

STOP ILLINOIS BRAIN DRAIN

Building Pathways to Prosperity
for High School Students



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OCTOBER 2018



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Stand for Children is a non-profit education advocacy organization focused on ensuring all students receive a high-quality, relevant education, especially children whose boundless potential is overlooked and under-tapped because of their skin color, zip code, first language, or disability.

We make an impact by:

- Partnering with parents to support their children's education journey and become strong advocates;
- Advocating, mainly at the state and local levels, for proven policies and funding primarily focused on helping students reach the make-or-break milestones of reading well by the end of third grade, and graduating high school ready for college, career training, or a career; and
- Ensuring the changes we fight for reach classrooms and directly support students.

This report would not have been possible without the help of our 2017-2018 Class of Illinois Policy Fellows. Their contributions of time, research, and writing, and their perspectives as educators, parents, and community leaders, were invaluable.

Stand Illinois Policy Fellows 2017-2018:

Cymone Card, Chicago
Raechal Maat, Harvard
Louis Makarewicz, Chicago
Jeanette Maydan, Chicago
Nicole Patel, Forest Park
Cynthia Ralls, Plano
Abigail Schultz, Chicago
Dovie Shelby, Romeoville
Wilbur "Will" Tillman, Calumet City
Kayla Valenti, Chicago
Mia Woods, Springfield

Let's start with the good news.

Many important stepping stones on the pathway to a bright future have recently been put in place in Illinois. They come in the form of more equitable funding: the recently enacted evidence-based funding formula, increased funding that has been distributed more equitably, and the elimination of a surcharge on federal funds used to hire teachers serving poorer students. They are also seen in improved accountability measures featured in the state's new Every Student Succeeds Act plan. Finally, important groundwork has been laid by the Post-Secondary and Workforce Readiness Act.

However, this recent progress was preceded by years when education policy and funding lagged behind a technologically and demographically changing world, including over two years of state budget stalemates.

The result? **A big case of brain drain.**¹

As 125,000 young adults finish high school every year in Illinois, an alarming number are crossing state lines: more Illinois high school graduates go to out-of-state colleges than any other state except New Jersey. As they leave the state, so do their well-educated minds and their buying power.

And what about those who stay in the Prairie State but whose potential we have failed to tap because we did not provide them with adequate guidance, training, or resources?

It is these precious years of high school, and the opportunities that we as a state must seize upon, that are the subject of this report.

Illinois must ensure that high school students in every corner of the state have access to enriching pathways that lead to prosperity. The implications are enduring and state-wide.

Stand recommends research-based policy changes and practices that fall into four categories and will quickly have a positive impact:

- A. Open More Doors to Individualized Coursework
- B. Provide Practical Workplace Experiences
- C. Modernize the Approach for Supporting Students
- D. Adequately Fund Education and Spend Wisely

These recommendations build upon structural improvements already in place. They incentivize the replication of promising models of success. Each enhances the others. Collectively, they present an achievable, impactful pathway for policymakers and advocates to make prosperity a reality for Illinois high school students.

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OPEN MORE DOORS TO INDIVIDUALIZED COURSEWORK

RECOMMENDATIONS:

- Build more cross-community partnerships and expand course access.
- Utilize the Illinois Virtual School to increase access to dual credit, Advanced Placement, and other advanced courses.
- Increase the number of teachers for dual credit courses.
- Encourage innovation.

The diversity of industries and rich mix of urban and rural areas across Illinois call for a wide range of talents and skills from our workforce. But oftentimes, Illinois high school students hit obstacles such as narrow course curricula and outdated, rigid graduation requirements.

To graduate from high school in Illinois, a student must fulfill the graduation requirements set by the state, along with daily Physical Education and Health and Consumer Education classes.² Many districts impose additional graduation requirements. Beyond the requisite courses exists an array of electives whose attunement to today's work force needs varies widely.

Our greatest opportunities for bringing Illinois high school education into the twenty-first century lie in competency-based learning programs, dual credit courses, Advanced Placement (AP) classes, and additional advanced coursework.

Competency-based learning allows students to advance towards graduation by demonstrating they have mastered the knowledge and skills to meet certain benchmarks, instead of following the traditional approach of passing specific classes. This structure maximizes the ability of schools to employ “personalized learning” strategies which meet students where they are. The essence of competency-based learning is to move away from artificially prescribed time in the classroom and

from simply “showing up” toward a student-centered, individualized learning environment focused on mastery of skills and moving at the faster or slower pace the student needs.

Since 2016, Illinois has provided support to school districts to pilot this innovative approach.³ High schools in 15 school districts (out of 852 total school districts in Illinois) are currently participating in the pilot, with another four programs just added.

Dual credit and AP coursework share a common goal of giving students a jumpstart on their post-secondary education by earning college credits while still in high school. Colleges determine whether they will accept these credits, depending on their policies and partnership agreements with high schools. A well-thought-out plan for taking dual credit and AP classes can make post-secondary education much more affordable, so it is important that students know these opportunities are available and understand whether their credits will count.

