constitution requires and that our students deserve—and to establish it as a national model.

To prepare this report, we delved into the extensive literature on the history of U.S. policy related to preparing students for employment. Seeking lessons that might prevent the current wave of interest in career preparation from becoming another temporary swing of the pendulum, we closely examined past attempts to reform vocational education and CTE and the pattern of the recurring insights on what constitutes true reform in this area. We believe this gives us some additional insights on what needs to be done now to ensure all students in American schools access to productive pathways.

We conducted a comprehensive review of current policies and practices relating to career preparation in New York State and in a number of other states to provide a comparative perspective. And we examined the literature on current best practices. In addition, we analyzed state court school-funding equity and adequacy decisions in all 50 states to identify decisions and orders that deal with the issue of the state's responsibility to provide students the opportunity for a sound basic education and, specifically, to prepare students for competitive employment. Finally, we conducted a number of interviews and entered into dialogue with educators, practitioners, researchers, educators, administrators, workforce training providers, and advocates nationally and in New York State in order better to understand their work and their needs.

This policy paper, therefore, examines the history of federal and local efforts to create pathways to careers starting with vocational education, looks at New York's current policy landscape and innovative policies and practices in career and technical education, and examines the options for systemic and sustained progress. We also then consider how this preparation for the workplace relates to the core mission of the schools to prepare productive citizens and the implications of the state's constitutional obligation in this regard for broader reform initiatives in the schools. (Readers who are familiar with the history of federal and state reform efforts might want to skip ahead to the section on current New York career preparation policies.)

The challenges are substantial. Improving pathways to competitive employment and productive citizenship requires investments in school facilities, instructional materials, teachers, and other support staff, and in systems that monitor success and provide support to students after they graduate. But school-to-work initiatives are particularly challenging because the workplace is, in many ways, outside the school sphere. Public officials have limited reach with respect to private businesses. School-to-work partnerships are resource intensive. The incentives and needs of the student, schools, and businesses do not often align. Locating the places where they do converge requires networks of linkages that often do not exist, particularly for under-resourced schools in neighborhoods isolated from businesses. And, for many young people, immediate needs for income outweigh the tenuous potential of postsecondary school or training. These short-term needs are increasingly available through an expanding low-skill service industry.

Despite these considerable obstacles, it is clear that public officials can and must do more. The steps include ensuring sufficient access to preparation for competitive employment and productive citizenship for all students, adequate and systemic funding, expanded school and workplace linkages and enhanced data collection for monitoring and accountability. These

reforms build from existing weaknesses identified by school officials, researchers, and advocacy groups and policy proposals they have put forward for dealing with them. We take these prescriptions one step further, though, by connecting the development of skills and dispositions needed for adaptive life time employment that are transferrable across industries with the skills and dispositions necessary for productive citizenship and civic participation, and by situating the need for these reforms as a fundamental right for students. In doing so, we create a more comprehensive vision of public education for the next generations of students.

Although high rates of youth unemployment occur in every country, the problem is more pronounced in the United States compared with most other advanced industrial nations.¹⁰ In the U.S., the percentage of 20-24 year olds who are not employed, enrolled in school, or enrolled in a career-training program was 15.8% in 2015, compared with 9.3% in Germany, 10.1% in Japan, and 10.2% in Norway. In 2015, 11.5% of New York youth ages 16-24 were neither in school nor employed, with significant racial disparities. Among white youth, 9.1% was neither employed nor in school, but the youth-disconnection rate for Latino youth was 15.7% and for black youth 18%.¹¹ The unemployment rate for New Yorkers without a high-school diploma or equivalent is twice that of individuals with a high-school degree. For the New Yorkers without a high-school degree who manage to find a job, the average weekly earnings are less than three-quarters the earnings of individuals with a high-school diploma.¹²

A 2012 report by economists Belfield, Levin, and Rosen examined the taxpayer and social costs for the United States of young people aged 16-24 who are neither in school nor in the labor market. Taxpayer costs refer directly to lost tax revenue from reduced income for these

¹⁰ Organisation for Economic Co-operation and Development, 2017.

¹¹ Burd-Sharps & Lewis, 2017.

¹² New York State Department of Labor, 2016.

disconnected youth and public costs associated with them. Social costs are broader, referring to public and private resource implications, including lost earnings plus additional spending associated with crime, health, and welfare. The authors estimate a direct taxpayer cost of \$13,900 per individual each year from age 16-24, and a social burden of \$37,450 per year. Since these costs accrue throughout a lifetime, the authors estimate that the direct taxpayer burden is \$170,740 per individual and a social burden of nearly \$530,000 over the longer term, generating an aggregate taxpayer burden of \$1.56 trillion and \$4.75 trillion respectively.¹³

Some reports indicate that there still are and will be many good jobs that do not require a postsecondary degree, but that our current high school CTE programs are not sufficiently preparing students to meet these needs.¹⁴ Other projections suggest that associate's degrees or occupational certificates will be a requirement for two-thirds of the jobs created in the next decade.¹⁵ Yet the United States has seen very slow growth in college completion rates and dramatically widening gaps between advantaged and disadvantaged populations.¹⁶ America's international competitive position has also been detrimentally affected by these trends since "[i]n an era in which education has never been more important to economic success, the U.S. has fallen behind many other nations in educational attainment and achievement."¹⁷

Historical Overview Shows the Real Issues of Today Were Present for Decades

A look back at the history of U.S. efforts to improve policy and practice in career and technical education shows that many of the same concerns and issues that are at the forefront of the field today have been raised time and again. Generally in reaction to economic downturns,

¹³ Belfield, Levin, & Rosen, 2012.

¹⁴ Symonds et al., 2011.

¹⁵ Symonds et al., 2011.

¹⁶ Cahalan, Perna, Yamashita, Ruiz, & Franklin, 2017; Ryan & Bauman, 2015.

¹⁷ Symonds et al., 2011, p. 1.

international competition, or technological changes, federal and state efforts have acknowledged a lack of a range of well-developed pathways from high school to living-wage jobs and family-sustaining careers; a lack of adequate investment in career preparation in the nation's schools that affects our economy and competitiveness; a tendency to isolate career and technical education from general academic education that is ineffective, unproductive, and often discriminatory.

These patterns of intermittent attention have resulted in fragmentary and piecemeal approaches and only incremental improvement. Our goal in tracing these policy-making patterns is to suggest that more of the same is unlikely to effect a complete solution. We submit that taking a rights-based approach can set in motion a more comprehensive and effective approach to solving this longstanding problem.

The Episodic Federal Involvement in Career and Technical Education

At various times in our country's history, the federal government has acknowledged the need to enhance career pathways and has implemented policies to improve formal linkages from high school (and, for some, through college) into the workforce. These initiatives sought, among other things, to improve connections between educators and employers and to provide students early on with practical experiences in the workplace. But these efforts have never turned into sustained action.

The expansion of education in the 20th century prioritized general education for all students; however, there were repeated calls for vocational education and the inclusion of courses that focused explicitly on carrying out specific job functions.¹⁸ Proponents of career-

¹⁸ Goldin, & Katz, 2009; Grubb & Lazerson, 2005; Labaree, 1997.

specific education positioned their vision as pragmatic, in opposition to the lofty but unrealistic ideal of providing a rounded, classical education to everyone.¹⁹

The federal Commission on National Aid to Vocational Education noted in 1914 that “The American people have hardly begun the work of providing for the practical education of...our wageworkers.”²⁰ Providing the script for dozens of reports over the next century, the authors cited other nations, notably Germany, as a model for the United States:

It is substantially true that practically every German citizen who could profit by it may receive vocational training for his life work in the schools and classes supported out of the public treasury. Since commercial prosperity depends largely upon the skill and well-being of our workers, the outlook for American commerce, in competition with that of our German neighbors, is under present conditions not very promising.²¹

Since labor was mobile, the Commission’s authors argued that workforce training was a national concern and, therefore, required federal funding targeted to vocations that were in demand.

Three years later, the federal government passed legislation incorporating many of the Commission’s recommendations. The Smith-Hughes Act of 1917 provided the first federal funding for vocational education for the public schools. Congress appropriated \$3 million in 1917,²² a total that increased to \$7.2 million annually with \$3 million each for agricultural training and trade, industrial and home-economics education, and \$1 million for teacher training to partially reimburse state costs; the federal government also required a state match.²³

Smith-Hughes also separated career-focused courses from general academic curricula, disregarding the Commission’s advice, as well as that of other influential educators, such as John Dewey, who called for combining vocational training and academic pursuits. The Act required

¹⁹ Labaree, 1997.

²⁰ Commission on National Aid to Vocational Education, 1914, p. 17.

²¹ Commission on National Aid to Vocational Education, 1914, p. 17.

²² LaFollette, 2011.

²³ Buerik, 1981; Kliever, 1965; Levitan, 1963.

states to create separate boards for vocational education and laid the groundwork for the separation of vocational education from the comprehensive high school tracks.²⁴

The establishment of separate academic and vocational tracks has had a profound, negative impact on equal educational opportunity.²⁵ From the start, students of color and students in poverty were disproportionately steered into vocational education.²⁶ This academic sorting provided a way for the system to integrate new populations into an expanding educational system, while relegating many of them to tracks that stigmatized them and limited their educational and career opportunities.²⁷

Federal investments in vocational education increased minimally from Smith-Hughes in 1917 to the middle of the 20th century. In 1936, Congress increased its appropriation to \$14 million and expanded the reimbursable categories to include “distributive occupations,” which included training for marketing, sales, and pharmaceutical work.²⁸ Funding for vocational education increased again in 1946 by \$29 million annually with the passage of the George-Barden Act.²⁹

Calls for a greater federal role in education substantially grew in the post-WWII period. The National Defense Act of 1958, created in response to Sputnik, designated education as a national security concern.³⁰ The Act was the first comprehensive federal funding bill for general education and also included \$15 million annually for STEM training.³¹ But, by 1961, the federal

²⁴ Gordon, 2003.

²⁵ Grubb & Lazerson, 2005; Labaree, 1997.

²⁶ Oakes, 1992.

²⁷ Mickelson, 2001; Oakes, 1983.

²⁸ Association for Career and Technical Education, 2002; Buerik, 1981.

²⁹ Levitan, 1963.

³⁰ Gordon, 2003; Kliever, 1965.