Dual credit programs recognize that it is impractical programmatically and financially for high schools to provide licensed teachers and coursework that meet the high-wage and high-demand careers of every industry and region. They capitalize on the fact that community colleges (and universities) are more attuned to the job market



SPOTLIGHT: BENITO JUAREZ ACADEMY

Benito Juarez Community Academy, a Chicago neighborhood public high school, is re-imagining high school and transform-

ing teaching and learning for students and adults. So says a 2017 Hechinger Report article written as part of a series profiling high schools that have beat the odds and succeeded in school turnaround efforts.⁴ Stand's Policy Fellows heard from Principal Juan Carlos Ocon about Juarez's transition, first to standards-based grading and now to implementing competency-based learning.

The shift to standards-based grading meant moving away from lectures, mid-terms and finals, and deadlines – toward flexible pacing where every student is expected to master the skills, even if it takes them longer. Juarez's school year extends into August. Their competency-based learning program will take this philosophy to the next level by providing personalized learning with a clear, shared understanding of the goals, and promotion when students demonstrate mastery, rather than at fixed intervals with their cohort of students. One key to Juarez's transformation has been its collaboration with teachers, dedicating time in the schedule for regular collaboration and professional development time.



COURTNEY'S STORY

Courtney dreams of being a software developer, and the grades on her high school report card indicated she was doing her part to get there. She attended a small, rural downstate high school which provided all the course offerings needed for her to meet the minimum state graduation requirements, but not much curricular variety. About five years ago, the school cut its counseling staff amid budget cutbacks.

Her high school only offered two courses related to computers, Information Processing and Keyboarding. Courtney excelled at both, and her teacher even recruited her to assist in teaching some of the lessons. These classes focused on learning basic word processing and slideshow programs, but none of the coding or other skills a developer would use. Courtney also took the standard math sequence that most of her classmates followed: Algebra I, Geometry, and Algebra II.

As her senior year started, Courtney and her parents discovered that, despite being near the top of her class, the course offerings that had been available to her fell far short of what the top colleges were recommending for admission to computer science programs. Courtney was not accepted at her top choice of colleges, but she has stayed true to her aspirations to be a software developer. Now in her sophomore year of college, she is meeting classmates who learned multiple coding languages while in high school and held programming internships. She is realizing how much her high school set her back and how much catching up she faces.

Every advanced course that could have set Courtney up to hit the ground running in college existed when she was in high school; what she lacked was ready access to them.

Even though her school lacked the resources or student interest to expand its own curricular options, it could have offered Courtney access to these courses if it had stronger broadband and an understanding of how to craft these partnerships. The Illinois Virtual School and numerous universities offer Calculus and Introduction to Java online to high schoolers. The community college near the school offers online and in-person options for computer networking, web design, operating systems, introductory programming languages, Trigonometry, and Calculus I, II, and III. All of the students at her school could have benefited from the guidance of a dedicated College and Career Coordinator to navigate these decisions and secure these partnerships.⁵

and nimbler in meeting marketplace demands. They also recognize the talent and credentials of teachers within high schools to teach college-level content to students. Dual credit courses can serve the student looking for a welding credential, so he can get a job immediately after high school, or the student wanting Advanced Calculus, so she can be prepared for college. All dual enrollments should be directly tied to the student's stated pathway and career goals.

Dual credit courses are established as partnerships between a high school and an individual college or university (either two- or four-year institution). There is a good deal of variance in how they are structured. Some are taught on the high school campus by a qualified high school teacher. Other times, the students go to the college campus for some portion of their school day. Still other dual credit courses are taught online. Costs to the student vary from a nominal fee to regular college tuition.

AP classes are generally more difficult than regular or honors high school classes. The College Board, the organization that administers the SAT college admissions test, has created curriculum for almost 40 AP classes provided ready-made to schools. Students enrolled in AP courses become eligible for college course credit by taking a standardized exam at the end of the school year. Even when colleges do not grant AP credit, they may favorably view the fact that a student took the more rigorous course of study during the admissions process.

Online AP courses, like regular AP classes, have a teacher, a syllabus, and reading and homework assignments, as well as lectures. Depending on the school, the student can take the class at home or as part of the school day along with other online AP students.

Moving beyond competency-based, dual credit, and AP classes, some of the more affluent school districts in Illinois offer advanced coursework that is increasingly important for the "jobs of tomorrow" and attractive for college admission. Examples of advanced classes that help students get a jump-start on jobs in the global economy are Chinese,

German, Hebrew, and Japanese. Increasing online access to these classes can open more doors of equity to more Illinois students right away.

Navigating this mix of course types and career possibilities is complex, but fortunately Illinois has recently put in place a strong road map so students can design individualized learning plans and make informed decisions about careers, post-secondary education, and financial aid. This road map, called **the Postsecondary and Career Expectations (PaCE) framework**,⁶ packs a large amount of important information into one page. The framework starts at eighth grade and maps out the steps a student needs to take in order to graduate from high school ready to take the next step the student may select, whether it is college, career, or career training. It establishes a set of benchmarks for each year of high school around three topics: career exploration and development, financial aid and literacy, and post-secondary education exploration, preparation, and selection.

WHAT ARE THE CHALLENGES?

Depending on their zip code, Illinois students may find that their schools do not offer the courses they need to be well positioned for success in their chosen career pathway. The main challenges fall into three buckets: an inequitable access to a rich mix of courses, a lack of teachers to teach them, and, as discussed further in the Modernize the Approach for Supporting Students section, poor guidance support.

The equity divide is profound.

Illinois student enrollment is only 49% white, yet 62% of dual credit enrollments and 57% of AP enrollments are by white students. Black students comprise 17% of state student enrollment, but only 12% of dual credit and 8% of AP enrollment. Hispanic students make up 25% of the student population, but just 18% of dual credit and 21% of AP enrollments. International Baccalaureate (IB) course enrollment bucks this trend, with 75% of



MAKIYA'S STORY

Makiya is a teenage parent who struggles with being bullied and truancy and has lived in several foster homes. Although she should now be a junior, she is technically a freshman, having earned just shy of the six credits needed to achieve sophomore status. Earning credits for high-mobility students like Makiya is challenging because they are not in the same place for long. As she has moved from one foster home to another, and hence one school after the next, she has faced a patchwork of different standards for receiving coursework credit.

Two years ago, she switched high schools the month before the school year ended. Her new school let her enroll in two courses,

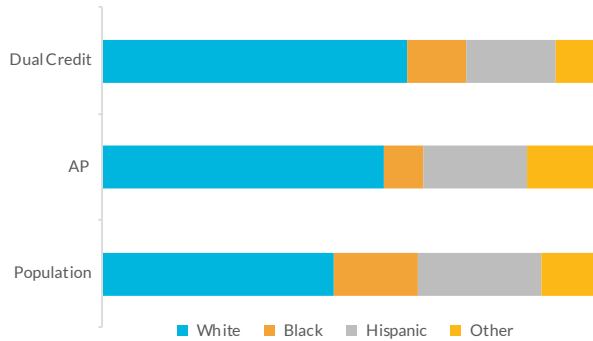
which she approached intensively, and she earned one credit. She returned home that summer and enrolled in a program for adult learners, earning no credits before she moved to yet another foster home in February. This time, the school stuck her in an online credit-recovery program that met after the school day for a total of seven hours per week, earning her just 0.5 credits. When Makiya finished her online course and asked to sign up for another that she could work on into the summer, she was told the summer school online system was not connected to the regular school year's online program.

With each roadblock, she falls further behind and faces more obstacles to a secure future.

Makiya would have benefited from flexibly-paced programs that would enable her to earn credits unconnected to seat time or traditional school-year calendars. An early-watch, freshman-on-track system would have drawn attention to the negative impact of her truancy, prompting quick intervention before she fell even further behind. A College and Career Counselor could help her determine if she wants to focus on getting a credentialed high school diploma as soon as possible in a high-demand industry and, if she wants to eventually pursue college, a realistic approach for doing so.

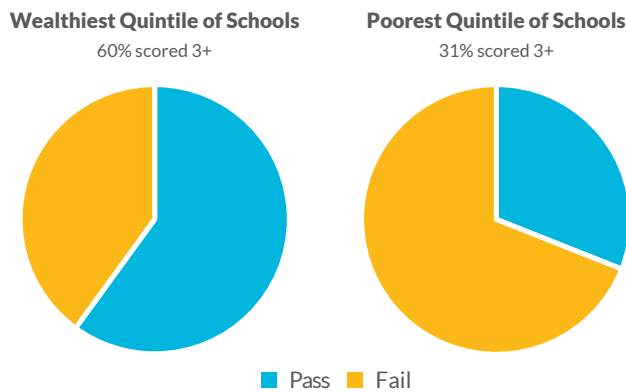
IB enrollments being Black or Hispanic; however, there are only about 10,000 total students in the state enrolled in IB courses, compared to over 100,000 enrolled in at least one AP or dual credit course.⁷

AP and Dual Credit Enrollment by Race



The gap goes beyond racial lines. Students in one-third of Illinois’ counties do not have access to AP classes. Every one of these counties is rural. Just over half of Illinois students are low-income, but those students represent just 35% of dual credit, AP, and IB participants.

AP Exam Pass/Fail Results



Somewhat perplexingly, some of the lowest AP enrollment numbers in Illinois are in middle-income school districts. These districts have only half of the combined AP enrollment of the state’s richest and poorest districts. The pass rate for AP exams is strongly correlated to district wealth. In the wealthiest Illinois districts, nearly 60% of AP students earn scores of three or higher on the AP test (the standard threshold score for college credit). In the poorest quintile of districts, the pass rate sinks to 31%.⁸

If we want to reverse brain drain in Illinois, we must make sure our best and brightest meet the admission requirements set by Illinois four-year institutions.

These powerhouse institutions of higher learning expect matriculating students to have taken far more STEM courses than the state minimums for graduation.