³¹ Sundquist, 1968.

government contributed just \$48 million of the approximately \$750 million spent nationally on vocational education.³²

The Vocational Education Act of 1963 increased federal investments and the scope of course offerings by local school systems. In the years leading up to its passage, concerns about unemployment and gaps in the school-to-work pipeline spurred federal initiatives that focused on adult training programs.³³ The Act was intended to provide access to vocational programs for all students. Amendments in 1968 and 1976 allowed funds to be used for programs geared not only to high school and postsecondary students, but also to out-of-school youth.³⁴

For reasons similar to those in prior decades—fears of declining international economic competitiveness and lagging academic outcomes—there was a renewed push for expansion of vocational education in the early 1980s. The influential 1983 *A Nation at Risk* report, which excoriated the United States for its mediocre performance in an increasingly competitive, changing international market, called for greater academic rigor and set the stage for a major emphasis on standards-based reforms.³⁵

Vocational education was included in the wave of reforms that followed, and funding was substantially increased. The Perkins Act of 1984 assisted state efforts to expand and improve vocational education programming.³⁶ Federal legislators appropriated \$783 million to states through Perkins and increased the funding to more than \$850 million in 1990.³⁷ Historian Howard Gordon notes that the Perkins Act moved “vocational education from relative obscurity

³² Levitan, 1963.

³³ Kliever, 1965.

³⁴ Threeton, 2007.

³⁵ National Commission on Excellence in Education, 1983.

³⁶ Gordon, 2003.

³⁷ U.S. Department of Education, 2001.

to prominence.”³⁸ Still, “prominence” for career and technical education is relative. In 1990, the federal line item for all of career and technical education amounted to about 9% of the total federal spending on elementary and secondary education. By 2015, the relative share of funding would decline to 3%.³⁹

The Perkins Act also required states to assess effectiveness of their vocational programs and provided funding to states based on a statutory formula that included additional funding for disadvantaged students. In subsequent reauthorizations, the accountability measures became more refined and the federal government required states to report their data publicly.⁴⁰ The first reauthorization of Perkins (Perkins II) altered the federal funding formula to provide more money to disadvantaged students and included a separate, dedicated funding stream, “Tech Prep,” that linked the last two years of high school with the first two years of college. The aim was to strike a better balance between the predominant emphasis in American high schools on preparation for four-year colleges by developing a bridge from high school to two-year certifications in career technical fields.⁴¹

Tech Prep targeted the students in the middle range of academic performance; it was designed to provide this “neglected majority” with more focused training in technical fields and formal links to community colleges.⁴² Federal allocations to states for Tech Prep were typically in the range of \$100 million per year, with each state receiving at least some money to create articulation agreements between high schools and postsecondary institutions, a continuous

³⁸ Gordon, 2003, p. 57.

³⁹ Calculations derived from U.S. Education Department, 2016a.

⁴⁰ U.S. Department of Education, 2014.

⁴¹ Parnell, 1985.

⁴² Cellini, 2006.

program of study between the last two years of high school and first two years of college, aligned curriculum between the programs, training for counselors, and recruiting services.⁴³

Congress passed a separate law intended to link secondary education more directly to the workforce. The School to Work Opportunities Act (STWOA) of 1994⁴⁴ was created in response to renewed concerns that, compared with other countries, American schools failed to prepare students for jobs that do not require four-year college degrees.⁴⁵ A Senate report once again complained:

The United States lacks a comprehensive, formal system to prepare youth for high-skill, high-wage jobs. So while our major national competitors are redefining and improving school-to-work transition systems, the United States has yet to develop one. In practical terms, this means that, unlike their peers in Japan or Germany, for example, young Americans entering the work force after high school make their way through school and into their first jobs with little guidance, direction or support.⁴⁶

The law provided states five years of seed money to establish career development as a key part of education through the development of comprehensive school-to-work transition systems.⁴⁷

These systems were to be created at the local level and to include partnerships between schools, employers, labor, and other groups. The statute focused on three primary initiatives: making school curriculum more relevant to career paths and work skills, increasing counseling around career development, and linking schools with more work-based learning opportunities.⁴⁸

Enacted during a period of concern about the national debt, STWOA included a firm sunset date. After the initial federal funding for these reforms, the states would be expected to

⁴³ Cellini, 2006. Despite some evidence of its success, direct federal funding for Tech Prep was eliminated in fiscal year 2011 as a cost-savings measure following the 2008 recession (Advance CTE, 2011).

⁴⁴ School to Work Opportunities Act, 1994.

⁴⁵ Gordon, 2003.

⁴⁶ Senate report no. 103-179, 1993, p. 7.

⁴⁷ Senate report no. 103-179, 1993.

⁴⁸ Hershey, Silverberg, Haimson, Hudis, & Jackson, 1999.

fund the comprehensive school-to-work systems that they had developed on a permanent basis.⁴⁹ However, funding for the Act from 1994 to 2000 averaged about \$330 million per year, an amount that, when divided among the 50 states, provided amounts too small to accomplish these objectives.⁵⁰

While it did not drive a major transformation of American education, STWOA did make some important contributions to career education. In total, the act contributed to about 1,000 local school-to-work partnerships that included over 3,500 postsecondary institutions.⁵¹ Research on initiatives associated with the program found a number of positive signs, including increased employer engagement, fewer school dropouts, better attendance and grades, and access to work-based learning and other career development activities.⁵² However, students rarely participated in the full spectrum of the initiatives that proponents had envisioned. Brief workplace visits and job shadowing were the most common work-based learning activities.⁵³ A study of eight early-funded states found just 3% of high school seniors participated in the three main activities promoted in the legislation: career-related academics, comprehensive career development, and work-based training.⁵⁴

Funding for STWOA ended in 2001, at the time of the passage of the No Child Left Behind Act (NCLB).⁵⁵ However, some elements of the program—namely the development of career pathways and workplace linkages—were incorporated in the most recent Perkins reauthorization. Perkins IV of 2006 requires recipient schools to provide at least one “program of study” that links a CTE course sequence from high school to higher education.

⁴⁹ Hughes et al., 2001.

⁵⁰ Grubb, 1996.

⁵¹ Gordon, 2003.

⁵² Hughes et al., 2001.

⁵³ Hershey et al., 1999.

⁵⁴ Hershey et al., 1999.

⁵⁵ Threeton, 2007.

Other recent federal statutes have also provided some further support for career and technical education. The 2015 reauthorization of the Elementary and Secondary Education Act, the Every Student Succeeds Act (ESSA), includes what some analysts have described as an “unprecedented incorporation of CTE.”⁵⁶ Whereas its predecessor NCLB statute did not mention “career and technical education,” ESSA requires states to demonstrate an alignment between academic standards and CTE standards and for state plans to include information regarding coordination, integration, and support of academic and CTE content, work-based learning programs, and transitions from across grade spans and into the postsecondary systems.⁵⁷ A reauthorization of the Perkins Act is currently pending. Both houses of Congress developed legislation at the end of the 2016 that authorize grant programs to expand CTE programs and allow states more flexibility in program design.⁵⁸

The federal government has also built on state and local initiatives around dual enrollment. Dual enrollment, typically defined as the opportunity for high school students to take college courses for college credits, has expanded rapidly in the last few decades to include nearly 1.3 million students as of 2010-11, the most recent year for which data are available.⁵⁹ Historically dual enrollment has been shown to benefit more advantaged, college-track students, but there are indications that in recent years historically disadvantaged students and career-focused youth are also benefitting. The Community College Research Center’s examination of dual enrollment among career-focused tracks in California found that dual enrollees had higher high school graduation and college persistence rates, and more credits than students in

⁵⁶ Dougherty, & Lombardi, 2016, p. 328.

⁵⁷ Elementary and Secondary Education Act of 1965, U.S. P.L. 114–95 (2015).

⁵⁸ Ujifusa, 2016b, 2016c.

⁵⁹ Marken, Gray, & Lewis, 2013.

comparison groups.⁶⁰ In 2015, the U.S. Department of Education provided \$20 million to expand the use of Pell grants to high school students to pay for dual enrollment.⁶¹ Federal law also allows Perkins dollars to be used for dual enrollment at the state's discretion.

While the aforementioned programs focus primarily on efforts at the K-12 level, federal career pathways initiatives also extend through the postsecondary arena into adulthood, spanning governmental agencies at the federal, state, and local levels. The Workforce Innovation and Opportunity Act (WIOA) is one example. WIOA provides federal support to states and cities to assist efforts to retrain workers for a changing economy.⁶² The program is intended to enhance and expand coordination and services among state agencies and organizations that provide employment and training services for adults, dislocated workers, and youth aged 16-24 who are not in school and unemployed.⁶³ Federal funding provides resources for states to improve linkages between the unemployed or underemployed to training programs in growing fields.

States received approximately \$3.39 billion through the U.S. Department of Labor in 2016. New York, for example, was allocated \$209 million through the various federal formulas, about one-quarter of which must be designated for youth activities.⁶⁴ WIOA requires that states develop a plan to prepare workers and meet employer needs. New York's plan, approved in 2016, mentions the state's career pathways work as part of its effort to address youth training. According to the plan, New York intends to place a stronger emphasis on career pathways and

⁶⁰ A 2012 summary of the initiative advocated for expanding dual enrollment for career-training students (see Hughes, Rodriguez, Edwards, & Belfield, 2012).

⁶¹ U.S. Department of Education, 2015.

⁶² Joachim, 2014; Porter, 2016.

⁶³ U.S. Department of Labor, n.d.

⁶⁴ U.S. Department of Labor, n.d.

sector partnerships primarily for individuals aged 18-24, improve offerings and programs for out-of-school youth—particularly students with disabilities.⁶⁵

New York State’s Anemic History of Career and Technical Education

New York State’s history of preparing students for the world of work is also one of intermittent attention and insufficient investment. Policies have ping-ponged back and forth and, as is generally true in the rest of the United States, preparation for employment has taken a secondary role to general academics.⁶⁶

In the late 19th and early 20th centuries, vocational education in New York was largely confined to private trade or correspondence schools.⁶⁷ As public high schools expanded in the 1910s and 1920s, they began to offer some career-training opportunities.⁶⁸ An official stated at the time, “As the armor of the Middle Ages would be wholly inadequate to resist the modern bullet, so the ancient equipment of the three R’s is totally inadequate to equip the coming generation for the place that they must take in our essentially industrial civilization.”⁶⁹

The expansion of public career-training programs proceeded slowly. In 1908, in an attempt to ensure that students were better prepared for the modern workplace, the New York City Board of Education established some school-based workshops that provided industry-aligned training tasks for all boys 12 or older, and it opened several new vocational schools that were separate from the general academic high schools. Yet a comprehensive study of the New York City public school system issued five years after the city’s vocational experiment began stated: “The provision for industrial education is so meagre as to be almost negligible; neither

⁶⁵ New York State Workforce Innovation and Opportunity Act, 2016.

⁶⁶ Bailey, 1992.

⁶⁷ Bailey, 1992.

⁶⁸ Goldin & Katz, 2009.

⁶⁹ *New York Times*, 1908.

industrial nor commercial education is so maintained as to secure the necessary effective cooperation of industry and commerce.”⁷⁰

At that time, the *total* enrollment in New York high schools, both city and state, was considerably lower than in many other parts of the country, perhaps because of the extensive industrialization of the northeastern states.⁷¹ Rather than attend school, many high-school-aged students worked in factories. The Great Depression and subsequent job losses changed this dynamic, forcing young people out of the workforce and into schools.

High school enrollment and graduation rates in New York spiked in the 1930s.⁷² The nature of schooling changed as well. The state legislature had in 1919, in accordance with the priorities in the federal Smith-Hughes Act, passed a bill establishing separate schools for industrial education.⁷³ In the Depression era, New York City officials moved to convert more schools into “vocational high schools.” Enrollment in these schools increased from 3% in 1929-30 to 20% in 1944-45.⁷⁴

In the decades following the Depression, however, these policies began to raise concerns about discriminatory tracking. Thomas Bailey writes, “[P]ractical courses proliferated in all the high schools, while at the same time the reputation of vocational education became clearly one of serving slow students who could not do well or who were discouraged from doing well in academic pursuits.”⁷⁵ A 1951 New York State Education Department report showed that,

⁷⁰ *New York Times*, 1913.

⁷¹ Goldin, 1999.

⁷² Goldin, 1999; New York State Department of Education, 1951.

⁷³ New York State Department of Education, 1951.

⁷⁴ Bailey, 1992.

⁷⁵ Bailey, 1992, p. 53.

compared with students in general academic schools, vocational school students performed lower on measures of reading and math, attendance, and health.⁷⁶

Nevertheless, at the state level, New York State continued to foster separate vocational educational centers by creating Boards of Cooperative Educational Services (BOCES), sites that provided regional vocational-education services that students from many upstate school districts could attend. BOCES would become primary sites for vocational education in much of the state in the subsequent decades.⁷⁷ BOCES do not operate in New York City and the development of vocational education in the nation's largest school system has followed a different path.

In the 1960s, pressures to promote school desegregation affected New York City as well as other large urban school systems around the country. To spur integration, the New York City Board of Education began to convert most separate academic and vocational schools into "comprehensive" high schools.⁷⁸ The board also created magnet schools that drew students from throughout a borough or even from throughout the city. A number of these schools had a career focus.⁷⁹

No new vocational schools were created in New York City during this era. Existing vocational schools were "allowed...to linger with outdated vocational education programs for decades"⁸⁰ and student interest in these schools waned. In an effort to provide better and more flexible pathways to careers for students, however, the Board of Education created a set of "educational option schools." These schools offered career-specific instruction but also required students to take a full academic program to ensure that they were also prepared for college,

⁷⁶ Bailey, 1992; New York State Education Department, 1951.

⁷⁷ Saslow, 1998.

⁷⁸ Buder, 1966.

⁷⁹ Bailey, 1992.

⁸⁰ New York City Department of Education, n.d.

should they decide to pursue that path. The schools were allowed to screen and select students, and recruit from a citywide population.

These option schools proved to be popular. By the mid-1980s, they reportedly received 15 applicants for every opening⁸¹ and their numbers then expanded dramatically. By the late 1980s, enrollment in option schools among entering ninth graders was just slightly below that of comprehensive high schools (about one in three attended education option schools compared with slightly under 40% in comprehensive schools).⁸² Notably, only about 10% of New York City students attended a vocational-specific school (a percentage that has persisted to the present time).⁸³

By this time, though, growing concerns about educational stratification and tracking, anxieties about global competitiveness, and complaints from employers about students' lack of preparedness,⁸⁴ led state and federal policymakers to turn their attention to increasing schools' academic rigor. In 1984, a year after the publication of *A Nation at Risk*, the Board of Regents passed an influential "Action Plan" that sought to raise academic standards and prepare all students for college. They doubled high school math and science course requirements from one to two years, and added a fourth year of social studies and art or music.

The concern about economic decline and international competition that spurred these actions also led to renewed interest in improving students' preparation for employment. The Secretary's Commission on Achieving Necessary Skills (SCANS) report, released in 1991 by the U.S. Department of Labor, described the hard and soft skills needed for success in the new

⁸¹ Maeroff, 1984.

⁸² Crain, Heebner, & Si, 1992.

⁸³ Crain et al., 1992.

⁸⁴ Fiske, 1984.

economy.⁸⁵ New York State officials channeled these concerns into a renewed focus on vocational education. In 1991, Governor Mario Cuomo appointed a Task Force on Creating Career Pathways for New York State Youth.⁸⁶ One year later, the Task Force report called for an overhaul of the education system, including new graduation requirements for all New York students, a coherent school-to-work system, and standards for vocational students.⁸⁷ The initiative helped New York become one of eight states to receive the first round of federal School to Work Opportunity Act grants.⁸⁸ From 1994-96, the state received approximately \$50 million for STWOA.

The New York State Education Department also promulgated curriculum standards in seven subject areas including Career Development and Occupational Studies (CDOS). Under the standards, students in the career education course of study were expected to create individual career plans, use what they learned to solve real-world problems, and gain skills needed in the workplace or postsecondary level.⁸⁹ New York's standards embraced the new set of skills described in the SCANS report; the competencies included basic skills, thinking skills, and interpersonal skills.⁹⁰

But ultimately, the vocational education initiatives took a backseat to the standards and accountability push that began in the mid-'80s and reached new heights a decade later. In 1996, New York State adopted new graduation requirements that applied to all students, including those in vocational education programs. All students were required to earn 22 units of credit and pass exams in five subject areas—English, math, science, global studies, and American history

⁸⁵ U.S. Department of Labor, 1991.

⁸⁶ Sack, 1990.

⁸⁷ New York State Job Training Partnership Council, 1992.

⁸⁸ Smith, 1995.

⁸⁹ New York State Education Department, 2013.

⁹⁰ New York State Education Department, 1995.

and government—to graduate high school.⁹¹ Although the law applied to students in vocationally oriented programs (now called career and technical education programs), their needs were not fully taken into account, since time spent on a wide range of mandated general academic subjects reduced time available for career preparation.

In 1999, the Regents created an advisory panel to help CTE students meet the new graduation requirements and improve the quality of CTE programs.⁹² This effort led to an overhaul of the state’s CTE policy in 2001. The new policy required school districts and BOCES seeking CTE program approval to submit a detailed explanation of their CTE offerings, including evidence of (1) a sequential program of study, (2) how both the academic and technical curricula were aligned to state standards, (3) the extent to which technical assessments are based on industry standards, (4) appropriate certifications of staff, (5) articulation agreements with postsecondary sector, and (6) whether work-based learning opportunities were available for all students.⁹³ The policy also created “integrated CTE courses” that allow students in approved CTE programs to take specially developed courses that combine CTE with English, social studies, math, or science. These courses can be applied to a maximum of one unit of credit in each of the four core academic areas and, at the same time, can be used to meet CTE program requirements.⁹⁴ Further, the policy required approved programs to present data on progress, performance, and placement in jobs or higher education.⁹⁵

Consultants commissioned by Board of Regents to examine the 2001 CTE policy reforms two years after their adoption reported some improvement in the overall quality in CTE offerings throughout the state, but they also found that quality varied markedly by program type. The

⁹¹ Holloway, 2000.

⁹² New York State Education Department, 2012.

⁹³ New York State Education Department, 2001.

⁹⁴ New York State Education Department, 2001.

⁹⁵ New York State Education Department, 2010.

report also identified a number of implementation problems including scheduling difficulties in meeting both academic and work-based learning requirements, inadequate resources and work overload. The consultants further found that CTE classrooms were crowded and understaffed.⁹⁶ As we discuss below, these and other challenges persist.

Current Policies Governing New York Students' Access to Career and Technical Education

According to the New York State Education Department (NYSED), career and technical education programs offer students “an opportunity to apply academic concepts to real-world situations; preparation for industry-based assessments or certifications; the opportunity to earn college credit or advanced standing while still in high school; and work-based learning opportunities where students demonstrate mastery of skills essential in the workplace.”⁹⁷ New York State education law requires local school districts to provide students with access to CTE and to develop programming that reflects contemporary workforce needs:

The board of education of each school district shall provide secondary school pupils and adults access to programs of career education, commensurate with the interests and capabilities of those desiring and having a need for preparatory training, retraining or upgrading for employment, and develop realistic programs in accord with manpower needs in existing and emerging occupations for present and projected employment opportunities.⁹⁸

The regulations of the commissioner of education build on this statute by requiring specifically that “All public school districts offer students the opportunity to complete a three- or five-unit

⁹⁶ MAGI Educational Services, 2005.

⁹⁷ New York State Education Department, n.d.-b.

⁹⁸ N.Y. Educ. Law § 4602.

sequence” in career and technical education, and the chance to begin this sequence in ninth grade.⁹⁹

The New York State program requirements for students in grades 1-8 include the mandate that all students receive instruction designed to facilitate their attainment of the state elementary and intermediate learning standards in career development and occupational studies. In addition, in grades 7 and 8, students are required to complete one unit of study in technology education, and three-quarters of a unit of study in “home and career skills.”¹⁰⁰ Students in grade 8 must also have the opportunity to accelerate their studies by taking high-school-level courses in math and at least one other subject including English, social studies, languages other than English, art, music, career and technical education subjects or science courses.¹⁰¹

NYSED has approved CTE programs in six content areas: agricultural education; business and marketing; family and consumer sciences; health occupations; technology; and trade, technical and industrial education. Within those areas, there are 16 U.S. Department of Education-endorsed “career clusters” that encompass hundreds of specific programs.¹⁰² To be eligible for federal CTE funding through the Perkins Act, school districts must offer at least three of the 16 career clusters.

In secondary school, individual career and technical education courses and full CTE programs of study can be offered at comprehensive high schools, in special CTE high schools, in

⁹⁹ 8 NYCRR Section 100.2 (h).

¹⁰⁰ 8 NYCRR Section 100.3 (b); 100.4 (b) (c).

¹⁰¹ 8 NYCRR Section 100.4 (d).

¹⁰² Agriculture, Food & Natural Resources; Architecture & Construction; Arts, A/V Technology & Communications; Business Management & Administration; Education & Training; Finance; Government & Public Administration; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law, Public Safety, Corrections & Security; Manufacturing; Marketing; Science, Technology, Engineering & Mathematics; Transportation, Distribution & Logistics

career academies within schools, and/or, outside of the Big Five city school districts,¹⁰³ through BOCES centers. In addition, some schools provide students access to college-level CTE courses through dual enrollment programs in partnership with local colleges or universities. Some students are able to use this option to take CTE classes that may lead to industry-recognized credentials.¹⁰⁴

Some New York students can take college-level CTE courses while in secondary school through early-college high-school programs. Such programs offer students the opportunity and support to complete 60 transferable college credits or an associate degree by the time they graduate.¹⁰⁵ New York City's first early-college high school program dedicated to CTE is the Pathways in Technology Early College High School (P-Tech). A partnership between the NYCDOE, CUNY, and IBM, it is a six-year ("9-14") program that allows students to earn an associate's degree in applied science upon successful completion.¹⁰⁶ IBM helped design the curriculum and provides mentors for each enrollee and priority hiring for graduates. P-Tech enrollment has increased steadily, with its ninth-grade class growing from 104 students in 2011-12 to 517 students in 2015-16.