- The University of Illinois at Urbana-Champaign requires three and a half years of math, including Trigonometry or higher,⁹ for many of its most competitive majors such as Engineering, Computer Science, and Business.¹⁰
- The University of Chicago recommends for admission three or four years¹¹ of Laboratory Sciences.¹²

Tragically, 37% of Illinois high schools do not offer Calculus, and 23% do not offer Physics.¹³

The same high expectations by in-state colleges apply to world languages. The University of Chicago recommends that applicants take two or three years of foreign language in high school. Northwestern, like several other Illinois universities, requires students to “demonstrate proficiency in a foreign language at a level that is equivalent to two years of college-level language instruction” in order to graduate.¹⁴ One way that students can demonstrate foreign language proficiency before they even begin classes at Northwestern is by earning a high enough score on an AP exam or a Northwestern placement exam. However, to get to the point where one can earn a high enough AP or placement score, most students need four years of high school world language instruction; this is another place where inequity kicks in. Many high schools offer only two years of world language study, and several only offer Spanish. For these students, in order to pursue a particular career, they may be forced to take costly college foreign language classes unrelated to their program of study or career pathway.

In addition to the Prairie State’s bad case of brain drain, we have a teacher shortage.

In a survey by the Illinois Association of Regional School Superintendents, an alarming 78% of school districts statewide reported a problem with teacher shortages, and 86% cited fewer qualified applicants for positions.¹⁵ Outside of Chicago, participating districts noted that just 71% of the 8,220 open teaching positions were filled by qualified teachers. After accounting for short-term hires and substitutes, 1,574 teaching positions remain open (19%).

The teacher shortage is even more concerning in the career and technical education (CTE) space: just 45% of about 800 posted CTE positions in these same districts were filled with qualified hires. After accounting for short-term hires and substitutes, 201 CTE teaching positions remain open (25%).

A recent bright spot in the teacher shortage department is the revised Dual Credit Quality Act.¹⁶ Previously, some high schools and community colleges differed in how they interpreted the qualifications needed for teachers of dual credit courses, which resulted in fewer teachers licensed for these classes. The Act centralizes the licensing process within ISBE, so more qualified teachers should be able to receive dual credit endorsements on their licenses. It also creates a professional development plan option for teachers who meet some, but not all, of the qualification requirements.¹⁷

RECOMMENDATIONS

The following recommendations would help bring the PaCE Framework alive for high school students in Illinois.

Build more cross-community partnerships and expand course access. School districts and community colleges should pool resources and offer more specialized courses. These partnerships do not have to be 1:1; they can join forces with neighboring districts and community colleges.

Strong models for these types of partnerships already exist via the Illinois 60 by 25 Network of schools, businesses, nonprofits, and community leaders; Illinois just needs more of them.

- “Spotlight: Township High School District 214” explains how this high school district partnered with institutions of higher learning to expand student access to courses in high-need industries such as health care and teaching. District 214 has shown that cross-community collaboration can be effectively achieved. The district consists of six high schools and four specialized programs serving 12,000 students in the north-west suburbs.
- “Spotlight: Rockford School District 205” shows how partnerships between a school district and local businesses resulted in a complete reorganization of their high schools into industry-specific College and Career Academies. It is a shining example of the business community and education sector exercising collaboration and urgency towards a shared goal.

Utilize the Illinois Virtual School to increase access to dual credit, AP, and other advanced courses. Illinois has an under-tapped resource in the form of the Illinois Virtual School (IVS). IVS was established to supplement (not replace) the education provided by brick-and-mortar public schools. Each IVS course is facilitated by a licensed Illinois teacher, aligns to statewide standards, and offers credits to students. IVS offers 12 AP courses and many advanced courses.

For the many rural schools that do not have a single AP course, IVS can open the AP door to their students until such time as teacher shortage situations improve. To clear the path to IVS for those schools, three hurdles need to be addressed.

- **Sliding IVS Pay Structure.** Enrollment in IVS courses is currently skewed toward wealthier districts.¹⁸ Policymakers should address this inequity by requiring IVS tuition to follow a sliding payment scale based on school district funding adequacy levels.
- **Broadband Internet Access for Every School.** Believe it or not, 79 school districts in Illinois serving almost 70,000 students still do not have the fiber infrastructure in place to meet the minimum recommended bandwidth

needs.¹⁹ The lack of broadband access is an education roadblock to prosperity that could easily be removed. This year's budget finally provided funding for the matching grants needed to bring every district up to speed. ISBE should reach out to communicate the availability of this great opportunity. School districts should apply and access the Education Superhighway's new transparency portal to ensure they are maximizing their technology budgets while expanding internet access as needed.

- **More Dual Credit Course Offerings by IVS.** Currently, IVS authority to enter into dual credit courses is essentially the same as

bricks-and-mortar high schools. It must negotiate individual agreements with each college partner, and the attendance boundary for its dual credit students is that of the partner institution. Given these significant barriers, it is no surprise that IVS currently offers only one dual credit course with a single community college partner: Calculus with Richland Community College. Because IVS is a virtual school created to serve students statewide, a state-level partnership with IVS should be created to allow any Illinois high school student to opt into an IVS dual credit course and receive college credit from that course's partner community college.



SPOTLIGHT: ROCKFORD SCHOOL DISTRICT 205

Nearly 10 years ago, business leaders and Rockford Public Schools came together to form Alignment Rockford, an organization devoted to transforming the traditional school structure to better prepare students for the jobs available in their own hometown. Alignment Rockford recruits and coordinates community partners to support public school strategies including kindergarten readiness, parent connections, grade school reading, and college and career readiness.