In 2011-12, P-Tech was designated a turnaround model and received federal School Improvement Grant (SIG) dollars. In 2013, the state elevated it into a statewide initiative; the New York State Pathways in Technology program (NYS P-Tech) provides competitive grants

¹⁰³ New York City, Buffalo, Rochester, Syracuse, and Yonkers.

¹⁰⁴ The New York City Department of Education has established a dual-enrollment program with the City University of New York (CUNY) called College Now. CUNY's website indicates that dual-enrollment options exist in 400 of the city's 408 high schools (up from approximately 300 in 2006 (City University of New York, 2016; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). Students must meet benchmarks in reading or math for enrollment in college-credit courses, with lower thresholds for enrollment in pre-college or developmental courses (City University of New York, n.d.-a), and College Now is free to all participating NYC high school students (City University of New York, n.d.-b).

¹⁰⁵ See http://www.highered.nysed.gov/kiap/SmartScholarsEarlyCollegeHighSchool_000.htm.

¹⁰⁶ Cavanaugh, 2013a.

that provide schools funding to create 9-14 programs in partnership with a higher education institution and local businesses.¹⁰⁷ By 2016, a total of 33 schools in three cohorts had received awards through NYS P-Tech. The New York City Department of Education lists three additional P-Tech schools that were established in the last five years, without NYS P-Tech awards.¹⁰⁸

Despite these innovations, access to CTE course offerings and other supports is limited, and does not meet the constitutional requirement to prepare all students for competitive employment and productive citizenship. New York State requires each school district to offer students the opportunity to complete a CTE course sequence in its schools or through BOCES. However, the state regulations do not provide any guidance as to what such access must entail. The state does not require every high school to provide any specific courses in CTE or career development and occupational studies.¹⁰⁹ (In fact, CDOS is the only area in which the state has established standards with no instructional or course requirements.)

It should not come as a surprise that, overall, relatively few New York high school students have access to and are able to complete CTE coursework. In 2014-15, less than 16% of New York high schoolers completed at least one CTE course and about 6% completed two or more CTE courses.¹¹⁰ Only 5% of 2016 high school graduates in New York State received a Regents diploma with a CTE endorsement (and only 1% received an advanced Regents with a CTE endorsement).¹¹¹ As a June 2012 Regents policy memo describing the K-12 CTE learning continuum concluded, “Currently, not all students who could benefit from approved CTE programs have access.”¹¹² This same memo found that “the statewide delivery of the CTE

¹⁰⁷ Cavanaugh, 2013b.

¹⁰⁸ New York State Education Department, n.d.-d.

¹⁰⁹ New York State Education Department, n.d.-c.

¹¹⁰ Authors’ calculations based on data from the New York State Department of Education.

¹¹¹ Authors’ calculations based on data from the New York State Department of Education.

¹¹² New York State Education Department, 2012, p. 2.

learning continuum is uneven; district capacity to offer meaningful CTE experiences is varied; and gaps in opportunity exist.”¹¹³ It cites an insufficient middle school CTE curriculum and a lack of CTE courses availability for ninth and tenth grade students, noting these are “critical years for academic credit accumulation.”¹¹⁴

The implications of inadequate access to CTE recently got even graver. In 2015, as part of an initiative to provide students with diverse interests a broader set of options for meeting graduation standards, the New York Board of Regents adopted new policies that provide “multiple pathways” to graduation. Students are now required to pass Regents exams in four subjects—ELA, math, science, and social studies and then must choose for their fifth assessment from a number of different “pathway” assessment options.¹¹⁵ One new pathway allows students who have completed an approved CTE program of study to use an approved CTE assessment.¹¹⁶ In June 2016, the Regents further amended the pathways to include the “Career Development Occupational Studies (CDOS) commencement credential,” based on a career plan, work experience, and meeting commencement-level CDOS learning standards, as a valid substitute for a fifth assessment.¹¹⁷ These policy changes were not accompanied by new requirements that schools actually provide more students access to CTE or CDOS courses or give more students assistance in obtaining work experience or in constructing a career plan.

¹¹³ New York State Education Department, 2012, p. 2.

¹¹⁴ New York State Education Department, 2012, p. 2.

¹¹⁵ New York State Education Department, 2017b.

¹¹⁶ New York State Education Department, 2015.

¹¹⁷ New York State Education Department, 2016; Disare, 2016a. This credential was originally intended for and applied to students with disabilities, and then extended to all students.

Taking a Rights-Based Approach to Career Preparation to Move Beyond Intermittent Attention and Incremental Improvement

As we have described, over the decades, elected officials and education leaders have cycled through reforms in an attempt to improve performance and outcomes for youth who have been historically disadvantaged by race, ethnicity, poverty, and poor public policy. At various times, our nation has been motivated to increase efforts to ameliorate the economic and social costs of the nation's failure to provide adequate and equal opportunities for all of its citizens. The transitory nature of many of the policy changes and investments has aptly been compared to a pendulum, with the weight of attention swinging back and forth between competing priorities.¹¹⁸

In the 1990s and 2000s, the education policy focus swung toward standards-based reforms and accountability with the goal of preparing many more students for college. Recently, attention nationally has tacked back slightly as policy discussions among federal, state, local, and nongovernmental actors have embraced career and technical education as a path out of poverty for many young people.¹¹⁹ The goal of improving pathways to unfilled jobs and competitive careers is again on the front burner, and the field is receiving renewed consideration in the national education policy conversation. Around the country there appears to be bipartisan support for progress in this area. The Carl D. Perkins Career and Technical Education Improvement Act, which provides federal funding for career and technical education, is more than a decade overdue for reauthorization, and, even in the current chaotic and divisive political climate, it appears to be one area where political agreement might be found.¹²⁰

¹¹⁸ Labaree, 1997.

¹¹⁹ Kelly, 2016; Sahm, 2016.

¹²⁰ Ujifusa, 2017.

In many states, there has been new momentum to improve access to quality career and technical education in the public schools. In 2016 alone, “42 states carried out a total of 139 policy actions relevant to CTE, including laws, executive orders, board of education actions, budget provisions and ballot initiatives,” according to Advance CTE, which for the last four years has undertaken annual review of CTE and career-readiness policies in the U.S. states and territories.¹²¹ States have added funding to support CTE activities, created policies to improve industry partnerships and work-based learning, and adopted policies facilitating dual enrollment and early college programs and the attainment of industry-recognized credentials.

Experts have reached a general consensus about the resources and practices that are necessary for effective career and technical education. These include

- high-quality teaching and instructional support;
- up-to-date facilities and equipment;
- curricula that provide strong general academics; specific skills related to professions that are in high-demand; and problem-solving, communication, and other skills that will allow workers to adapt to changing job needs;
- sufficient staffing to ensure necessary counseling support and seamless linkages and transitions;
- meaningful real-world job-related learning opportunities;
- engagement with employers to ensure alignment with workforce demands and requirements for industry-recognized credentials;
- additional pathways to attain credentials, like dual enrollment; and

¹²¹ Advance CTE, 2016.

- data, monitoring, and reporting mechanisms to ensure valid and reliable feedback for continuous improvement.¹²²

This consensus should make it easier for states and school districts to provide effective CTE programs for all students who want and need them. Yet progress toward career and technical educational goals has been only incremental and piecemeal.

The fact is that the contemporary consensus about the resources and practices that are necessary for effective career and technical education echoes many of the policy positions and recommendations that have been made in the past but poorly implemented. This pattern of intermittent attention and incremental improvement can be broken by taking a rights-based approach to ensure that all students leave high school with the knowledge, skills, and experience necessary to put them firmly their pathway to a career.

Constitutional Mandate as Driver of Adequate Investment and Systemic Implementation

Recent court cases in New York and 20 other states have declared that students have a constitutional right to an education that prepares them for the workforce.¹²³ For example, in 2003, the New York Court of Appeals held in *CFE v. State of New York* that the state constitution entitles all students to a “meaningful high school education” that provides them the skills they need to function as capable citizens and prepares them for competitive employment.¹²⁴ The court reiterated this holding in 2017.¹²⁵

These court decisions, and the rights they confer on students, can dramatically improve the chances for fully implementing the reforms and improvements that CTE practitioners and

¹²² Dalton, Charles, Klein, Knapp, & Charner, 2016; Symonds et al., 2011; Visher, & Stern, 2015; Jacoby & Dougherty, 2016.

¹²³ See the appendix for a list of these states and citations to their constitutional standards.

¹²⁴ *Campaign for Fiscal Equity v. State of New York*, 2003.

¹²⁵ *Aristy-Farer/NYSER v. State*, 2017.

other career-pathway experts acknowledge to be necessary. The clear mandate to prepare all students for competitive employment in court decisions like *CFE v. State* creates a strong foundation for systemic improvements of career and technical education. Awareness of and emphasis on the constitutional mandate can be a powerful driver for adequate investment.

Beyond this, court decisions clarify what schools must actually provide to fulfill students' educational rights. In New York, the Court of Appeals rejected a lower court's conclusion that schools need only prepare students for jobs that will allow them to stay off the welfare rolls. Instead, the court forcefully stated that "[m]ore is required." In its 2003 decision in *CFE v. State*, the court held,

a high school education is now all but indispensable....[M]anufacturing jobs are becoming more scarce in New York and service sector jobs require a higher level of knowledge, skill in communication and the use of information, and the capacity to continue to learn over a lifetime. The record showed that employers who offer entry-level jobs that do not require college increasingly expect applicants to have had instruction that imparts these abilities, if not a specific credential.¹²⁶

Accordingly, in order to provide students the "meaningful high school" education that the state constitution requires, the court held that schools must provide *all* students access to the kind of instruction and experiences that will adequately prepare them for 21st-century jobs. The court specified that the state must ensure that adequate resources are available in "every school," so that all students will have access to the personnel, courses, and pathways that are needed for these purposes.¹²⁷ It further ordered the state to determine the "actual cost" of providing all students these opportunities.

Approaching the issue of effective career preparation from a constitutional-rights perspective also provides a roadmap for reconciling the perennial tension between academic and

¹²⁶ *CFE v. State*, 2003.

¹²⁷ *CFE v. State*, 2003, at 930.

vocational programming. State constitutional definitions of the right to an “adequate,” “thorough and efficient,” or “sound basic” education have almost invariably emphasized that schools are responsible for preparing productive citizens, which entails *both* preparation for competitive employment and preparation for capable civic participation.