In partnership with Alignment Rockford, Rockford Public Schools completely redesigned its high schools into the College and Career Academies of Rockford. The Academies, which are within each high school, are small learning communities that provide interest-based, real-world experiences with local businesses and professionals, linking schoolwork to college and career. In addition to regular coursework, specialized electives are presented within the context of the academy's focus. These electives lead to either dual-credit or industry certifications for graduating students. Students chart their unique pathway during eighth and ninth grades, exploring various career pathways. Eventually, students will select one of the following academies to enter tenth through twelfth grades: Business, Arts, Modern World Languages and Information Technology

(BAMIT); Engineering, Manufacturing, Industrial and Trades Technologies (EMITT); Human and Public Services (HPS); and Health Sciences (HS).

Students get a preview of these Academies during the Academy Expo their freshman year. The Academy Expo is a unique, interactive event that allows students to explore over 100 regional career opportunities demonstrated by nearly 500 industry experts who offer hands-on demonstrations and career awareness. The Expo is an immersion experience for all freshman that helps them choose a desired Academy for the upcoming year.

Alignment Rockford bridges the gap between schools and the business community by recruiting industry partners for Rockford Public Schools. Once students select an Academy their sophomore year, they begin exploratory learning with sophomore site visits with industry professionals in connection to their chosen college and career pathway. This year, Alignment Rockford is rolling out their long-awaited pilot for junior year students to participate in job shadowing with real employees from each business throughout their regular coursework. Once students have a deeper understanding of their preferred industry, they may choose to enroll in the capstone course their senior year. The capstone allows the student to plan, create, and implement a real-world solution in connection to their academy, pathway, and industry needs. The capstone projects give students a chance to lead with the knowledge that has accrued over their high school career, while producing an experience that adds to their early college and career resume.

RPS 205 are experts in designing and implementing curriculum. Keeping true to the collective impact model, Alignment Rockford provides support by connecting RPS 205, community volunteers, and industry leaders who eventually create solutions like the College and Career Academies, The Academy Expo, the Capstone Project, and more. Alignment Rockford acts as a facilitator to get the conversation started, and keep it moving forward. For all their pioneering work, Rockford was named a Ford Next Generation Learning Model Community, the third community to be named. Today, there are about 53 communities following this model.

Increase the number of teachers for dual credit courses. Now that the Dual Credit Quality Act has been amended, school districts and community colleges should undertake two important implementation steps:

- Maximizing the professional development plan agreements that provide a pathway for teachers to become qualified to teach dual credit; and
- Developing a strong model partnership agreement between high schools and community colleges for dual credit programs.

Encourage innovation. State policymakers can help incentivize districts to pilot competency-based learning approaches by appropriating small grants for participating districts to use toward implementation at the local level.

School districts not ready to fully embrace competency-based learning programs should explore other alternatives for students not suited for the take-a-class-take-a-test approach. Learning—and earning high school credits—should not be bound by four walls and a school calendar.

PROVIDE PRACTICAL WORKPLACE EXPERIENCES

RECOMMENDATIONS:

- Expand career and technical education opportunities and align them with industry needs.
- Introduce students to career and technical education opportunities while they are in middle school.

The demand for highly skilled workers is strong, and many of those jobs are in Illinois.

Illinois leads the Midwest in clean energy job growth with nearly 120,000 jobs, a growth rate six times faster than all other jobs in the state.²⁰ Manufacturing, which makes up 21% of Illinois jobs, had more than 58,000 jobs postings in 2017 in the Chicago area alone and twice as many job postings as hires, suggesting a high rate of unfilled openings.²¹

There are 232,000 openings for construction jobs across the country; with a median salary of \$65,390 in Illinois, this sector pays well.²² The median annual wage for a wind turbine service technician in Illinois is \$56,680 while the top 10% of wind turbine service technicians earn more than \$80,170.²³

Still other fields, like law enforcement, do not show an abundance of unfilled posted positions, but behind the supply-and-demand statistics is a compelling case for targeted recruitment and training: most police forces fail to reflect the diversity of the communities they serve. Early exposure to these public service jobs could improve community relations with law enforcement and more equitably distribute these jobs, which pay an average of \$64,490.²³

CTE courses prepare high school students for these highly skilled jobs. CTE provides academic content in real-world career scenarios. It provides instruction for careers in high-wage, high-skill, and high-demand career areas like Agriculture, Business, Computer Science, and Health Science Technology.

CTE completers are as likely as non-CTE students to enroll in college.²⁴ Even so, many high-skilled jobs do not require a college degree.²⁵

Working with employers in prioritized areas of economic development, Illinois has created nine CTE pathways to train students for high-wage, high-skill, and high-demand occupations in:

1. Agriculture and Natural Resources
2. Architecture and Construction
3. Energy
4. Finance
5. Health Science
6. Information Technology
7. Manufacturing
8. Research and Development
9. Transportation, Distribution and Logistics

Students who complete any of these pathways will eventually earn on their diploma an endorsement signifying that they have received career-focused instruction with a minimum of 60 internship hours.²⁶



SHANE'S STORY

As a junior in high school, Shane was not sure what he wanted to do after graduation. Many of the classmates in his small town in southern Illinois were heading to the farm or the factory after high school, but those occupations did not appeal to him. A

family friend told Shane about a new Power Plant Technology program at the local community college. Members of the business community started the program when they saw too few students pursuing careers in the state's booming energy sector.

Shane began taking dual credits the following semester. His classes were taught by working professionals, giving him the practical skills he would need as a power plant technician, along with the soft skills needed by all professionals. Once enrolled in the program, he was assigned a career guide who helped him build his resume and find and apply for internships. Shane landed a paid internship during his first summer break at one of the state's largest energy companies, gaining practical, on-the-job experience while pursuing his degree. Shane graduated with an associate's degree and a job offer.

After several years in his first position, Shane's employer paid for him to complete a bachelor's degree in the field. Now, with minimal college debt, and both professional and technical experience in the energy sector, Shane is working full-time as a power plant technician. He reports that his company is still hiring.



SPOTLIGHT: TOWNSHIP HIGH SCHOOL DISTRICT 214

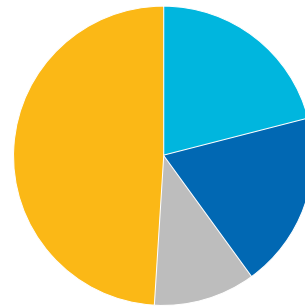
Located in the northwest suburbs, District 214 is a state-wide leader in blurring the lines between high school and college, eliminating barriers to college access and affordability and changing the narrative on the value of public education. Eighty-four percent of the district's seniors are enrolled in early college courses, earning 37,500 early college credits in a single year. Aided by a nationally recognized Career Pathways program allowing students to complete early college credit, workplace learning experiences and career credentials in 44 programs of study, 95% of District 214 students have declared a career area of interest by the time they graduate. The district does this with purpose: Knowing that entering college with 15 or more credits can greatly increase a student's opportunity of persisting to complete a college degree, and recognizing the value of an early career credential in shaping future plans, the district looks to fund these opportunities for the student while they are still in high school.

The district has partnerships with multiple colleges and universities for dual credit opportunities; an Educator Prep pathway for students who pledge to come back as the next generation of teachers and can get their degree through low-cost, no-debt college partnerships; and a unique online course program offered through Arizona State University. Curriculum is built with a close eye on industry demands: a shortage of skilled manufacturing workers led to a specialized program for students who would be immediately employable in high-demand, high-pay jobs. More recent news of a worker shortage in airline mechanics sparked a new aviation maintenance technology program, a partnership with nearby Lewis University, and an opportunity to learn inside an airplane hangar at Chicago Executive Airport. The district has consistently thought outside the box to bring new options for early college credits and other post-secondary opportunities to its students, ensuring they can discover their future and be positioned for success well beyond graduation.²⁷

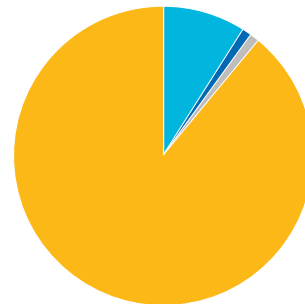
WHAT ARE THE CHALLENGES?

There is a significant misalignment between the CTE courses offered to Illinois students and the demand for jobs in the associated sectors. Case in point: three pathway areas—Manufacturing, Energy, and Health Science—represent about half of the jobs in Illinois, but account for only 12% of CTE enrollment.²⁸

Percent of Total Illinois Employment



Percent of Illinois CTE Enrollment



■ Manufacturing
 ■ Energy
 ■ Health Science
 ■ Everything Else

Nearby states are way ahead of Illinois in the CTE race to the jobs of tomorrow.

Illinois receives nearly \$40 million in federal Perkins grant funds to support CTE programs. The state contributes a matching grant of \$38 million, a figure that has remained stagnant since 2004. If the state's contribution had kept up with inflation, the state's contribution to CTE would be over \$52 million today. Perhaps because of this lack of funding, the number of CTE participants in Illinois has been decreasing since 2012.²⁹ However, with the recent federal reauthorization of the Carl D. Perkins Vocational and Technical Education Act and updates to the Workforce Innovation and Opportunity Act (WIOA), Illinois has an opportunity to rethink its CTE plan to create a truly modern and

holistic approach to college and career readiness. Indiana approaches CTE in a nimble, market-driven manner: it funds CTE programs based on wage and labor demand. It allocates per-pupil funding for CTE courses in high-wage, high-demand industries at a rate of more than three times its funding for CTE courses for low-wage, low-demand industries (a \$350 difference).³⁰ To further encourage CTE pathways, the state allocates double the funding for work-based learning and advanced CTE courses compared to introductory classes.

Michigan high school students outpace Illinois students concentrating in CTE, and Iowa is well ahead of even Michigan. Now federally defined, a student is considered a “CTE concentrator” if the student takes two or more CTE courses in a sequence. Five percent of Illinois high school students are CTE concentrators.³¹ Contrast that to 18% for Michigan and 37% for Iowa.³¹

RECOMMENDATIONS

Illinois can make a series of policy and programmatic shifts to create more opportunities for students to pursue high-demand CTE pathways.