The *CFE* decision emphasized that the constitutional requirement for schools to prepare students to “function productively as civic participants” also includes “an employment component.”¹²⁸ Numerous other courts have agreed. For example, the New Jersey Supreme Court held that “the constitutional guarantee . . . must be understood to embrace that educational opportunity which is needed in the contemporary setting *to equip a child for his or her role as a citizen and as a competitor in the labor market,*”¹²⁹ and Washington’s Supreme Court has held that the right under its state constitution “embraces broad educational opportunities needed in the contemporary setting to equip our children *for their role as citizens and as potential competitors in today’s market* as well as in the market place of ideas.”¹³⁰

These courts indicate that preparation for the workplace cannot be isolated from general academic preparation; the constitutional guarantees of civic and career preparation are interrelated, inextricably linked, and must be approached in tandem.

Interest is high on the part of the business community and the American public in the competencies that young people require to thrive in an economy that is rapidly changing and global in scope. Educators are being urged to ensure that young people have acquired competencies that will serve them not only in their communities and nations, but also in workplaces that are part of the dynamic economic systems of the twenty-first century.¹³¹

Research shows that many of the same 21st-century social and communication skills, critical- and creative-thinking and problem-solving habits, and key dispositions toward hard work, obeying

¹²⁸ *CFE v. State*, 2003, at 906.

¹²⁹ *Abbott v. Burke*, 1985, at 382 (emphasis added).

¹³⁰ *Seattle Sch. Dist. No. 1 v. State of Washington*, 1978, at 94 (emphasis added).

¹³¹ Gould, 2011, p. 20.

the law, and collaborating with diverse groups are fundamental to workplace and civic preparation.¹³² In an increasingly diverse, complex, technological, and global society, civic preparation and career preparation are more important to each than ever before.¹³³

There is growing recognition that the connections between adult work and civic life are also strong. In the workplace, as in school, most people must daily practice civic skills like problem solving, planning, consensus building, and shared decision-making. The Minnesota Campus Compact Task Force on Civic Engagement and Workforce Development put this clearly,

Minnesota employers — from business, government, education and nonprofit sectors — desire more employees and prospective employees who possess not only technical skills, but who also can work effectively with diverse others, put the good of the whole above the good of self, and understand the importance of ethical behavior and positive community engagement. ... *[T]he process of developing productive workers is inextricable from the process of developing active citizens.* Traditional approaches to workforce development — which focus on technical professionalism and largely ignore larger public or civic concerns — are inadequate if we wish to maintain Minnesota’s historic high quality of life.¹³⁴

To prepare students adequately for capable citizenship requires schools to provide them with knowledge of government, law, history, economics, and civics, as well as basic English language arts, mathematics, and science. Students need ample opportunities to build media literacy and discuss local, national, and international issues they feel are important to their lives. Plus students must learn critical analysis, interpersonal, communication, and adaptation skills

¹³² Carnegie Corporation of New York & CIRCLE, 2003; Gould, 2011.

¹³³ For example, as a corollary of automation, research shows as growing demand in the labor market for social skills in recent decades. “Computers are still very poor at stimulating human interaction. ... Human interaction in the workplace involves team production, with workers playing off each other’s strengths and adapting flexibly to changing circumstances” (Deming, 2017, pp. 28-29).

¹³⁴ Minnesota Campus Compact Task Force on Civic Engagement and Workforce Development. See also, Eyler & Giles, 1999; Joran & Krumnow, 2014; Maryland DC Campus Compact CONNECTS Task Force, 2015; Scales, Roehlkepartain, Neal, Kielsmeir, & Benson, 2006.

and be provided with a range of experiential learning opportunities both during school time and after school to practice these skills in their communities.¹³⁵ Virtually all of these learning experiences are also essential to prepare students for competitive employment.

As Teachers College professor Henry Levin said when he testified as a witness in the *CFE* litigation,

[T]oday what we see is a merger between the requirements for being a good citizen [and being a good worker]: being able to evaluate arguments, being able to gather information, ... being able to work with others, ...problem solving, decision-making, evaluation of issues, those become common to the preparation of both citizens on the one hand and workers on the other.¹³⁶

Implications for CTE Policy and Practice of the Constitutional Mandate

Education officials at both the state and city levels have made efforts to enhance school-to-work pathways in recent years, but the rate of progress in providing access to career and technical education has been relatively small. From a rights-based perspective, incremental progress does not suffice. New York must adopt appropriate policies and practices and make an adequate investment to provide students “meaningful” programs that will prepare them for productive employment. Currently, state policy and investments are not adequate to provide the basic resources necessary to meet the constitutional guarantee and to ensure that all interested students can take advantage of the many benefits of CTE and career-pathway options. New York’s data, reporting, and accountability systems do little to illuminate problems, inform students and their families of their entitlements, or incentivize improvements.

¹³⁵ Carnegie Corporation of America & CIRCLE, 2003; Gould, 2011; Rebell, 2018, in press.

¹³⁶ *CFE v. State of New York*, 2001, trial transcript, p. 12119.

In the following section, we detail some of these resource-availability issues and suggest what the constitution would require to resolve them. Any new mandates must be tied to adequate funding and other assistance needed for their effective implementation.

Meaningful Access to Coursework

The state needs stronger access requirements at the middle- and high-school levels to ensure that all New York students have meaningful access to CTE courses and course sequences. A suitable career-preparation curriculum should include sufficient middle-school CTE opportunities. As the Board of Regents recommended in 2012, New York should provide

- a grade 6 “Introduction to CTE” course encompassing the six CTE content areas (agriculture, business and marketing, family and consumer sciences, health occupations, technology, and trade and technical) to promote vertical alignment with high school programs of study.
- greater opportunities for middle level CTE acceleration in grades 7 and 8 so more students enter high school with diploma credit.¹³⁷

At the high-school level, the requirement that each *school district* must provide students access to a three- or five-unit sequence in CTE is not sufficiently specific to ensure that all students who need or want to participate in these courses actually have access to them. Individual high schools are required under state law to provide only the courses necessary for a basic Regents diploma, but a student can obtain a Regents diploma without taking any CDOS or CTE courses at all. In larger school districts, like New York City, although CTE courses are available in a number of places in the district, many of the city’s more than 400 high schools offer few or no CTE courses or course sequences. This means that students attending these schools who do

¹³⁷ New York State Education Department, 2012.

want to take CTE courses generally are denied actual access to them, even though state law also mandates that they have a right to access these opportunities.

The recently enacted changes to the graduation requirements, though intended to provide students with multiple pathways to a high school diploma, potentially exacerbate the impact of inequitable and inadequate access to CTE. The new CTE and CDOS pathways to graduation are available only to students who have access to the requisite courses. For students whose schools do not offer these courses, these new pathways are virtually meaningless. Similarly, the opportunity to earn an advanced-designation Regents diploma through a CTE endorsement is contingent on students having access to a five-unit sequence of courses.

To fulfill the constitutional mandate to prepare all students for competitive employment, and to ensure that the new pathways to graduation improve rather than create more impediments to obtaining a diploma, New York should enact more specific requirements that would ensure broader and more equitable access to CTE courses and course sequences. New York could draw from policies in others states. Tennessee, for example, requires that CTE programs “shall be made accessible to all high school students and planned to serve at least fifty percent (50%) of the students in grades nine through twelve (9-12).”¹³⁸ The State of Washington includes one credit of CTE as a graduation requirement¹³⁹ and mandates that all school districts provide CTE courses that also meet at least one core math or science graduation requirement as well as industry standards.¹⁴⁰ Arkansas’s recently adopted “Smart Core” requires all students to complete, among other things, six units of career-focused courses.¹⁴¹

¹³⁸ Tenn. Code Ann. § 49-11-104.

¹³⁹ Washington State Board of Education, n.d.

¹⁴⁰ Washington State Board of Education, 2015.

¹⁴¹ Arkansas Department of Education, 2015; see also Dougherty, 2016.

West Virginia requires that 80% of students in grades 9 and 10 have access to at least one career and technical foundations course. Further, the regulations stipulate that 30% of students in grades 11-12 have access to four units in a career and technical concentration and two career and technical electives and that schools offer CTE concentrations in six of 16 approved career clusters. The state further requires each student, with the support of school staff, to develop a personalized education plan that identifies a career cluster or college course sequence of interest. This process begins in middle school and is a requirement for graduation.¹⁴²

New York State should ensure that schools at all levels provide all of their students with sufficient high quality CDOS instruction to allow them to meet learning standards in this subject; provide all high school students, including ELLs and students with disabilities, sufficient access to career and technical education courses to complete a five-unit CTE sequence necessary for the 4 +1 Regents diploma or Regents diploma with an advanced designation; and provide all high school students a choice of at least three career clusters or programs of study. The extra platform of services for students who are struggling academically must also include sufficient supports for students in CTE courses to develop cognitive and noncognitive skills needed for preparation for employment.

Sufficient Qualified CTE and CDOS Teachers

A major impediment to providing adequate access to CTE and CDOS coursework is the lack of sufficient qualified teachers. New York State has reported teacher shortages in career and technical education for every school year but one dating back to 2005-06.¹⁴³ As of 2014-15,

¹⁴² W. Va. Code St. R. § 126-42-5.

¹⁴³ Cross, 2016; the lone year when CTE was not reported as a shortage area was 2013-14. However, that year New York reported shortages in related areas, including computer technology, drafting, mechanical technology, and technology education (K-12).

media reports listed the shortfall in CTE subjects at 450 teachers.¹⁴⁴ This problem is nationwide and is perpetuated by many factors: the inability of school districts to offer salaries that compete with industry jobs; teacher licensing qualifications that align poorly with professional qualifications; and tight school budgets that limit hiring outside of core areas. New York professionals describe the state teacher licensing process as burdensome and assert that the state certification requirements do not keep up with changing job market needs. By way of contrast, community colleges have fewer hiring constraints and are able to adapt more readily to shifts in employment needs. These differences sometimes create challenges in aligning instruction between high schools and community colleges.

A number of states are working to make teaching more accessible and appealing through alternative certification options, financial incentives, and career ladder arrangements. New York City has a longstanding CTE teacher residency program—the Success via Apprenticeship Program—that offers a paid teaching internship, industry work experience, and post-academic study to high school graduates interested in teaching CTE.¹⁴⁵ To attract more teachers, the Regents recently amended their CTE teacher certification policies to expand the number of alternative paths for candidates, reduce the requirements for initial certification if certain conditions are met, and allow prospective teachers to obtain transitional licenses while they complete required courses.¹⁴⁶ It remains to be seen whether these certification changes will substantially ameliorate the longstanding teacher shortages in this area. Ultimately, additional funding may be required to ensure that all schools are able to hire an adequate number of qualified CTE teachers to fulfill all students’ rights to career preparation.

¹⁴⁴ Disare, 2016b.

¹⁴⁵ See <http://svaprogram.wixsite.com/svaprogram/aboutus>.

¹⁴⁶ Disare, 2016b; New York State Education Department, n.d.-a; New York State Education Department, 2016.

Sufficient Internship, Apprenticeship, and Other Work-Based and Experiential Learning Opportunities

New York students' preparation for competitive employment is also seriously hampered by the lack of adequate access to internships and apprenticeship programs that provide students meaningful work-based experiences. In New York City, with 26,000 students attending dedicated CTE high schools, and 120,000 taking at least one CTE course, just 1,575 students found internships with employers in 2014.¹⁴⁷ This means that less than 2% of the students who have expressed interest in CTE programs were able to experience internships. Two recent surveys in New York City found that more than half of the school respondents stated that the number of interested students outpaced the demand for internships in businesses and that fewer than half of the employers who responded believed CTE schools and programs were adequately connected to industry.¹⁴⁸ Although New York's P-Tech programs provide students deep linkages with employers, P-Tech schools are exceptions. New York State provides no other funding specifically dedicated to support workforce engagement in the schools. It also does not systematically collect or report data on the availability or take-up of work-based learning opportunities.

In European countries that have formal apprentice pathways, average worker wages tend to be higher, and apprenticeships are attractive to employers because students will do productive work at reduced rates. These countries also have institutions (primarily councils created through the government) that set uniform standards, formally engage both employers and workers (and unions where they exist), and coordinate individual employers' participation. For example, Switzerland's apprenticeship program, which expends \$3.4 billion annually and enrolls two-

¹⁴⁷ Jacoby & Dougherty, 2016, p. 19.

¹⁴⁸ PricewaterhouseCoopers, 2014, 2015.

thirds of the nation's students, operates through formal relationships between its national government (i.e., the Confederation), states (i.e., cantons), and professional organizations. Three-fourths of the costs are borne by the states, with the remaining public funding covered by the national government. Funding is also provided by professional organizations, which pay training-center costs.

A number of states have undertaken a variety of initiatives that more effectively link CTE to the workforce. In Massachusetts, for example, a Connecting Activities program funds the staff of a Workforce Investment Board that recruit employers and develop structured work opportunities for students. In 2015, this initiative resulted in more than 10,000 student internships.¹⁴⁹ Wisconsin law provides for an extensive education for employment program that include a long-range plan developed by a team of school district staff and business and other community stakeholders, and extensive individualized student career planning with school district support.¹⁵⁰ The state provides funding for an apprenticeship program for high school juniors and seniors that links high school credits and worksite instruction.¹⁵¹ Wisconsin also partially funds local consortiums comprised of one or more school districts, employers, technical colleges, organized labor and other public agencies and nonprofits.¹⁵² Colorado recently received national attention when it launched a youth apprenticeship program modeled after one in Switzerland. Students in this program will get paid, receive training, and earn college credits.

¹⁴⁹ Massachusetts Department of Elementary and Secondary Education, n.d.

¹⁵⁰ WI ADC s PI 26.03.

¹⁵¹ Wisconsin Department of Workforce Development, n.d.

¹⁵² Wisconsin Department of Public Instruction, 2016; Wisconsin Department of Workforce Development. n.d.

The state aims to have one in ten high school students in an apprentice program by 2027, but, to date, the program has been wholly funded through grants from private foundations.¹⁵³

New York may also look to Nashville, Tennessee, for a model of how to provide strong, district-wide CTE options through formal cross-sector collaborations. In the last decade, Nashville has used federal funding to convert all of its public high schools into career academies, creating small learning communities that provide more effective workplace and college connections for students. Most of these schools have robust, productive links with employers.¹⁵⁴ Extensive employer involvement is promoted by Alignment Nashville, a nonprofit organization that fosters cross-sector collaboration among city and state agencies, the schools, and the business and nonprofit sectors,¹⁵⁵ the Nashville Chamber of Commerce, and the Pencil Foundation, a nonprofit that recruits businesses to invest funding and volunteers in the district.¹⁵⁶ These groups work with the school system to encourage businesses to partner with schools that have CTE programs relevant to their industry. Many of these companies—for example, the local Nissan plant, which works with an automotive career academy—have been integrally involved with school personnel in designing and supporting the CTE program, in addition to hiring students as interns and apprentices.¹⁵⁷

Since all New York students have a right to career preparation, and since work-based and experiential learning opportunities are critical for developing necessary career and civic knowledge and skills, the state must ensure that all CTE students have sufficient access to co-

¹⁵³ Gewertz, 2017; see also <https://www.pbs.org/newshour/show/colorado-apprenticeship-program-turns-factory-floor-classroom>.

¹⁵⁴ Leicht, 2016.

¹⁵⁵ Alignment Nashville, 2015.

¹⁵⁶ Pencil Foundation, n.d.

¹⁵⁷ Nashville Chamber of Commerce, n.d; Rebell interviews with Melissa Jagers, Executive Director, Alignment Nashville, Ronnie Steine, Executive Assistant to the Mayor, Angie Adams, Executive Director, PENCIL, Dec. 1 and 2, 2016.

curricular work-based learning and leadership experiences, including internships and apprenticeship programs, and that there are adequate instrumentalities of learning for CDOS instruction and CTE courses for all students attending school-based CTE programs.¹⁵⁸

Work-based and career-related learning experiences must begin no later than middle school. New requirements must ensure that all students in New York schools are exposed to the world of work, beginning with guest speakers, industry visits, and information about career opportunities and pathways in middle school that lead, in high school, to real work experience like internships, apprenticeships, and other exposure to work environments for all students who want and need those experiences. The state must develop new partnerships with for-profit and not-for-profit communities to ensure all students have adequate access to internships and other work-based-learning and civic-learning opportunities. It must do more to incentivize private employers to create internships. And the state must also find ways to reduce reliance on private industry and informal networks to provide these critical learning experiences. Internships should be offered in public agencies; public funding should support internships for high school students in nonprofit organizations; and students should have access greater to school-based work experiences.

Sufficient Number of Counselors and Work-Based Learning Coordinators

According to New York law, all middle and high schools should have sufficient numbers of school counselors to review each student's educational progress annually and to develop individual high school/postsecondary education and career plans. Counselors are also expected to provide (individually or in cooperation with classroom teachers) grade-level instruction about

¹⁵⁸ Ideally, these experiences should be provided as part of the school day or, if provided in after-school time, are appropriately remunerated to ensure that students who need to earn money in after school jobs and/or need to take on family responsibilities are included.

academic and career planning; facilitate articulation to high school/college; help students who exhibit any attendance, academic, behavioral or adjustment problems; provide related services to students with disabilities; support academic intervention and response to intervention services; encourage parental awareness and involvement; and provide a safe and orderly climate for learning.¹⁵⁹ Many districts and schools do not have enough school counselors to provide the range of services necessary to support their students, and, during times of fiscal constraint, those school counselors who do staff the schools are often considered expendable.¹⁶⁰

In addition, students' access to work-based learning opportunities, including apprenticeships and internships, requires sufficient school-based staff to secure these opportunities for students. New York must create appropriate regulations and invest adequately in staff who are qualified to carry out these necessary functions.

A study by the Center for Educational Equity reported that none of the 12 high-needs high schools in its statewide sample were able to provide their students sufficient CTE courses, internship support, or career counseling to prepare them to explore occupational options and develop postsecondary educational plans. Most often cited as a barrier was insufficient staff time to provide more than a handful of students with adequate support for career planning.”¹⁶¹

One high school could afford to support only 10-15% of its students in securing internships; 8 schools lacked any dedicated staff to help coordinate internships for students. Study participants indicated that they would need additional full- or part-time staff positions in order address students' learning and support needs in career preparation. Most schools indicated that hiring a college counselor and/or a “work-based learning coordinator” (as one school described the role) would allow them to adequately expose students to the worlds of college and careers.¹⁶²

¹⁵⁹ 8 NYCRR §§100.2 (j); (ee); (ii), 100.1 (g).

¹⁶⁰ Rebell et al., 2012, pp. 20-22.

¹⁶¹ Rebell et al., 2012, p. 38.

¹⁶² Rebell et al., 2012, p. 38.

Schools in the CEE study reported counselor-to-student ratios ranging from 1:300 to 1:600.¹⁶³ The American School Counselor Association recommends a counselor-to-student ratio of 1:250, and 1:200 in schools with intensive needs.¹⁶⁴ Tennessee requires that schools provide one school counselor specializing in CTE guidance for every 200 students.¹⁶⁵

Most CTE high schools have employees who are certified as “work-based learning coordinators.” These individuals are responsible both for finding internships and for managing them, which is a demanding responsibility: “Outreach is only the beginning. It’s about cultivating the would-be employer, helping the company understand what it means to offer an internship, working with it to structure the experience, and managing the expectations of students and employers.”¹⁶⁶ In many schools these coordinators are, however, burdened by heavy teaching loads. In New York City, more than half of them teach four or more classes per day, which leaves them little time for the labor-intensive work of connecting with external actors. Comprehensive and other general academic high schools often have no internship coordinators even though many of their students’ desire or could benefit from their services to secure work-based learning experiences.

In New York, because of the intensive need for counseling services, there should be a ratio of one school counselor to every 300 students in secondary schools in general, and 1:200 in all schools with intensive needs. To ensure preparation for college, careers, and civic participation high schools should, in addition, provide counselors in a ratio of 1:100 seniors, and these counselors should begin working with students in the ninth grade.¹⁶⁷

¹⁶³ Rebell et al., 2012, p. 20.

¹⁶⁴ American School Counselor Association, 2012.

¹⁶⁵ Tenn. Code Ann. § 49-11-104 (2016).

¹⁶⁶ Jacoby & Dougherty, 2016, p. 22.

¹⁶⁷ See, e.g., New York City Comptroller, 2012; Urban Youth Collaborative, 2013.

Adequate Data Collection, Monitoring, and Accountability

The Perkins Act requires relatively extensive reporting to ensure that students have access to career and technical education without regard to their race, color, national origin, sex, or disability. A federal court order mandates that in order to monitor compliance with federal civil rights laws, state education departments including NYSED must

- conduct an annual “desk audit” of all eligible school districts/BOCES using available enrollment statistics and other information to identify areas of possible non-compliance;
- conduct comprehensive onsite reviews of 2.5% of the districts/BOCES in the desk audit pool each year, identify findings of non-compliance and work with school officials to develop a compliance plan to remedy violations;
- monitor school districts for completion of their compliance plan; and
- respond to and help resolve civil rights complaints.¹⁶⁸

The court order requires that states report statewide enrollment numbers for CTE “participants” and “concentrators” by subgroups as well as some performance information.¹⁶⁹ While this reporting is critical, it is not sufficient to ensure constitutional compliance. New York’s efforts to improve and extend CTE require accurate data collection to identify and understand gains or gaps in access and preparation. At present, state reporting of access to career and technical education, and attainment of work-related skills, is clearly inadequate. The state does not report district- or school-level data on CTE access, enrollment, or completion. The data that NYSED has reported to the federal government fluctuate significantly from year to year, suggesting inaccuracies. Moreover, CTE courses offered at regular high schools are inconsistently included in this reporting.¹⁷⁰

¹⁶⁸ New York State Education Department, Career and Technical Education, 2013.