Expand CTE opportunities and align them with industry needs. Districts and local industry should work together to expand CTE opportunities and ensure that program offerings are aligned with local job market projections.

Introduce students to CTE opportunities while they are in middle school. Introducing middle school students to high-wage, high-growth industries in Illinois gives them more opportunities to think about career pathways that spark their love of learning. Just as college students often switch majors, high school students may want to try different pathways. Exposure to CTE while in middle school gives them a jump start on thinking about the pathways that excite them. Business groups, higher education, and local and state government should partner to form industry advisory boards that commit to do the following:



BOBBY'S STORY

Bobby was an uninspired sophomore attending a suburban high school piloting a competency-based learning program. His father was a bricklayer and Bobby wanted to drop out of school and follow in his footsteps. Instead, Bobby had the chance to better understand the relevance of staying in school through a Geometry in Construction class, and then was connected to internship opportunities through his school's Manufacturing and Engineering Job Fair. These applied learning opportunities and the internship dramatically changed his perception of school and paved the way for an even brighter future for Bobby. He is now using his senior year alternating between his in-school courses and an internship with a manufacturing company while earning advanced industry credentials. He has multiple well-paying job offers on the table for him when he graduates.

- Provide in-house exposure tours for middle school and ninth grade students using young professionals who mirror the demographics of the student body;
- Send visiting young professionals to the school;
- Review the school's curriculum annually to provide guidance on best practices;
- Include students in industry-related events; and
- Provide paid internships. (Funding can come from municipalities, philanthropy, or industry.)

MODERNIZE THE APPROACH FOR SUPPORTING STUDENTS

RECOMMENDATIONS

- Let school counselors counsel and increase the level of college and career coordinating support for students.
- Create Freshman-on-Track Early Warning Systems in high schools, especially those with low graduation rates.
- Create individualized student learning plans that emphasize pathway completion.
- Guide students through post-secondary planning by using student, employment, and post-secondary data.
- Be transparent about whether each Illinois high school has a meaningful college and career ready orientation.

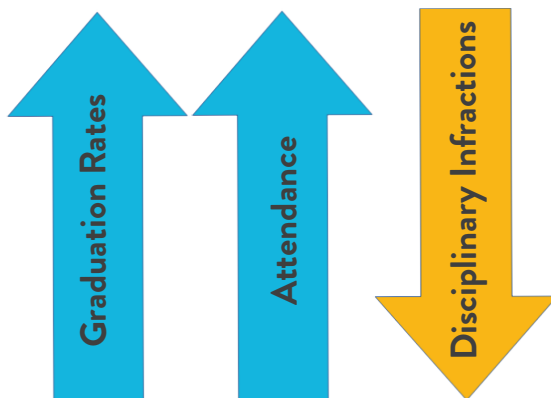
Illinois uses a counselor-to-high-school-student ratio of 1:250 and recommends that counselors spend at least 80% of their time on student services.³² According to the Developmental Counseling Model for Illinois Schools, counselors work in three domains (academic, social-emotional, and post-secondary) and serve three “tiers” of students (all, some, and few).

In today’s era of increased incidents of in-school bullying and trauma, as well as higher student poverty, that is a tall order, especially when stakes are so high for students in their final years before adulthood.

Yesterday’s traditional counselor role might involve scheduling, checking to see if students are on track for meeting graduation requirements, and guiding them through college and financial aid applications. But today’s counselors are also expected to provide social-emotional support in a quickly changing world and, in high-poverty districts, their time is being diverted to decidedly non-counselor roles such as lunchroom duty and substitute teaching.³³

These mounting responsibilities fly in the face of research that affirms the value of investing in counselors: **studies show that high-poverty schools that meet the recommended ratio of students-to-counselors have higher attendance and graduation rates and fewer disciplinary infractions.** An analysis this year showed graduation rates five percentage points higher in schools with more guidance counselors.³⁴

High-poverty schools that meet the recommended counselor-to-student ratio:



SPOTLIGHT: DISTRICT OF COLUMBIA PUBLIC SCHOOLS

In 2014, DC Public Schools were among the schools nicknamed “dropout factories.” With a district-wide graduation rate of 58%, the district embarked on a major change within high schools, putting the district on a trajectory toward its 2017 graduation rate of 73% - and rising. The key to DC’s transformation? College and Career Coordinators.

College and career readiness got a new focus within the DCPS Central Office; every high school was soon equipped with a College and Career Coordinator. These positions did not replace traditional guidance counselors or look to guidance counselors to fill the positions; instead, schools’ college and career readiness programs were transformed with Coordinators leading the charge. Coordinators built teams of existing staff and support organizations, creating a strategic plan to boost college and career readiness rates in each high school. Coordinators became point people for colleges and businesses, and they sought out internship opportunities for students to pursue.

Every student on track for an internship would also complete a training program called “TENACITY,” for which the Coordinators train the trainers. They lead the eighth-grade exposure programs and engage families of rising ninth grade students in college and career planning activities. They analyze data to steer students toward post-secondary programs with high persistence rates.