¹⁶⁹ U.S. Department of Education, 2014.

¹⁷⁰ Leake, n.d.; New York State Education Department, personal communication.

Other states provide models for better CTE data collection and monitoring. California, for example, requires the state department of education to provide a comprehensive report on CTE that must include CTE enrollment trends over time compared with trends in other courses, the reasons students selected CTE courses, details on course-taking patterns, the extent to which CTE courses were aligned with state standards, and the extent to which CTE courses were aligned with other subject areas.¹⁷¹

Additional Resources Necessary for High Quality Flexible Preparation for College, Careers, and Civic Participation

High quality CTE pathways, including “9-14” programs that bridge secondary and postsecondary education, will only effectively serve students if they are constructed on a strong foundation of basic educational opportunity. While some economists have projected a glut of unfilled “middle skills” jobs, other economists have challenged these forecasts.¹⁷² Whatever the actual extent of available “middle level” jobs, clearly the job market will continue to evolve and, with it, the specific technical knowledge and skills that students need to acquire. The broad-based knowledge, skills, experiences, and dispositions needed for civic participation and competitive employment provide better long-range preparation than a narrow focus on skills for particular jobs that may not be relevant in the future.

The opportunity for a sound basic education to which every New York student is entitled must therefore provide students with high quality, flexible preparation for college, careers, and civic participation. Effective education for career pathways and for civic participation requires largely overlapping educational content, skill development, and experiences. Preparation for both competitive employment and preparation for civic participation require

¹⁷¹ California Education Code Sections 48980 and 51225.3; see <http://www.cde.ca.gov/ci/ct/pt/>

¹⁷² Symonds et al., 2011.

- a foundation of general knowledge;
- a set of common skills, including basic academic skills, well-developed higher-order skills like problem solving, critical thinking, and noncognitive social and communication skills;¹⁷³
- experiential learning opportunities that provide the opportunity to practice that full set of skills; and
- a set of dispositions and values that include honesty, reliability, respect for others, persistence, tolerance, respect for the rule of law and the like.

New York’s 2017-18 budget provided a total of \$165 million for CTE programs across the state;¹⁷⁴ federal Perkins funding added another \$51 million.¹⁷⁵ New York currently provides a total of approximately \$3 million annually for its pathways initiatives across the state. In contrast, California budgets more than \$21 million for a comparable program.¹⁷⁶ As the above discussion of the shortage of course offerings, work-based learning opportunities, teachers, counselors and coordinators made clear, this level of funding is clearly insufficient to implement adequate CTE programs on the scale needed to provide meaningful opportunities to all students.

Meeting constitutional requirements in this area undoubtedly will require a substantial increase in funding, although adoption of more cost-effective educational practices in this and

¹⁷³ The skill areas common to both include initiative, cooperation and group work, self-assessment, communication, reasoning, problem solving, decision-making, planning, learning, and multicultural skills (Levin quoted in *CFE v. State of New York*, 2001, trial transcript, p. 12119).

¹⁷⁴ New York State Department of Education, 2017, p. 32.

¹⁷⁵ U.S. Department of Education, 2016, Oct. 4, p. 4.

¹⁷⁶ California’s career academies program requires participating schools to develop programs based on labor market analysis, provide common teacher planning time, engagement with at-risk students, and business partnerships. The local district and partnering businesses must commit to match state funding to participate; and schools must report results annually (California Department of Education, 2017). In addition to the partnership funding, California has appropriated a total of \$500 million since 2013-14 for a competitive grant program to enhance career pathways in schools for grades 9-14. (California Department of Education, 2016; Visher & Stern, 2015).

other areas could lessen the ultimate budgetary impact of the needed reforms.¹⁷⁷ (Also relevant in this regard is the high rate of return on investments in this area both to the individuals involved and to society at large.¹⁷⁸) In any event, whatever the extent of the actual increased costs, when constitutional rights are at stake, the New York courts, like the U.S. Supreme Court, have repeatedly made clear that cost factors do not constitute an acceptable justification for failing to meet constitutional requirements.¹⁷⁹

Adoption of these recommendations will undoubtedly require a significantly greater resource investment in these areas, but that investment will be repaid many times over.¹⁸⁰ Funding for the resources needs to be systematic, sustained, adequate, equitable, and coherent. Cost studies estimating the costs of providing a constitutional adequate education must include the costs of access to these resources. In addition to outcome data that helps systems understand the effectiveness of current policies and practices, data on school-level availability of these resources should be collected and reported to assure that educators, parents, and students are informed.

Conclusion

In the United States, many young people leave high school ill-equipped for the roles that they need to play as adults. They are not ready for college or the workplace nor are they prepared for their civic responsibilities. Fortunate young people have access to informal systems outside of school that help them find the pathways from school to productive citizenship; many students in poverty and students of color do not have such supports. Periodically, our nation has given

¹⁷⁷ See Rebell, 2012.

¹⁷⁸ Belfield et al., 2012; Levin et al., 2007.

¹⁷⁹ See, e.g., *Klostermann v. Cuomo*, 1984; *Hurrell-Harring v. State*, 2010; *Rufo v. Inmates of Suffolk Cnty. Jail*, 1992.

¹⁸⁰ Belfield et al., 2012.

more thought to how to help engineer stronger and better pathways for all students. However, these efforts have been piecemeal and fragmented and have not become part of the core public education mission.

Echoing many recommendations that have been made in the past, a general consensus today holds that schooling that prepares students for career pathway should include

- high-quality, up-to-date teaching, curricula, facilities, and supports;
- strong academics and skills related to current professions that are in high-demand today as well as problem-solving, communication and other skills that will allow workers to adapt to changing job needs;
- adequate staffing to ensure necessary counseling support and seamless linkages and transitions;
- meaningful real-world job-related learning opportunities;
- alignment with workforce demands and requirements for industry-recognized credentials;
- additional pathways, like dual enrollment; and
- data, monitoring, and reporting mechanisms necessary to ensure a valid and reliable feedback loop for continuous improvement.

Past efforts to provide these systematically have largely foundered for two reasons: funding constraints and the difficulty of reconciling the often-competing goals of providing students both high general academic knowledge and practical work-related skills and experiences.

We believe that recent court cases in New York and 20 other states that have declared that students have a constitutional right to an education that will prepare them adequately for productive citizenship and competitive employment dramatically improve the chances for actually implementing on a broad basis the educational improvements and reforms that are

widely acknowledged to be necessary. The mandate to prepare all students for competitive employment in court decisions like *CFE v. State* creates a strong basis for systemic improvements of career and technical education. Understanding and invoking the constitutional requirements can help drive adequate investment.

New York’s highest court, the Court of Appeals, defines productive citizenship as the ability to engage in civic obligations capably and knowledgeably. It posits that competitive employment today requires “a higher level of knowledge, skill in communication and the use of information, and the capacity to continue to learn over a lifetime.”¹⁸¹ The court wrote that for the state to meet these goals, “more is required” than merely a job that allows an individual to stay off of welfare. Today, more than 14 years after this case was decided, still more is required. To be “meaningful,” a high school education today must adequately prepare those students who will immediately enter the workforce upon graduation and the increasing number who will need some amount of higher education to obtain the skills they will need to obtain decent, competitive employment over their lifetimes. In the years since the court’s decision, officials at both the state and city levels have made efforts to enhance the school-to-work path, but these efforts have been limited, inconsistent and inadequately funded. The system today falls far short of the constitutional requirements for providing students “meaningful” programs that will provide them the skills they need for capable citizenship and productive employment.

The court specified that the state must determine the “actual cost” of providing *all* students these opportunities and that it must ensure that adequate resources are available in “*every school*,” so that all students will have access to the courses and pathways that are needed for these purposes.¹⁸² Since the Regents and virtually all educators in the field agree that all the

¹⁸¹ Campaign for Fiscal Equity, Inc. v. State, 100 N.Y. 2d 893, 906 (N.Y. 2003)

¹⁸² *CFE v. State*, 2003 at 930.

CTE reforms listed above are necessary in order to provide all students a meaningful opportunity for a sound basic education, these are the programs and services that the state must actually implement, according to the constitutional mandate, whatever their cost.

Approaching the issue of effective CTE implementation from a constitutional rights perspective not only provides a firm basis for adequate funding, but it also offers an important new perspective for addressing the tension between academic programming and career preparation. In court cases throughout the country, the constitutional definitions of an “adequate,” “thorough and efficient,” or “sound basic education” have nearly all emphasized both preparation for competitive employment and preparation for capable citizenship. The *CFE* decision in New York, and courts in many other states, emphasized that the constitutional requirement for schools to prepare students to “function productively as civic participants” also includes “an employment component.”¹⁸³

To prepare students adequately for capable citizenship requires schools to provide them with content knowledge, critical thinking and problem solving strategies, involvement in a range of extracurricular and experiential activities, and the development of appropriate interpersonal, communication, and adaptation skills and democratic values.¹⁸⁴ These skills are also needed to prepare students for competitive employment. Improved preparation for employment correlates strongly with improved preparation for civic participation, and vice versa. And the reality is that in the workplace, as in school, most people must practice civic skills every day.

The job market for both college graduates and non-college graduates will continue to evolve and, with it, the specific technical knowledge and skills that employees will need to acquire. Therefore, communication, information gathering and critical analytic ability and other

¹⁸³ *CFE v. State*, 2003, at 906.

¹⁸⁴ Rebell, 2018, in press.

adaptive skills that facilitate life-long learning that are needed for both civic participation and competitive employment provide better long-range preparation for future employment than a narrow focus on training for particular skills and professions that exist now.

As Grubb and Lazerson have put it, preparation for employment in the 21st century clearly requires

a variety of competencies or intelligences—cognitive *and* noncognitive abilities, general “academic” knowledge *and* generic occupational knowledge, conceptual or theoretical approaches *and* their application in different spheres including production—but leaves job-specific and firm-specific skills to be learned on the job.¹⁸⁵

If these interrelated needs are understood, then schools should be providing *all* students knowledge of history and civic responsibility, verbal, critical analytic, communication and other skills, experiences in community engagement and real-world job-related experiences and democratic and interpersonal values.

The strong connection between the two basic purposes of education also plays out in the opportunity gap that denies many students in poverty and students of color the resources they need to develop appropriate skills both for competitive employment and for capable citizenship. Youth who drop out before finishing high school are less like to vote, run for office, and be otherwise civically involved¹⁸⁶ and they also are much more likely to be unemployed.¹⁸⁷ The schools these students attend often lack the basic building blocks of an adequate education—qualified teachers, reasonable class sizes, up-to-date instrumentalities of learning, and so on.

¹⁸⁵ Grubb & Lazerson , p. 256.

¹⁸⁶ See, e.g., Levinson, 2012; Putnam, 2015.

¹⁸⁷ See discussion of unemployment rates above.

These schools provide few the real-world learning experiences that are especially important for increasing motivation and unlocking the talents and interests of these students.¹⁸⁸

Educational improvements to prepare students for the workplace must no longer be approached in isolation. Those concerned about ensuring that students have the knowledge and skills they need to be competitive workers must join forces with the increasing number of people who, especially since the 2016 presidential election, have become concerned about the need to bolster the schools' ability to prepare students to be capable citizens who can take responsibility for sustaining our democratic institutions.

To uphold the constitutional obligation to New York's students therefore requires that schools be provided (1) the full range of resources they need to provide meaningful CTE courses and pathways and exposure to real-world work experiences to all students who want and need them and (2) the basic resources that are needed to provide more generally the opportunity for a sound basic education that can provide high-quality, flexible preparation for college, careers, and civic participation.

If we are to provide this preparation systematically to all students, states must provide the necessary resources. The constitutional foundation for this preparation also requires further consideration of the respective roles of schools, other public institutions, community-based organizations, and of the private sector in this endeavor. Future research must study the range of viable alternatives, including expanding the role of public investments and institutions, identifying cost-effective ways to provide constitutionally required programs and services for students, creating more formalized public/private partnerships; and significantly expanding and refining local cross-sector collaborations among school systems, community-based organizations, employers, and government agencies.

¹⁸⁸ Washor & Mojkowski, 2013.

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Appendix. State Court Decisions Holding that Preparation for Competitive Employment Is a Fundamental Purpose of Public Education

1. Alabama

Alabama Coalition for Equity (ACE) v. Hunt

“[A]dequate educational opportunities shall consist of, at a minimum, an education that provides students with opportunity to attain the following: . . . (viii) Sufficient levels of academic or vocational skills to enable public school students to **compete favorably with their counterparts in Alabama**, in surrounding states, across the nation, and throughout the world, in academics or **in the job market.**” Opinion of the Justices, 624 So. 2d 107, 107-110 (Ala. 1993).¹⁸⁹

2. Arkansas

Lake View Sch. Dist. No. 25 of Phillips Cty. v. Huckabee

“[A]n efficient system of education must have as its goal to provide each and every child with at least the seven following capacities: . . . (vii) sufficient levels of academic or **vocational skills** to enable public school students to **compete favorably with their counterparts in surrounding states, in academics or in the job market.**” 91 S.W.3d 472, 487–88 (Ark. 2002)

3. Arizona

Roosevelt Elementary Sch. Dist. No. 66 v. Bishop

In his concurring opinion, Chief Justice Feldman states that “the Arizona Constitution guarantees a basic right to educational opportunity—the right to be provided with the opportunity to **compete successfully in the economic marketplace**, to develop as a citizen, and to become a self-reliant individual.” 877 P.2d 806, 818 (Az. 1994)

4. California

Serrano v. Priest

“[E]ducation is essential in maintaining what several commentators have termed ‘free enterprise democracy’—that is, **preserving an individual’s opportunity to compete successfully in the economic marketplace**, despite a disadvantaged background. Accordingly, the public schools of this state are the bright hope for entry of the poor and oppressed into the mainstream of American society” 487 P.2d 1241 (Cal. 1971)

5. Connecticut

Connecticut v. Rell

“We conclude that article eighth, § 1, of the Connecticut constitution guarantees Connecticut’s public school students educational standards and resources suitable to participate in democratic

¹⁸⁹ Based on the finding that “any specific remedy that the judiciary could impose would, in order to be effective, necessarily involve a usurpation of that power entrusted exclusively to the Legislature,” the court on its own initiative, dismissed this litigation in its entirety. *Ex parte James*, 836 So. 2d 813, 819 (Ala. 2002). The court did not, however, redefine or otherwise disagree with its predecessors’ definition of an adequate educational opportunity.

institutions, and to **prepare them to attain productive employment** and otherwise to contribute to the state's economy, or to progress on to higher education.” 990 A.2d 206, 212 (Conn. 2010).

6. Kansas

Gannon v. State

The Court held the adequacy component of Article 6 of the Constitution “is met when the public education financing system provided by the legislature for grades K–12—through structure and implementation—is reasonably calculated to have all Kansas public education students meet or exceed the standards set out in *Rose* and presently codified in K.S.A.2013 Supp. 72–1127.” 319 P.3d 1196, 1236–37 (Kan. 2014). Under *Rose*, an adequate education must contain seven capacities, including “sufficient levels of academic or vocational skills to enable public school students to **compete favorably with their counterparts in surrounding states, in academics or in the job market.**” 790 S.W.2d 186, 212 (Ky. 1989).

7. Kentucky

Rose v. Council for Better Educ., Inc.

“[A]n efficient system of education must have as its goal to provide each and every child with at least the seven following capacities: (i) sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization; (ii) sufficient knowledge of economic, social, and political systems to enable the student to make informed choices; (iii) sufficient understanding of governmental processes to enable the student to understand the issues that affect his or her community, state, and nation; (iv) sufficient self-knowledge and knowledge of his or her mental and physical wellness; (v) sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage; (vi) sufficient training or preparation for advanced training in either academic or vocational fields so as to enable each child to choose and pursue life work intelligently; and (vii) **sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market.**” 790 S.W.2d 186, 212 (Ky. 1989)

8. Massachusetts

McDuffy v. Sec'y of Exec. Office of Educ.

“[A]n educated child must possess at least the seven following capabilities: . . . (vii) **sufficient level of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market.**” 615 N.E.2d 516, 554 (MA. 1993).

9. New Hampshire

Claremont Sch. Dist. v. Governor

The Court looked to “the seven criteria articulated by the Supreme Court of Kentucky as establishing general, aspirational guidelines for defining educational adequacy,” and concluded that “a constitutionally adequate public education should reflect consideration of the following: . . . (vii) **sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market.**” 703 A.2d 1353, 1359 (1997).

10. New Jersey

Abbott v. Burke

“[T]he constitutional guarantee of a thorough and efficient education requires equal educational opportunity for all children, which must be understood to embrace that educational opportunity which is needed in the contemporary setting to **equip a child for his or her role as a citizen and as a competitor in the labor market.**” 495 A.2d 376, 382 (N.J. 1985).

11. New York

Campaign for Fiscal Equity, Inc. v. State

“[W]hile a sound basic education need only **prepare students to compete for jobs** that enable them to support themselves, the record establishes that for this purpose a high school level education is now all but indispensable. 100 N.Y.2d 893, 906 (N.Y. 2003)

12. North Carolina

Leandro v. State

“[F]or purposes of our Constitution, a “sound basic education” is one that will provide the student with at least: (3) sufficient academic and vocational skills to enable the student to successfully engage in post-secondary education or vocational training; and (4) sufficient academic and vocational skills to enable the student to **compete on an equal basis with others in further formal education or gainful employment** in contemporary society.” 488 S.E.2d 249, 255 (N. Car. 1997).

13. Ohio

DeRolph v. State

“[E]ducation is essential to preparing our youth to be productive members of our society, **with the skills and knowledge necessary to compete in the modern world.** . . .” and citing the mission statement of the State Board of Education, that “the mission of education is to prepare students of all ages to meet . . . the academic, social, civic, and employment needs of the twenty-first century, by providing high-quality programs that emphasize the lifelong skills necessary to . . . enjoy productive employment.” 677 N.E.2d 733, 736–37 (Ohio 1997).

14. South Carolina

Abbeville Cty. Sch. Dist. v. State

A “minimally adequate education” includes “the provision of adequate and safe facilities in which students have the opportunity to acquire:(1) The ability to read, write, and speak the English language, and knowledge of mathematics and physical science;(2) A fundamental knowledge of economic, social, and political systems, and of history and governmental processes; (3) Academic and **vocational skills.**” 767 S.E.2d 157, 160–61 (S.C. 2014).

15. South Dakota

Davis v. State

“[T]he South Dakota Constitution guarantees all South Dakota children a free, adequate, and quality public education which provides them with the opportunity to prepare for their future roles as citizens, participants in the political system, and **competitors both economically and intellectually.**” 804 N.W.2d 618, 641 (S. D. 2011)

16. Texas

Neeley v. W. Orange-Cove Consol. Indep. Sch. Dist.

A “suitable” education “requires that the public school system be structured, operated, and funded” so that it can ensure Texas school children “access to that education needed to participate fully in the social, **economic**, and educational **opportunities** available in Texas.” 176 S.W.3d 746, 753 (Tex. 2005).

17. Vermont

Brigham v. State

“While history must inform our constitutional analysis, it cannot bind it. Yesterday's bare essentials are no longer sufficient **to prepare a student to live in today's global marketplace.**” 692 A.2d 384, 396-97 (VT. 1997)

18. Washington State

Seattle Sch. Dist. No. 1 of King Cty. v. State

“[T]he State's constitutional duty goes beyond mere reading, writing and arithmetic.... “it also embraces broad educational opportunities needed in the contemporary setting to **equip our children for their role as citizens and as potential competitors in today's market** as well as in the market place of ideas;” and “the constitutional right to have the State make ample provision for the education of all (resident) children would be hollow indeed if the possessor of the right **could not compete adequately** in our open political system, **in the labor market**, or in the market place of ideas.” 585 P.2d 71, 94–95 (WA. 1978)

19. West Virginia

Pauley v. Kelly

A thorough and efficient system of schools is one that “develops, as best the state of education expertise allows, the minds, bodies and social morality of its charges to **prepare them for useful and happy occupations**, recreation and citizenship, and does so economically.” 255 S.E.2d 859, 877 (W. VA. 1979).

20. Wisconsin

Vincent v. Voight

“[A]n equal opportunity for a sound basic education is one that will equip students for their roles as citizens and enable them to **succeed economically and personally.**” 614 N.W.2d 388, 396 (WI. 2000)

21. Wyoming

Campbell Cty. Sch. Dist. v. State

“The framers intended the education article as a mandate to the state legislature to provide an education system of a character which provides Wyoming students with a uniform opportunity to become equipped for their future roles as citizens, participants in the political system, and **competitors both economically and intellectually.**” 907 P.2d 1238, 1259 (Wyo. 1995)

About the Center for Educational Equity

The Center for Educational Equity (CEE) is a nonprofit policy and research center at Teachers College, Columbia University. CEE champions the right of children everywhere, whatever the current political and economic climate, to a meaningful opportunity to graduate from high school prepared for college, careers, and civic participation. We work to define and secure the full range of resources, supports, and services necessary to guarantee this right to all children, particularly children in poverty and children of color.

Founded in 2005 by educational law scholar Michael A. Rebell, who successfully litigated the landmark school-funding lawsuit, *CFE v. State of New York*, CEE pursues systems change through a dynamic interrelated program of research, legal analysis, policy development, coalition building, curriculum development, and advocacy to advance this agenda at the federal, state, and local levels.