Moving college and career readiness from a day-to-day process of scheduling and filling out applications, Coordinators take a proactive approach to building opportunities for students and create a system that embeds college and career readiness throughout the culture of the school building.

A cost-efficient approach that complements the Illinois Developmental Counseling model involves having a dedicated staff position of a College and Career Coordinator. Affluent districts that can rely on local property wealth have versions of this kind of support; making it possible for every student in Illinois to have it would benefit the entire state.

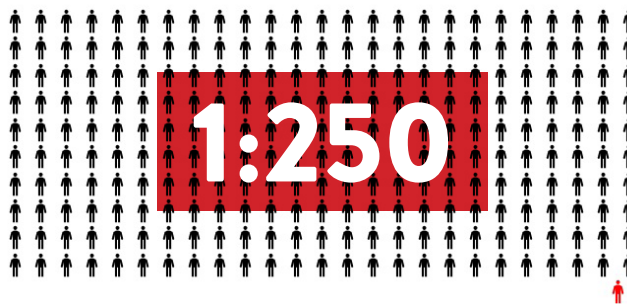
The College and Career Coordinator works with school leadership to create a college and career advising team (typically comprised of existing school staff, teachers, and support organizations) to ensure every high school student and family receives proactive support to successfully transition the student to college, career, or career training. This coordinator helps students stay on track for graduation and pursue opportunities in the students' fields of interest. The coordinator is also the bridge connecting the school with business and industry advisory boards. College and Career Coordinators market and support students in dual credit programs and utilize post-secondary and career data to drive student programming. They act as point persons for internships with businesses and community groups, visits with college recruiters, and exploring opportunities available in industries with unfilled positions. The coordinator is a resource to counselors, students, and families, armed with the latest information on high-wage, high-growth careers available in their district. In short, they steer the resources and supports to ensure high school students have strong post-secondary plans that match the students' chosen pathways.

These coordinators are typically paid out of administrative budgets. They are not considered teacher or counselor FTEs, and they do not require professional licensure. **One College and Career Coordinator can support about 400 students from ninth to twelfth; one single professional can make a huge difference in those students' future.** Washington, DC Public Schools is utilizing the College and Career Coordinator structure well, and now almost half of their high school students are taking CTE coursework.³⁵

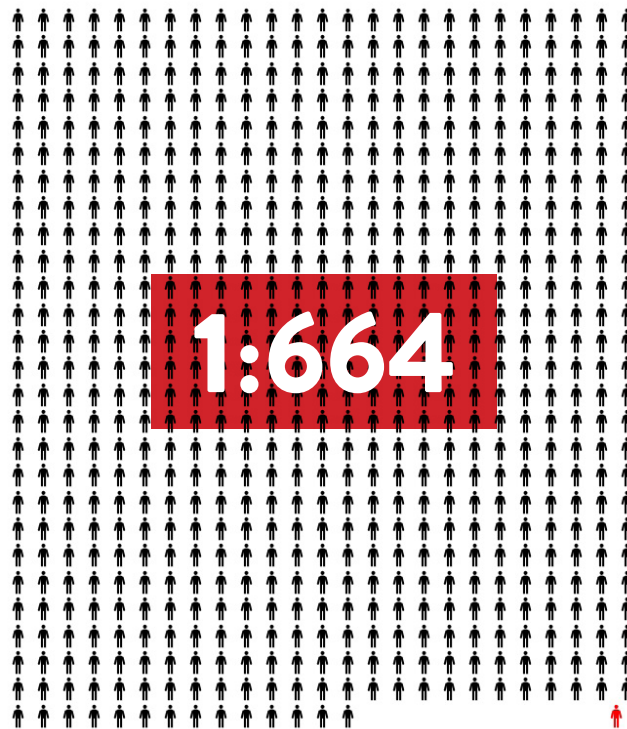
WHAT ARE THE CHALLENGES?

Illinois has several challenges in this area.

The first is clear and measurable: Illinois schools do not have enough counselors. **While the recommended counselor-to-high-school-student ratio is 1:250, Illinois' average is 1:664 (the sixth-worst in the country).**³⁶ Twenty-one percent of Illinois high schools have no counselors, which breaks down to 850,000 Illinois students not having even one counselor at their school.³⁷



1:250: The recommended counselor-to-student ratio.



1:664: Illinois' sixth-worst in the nation counselor-to-student ratio.

The second challenge relates to the wide range of roles and responsibilities placed upon school counselors. These vary widely from school to school and often clash with a myriad of competing priorities, many of which fall outside the scope of counseling.

The third challenge pertains to the opportunities available to Illinois students during high school and once they graduate. Illinois simply needs to provide students with more college and career coordinating support that remains squarely aimed at opening doors to high-demand, high-wage opportunities in this state.

RECOMMENDATIONS

There are several steps that can be taken to modernize the way students receive college and career guidance.

Let school counselors counsel and increase the level of college and career coordinating support for students. Districts should ensure that school counselors dedicate their time to supporting students, rather than being pulled away to handle lunch duty and substitute teaching. Creating a dedicated College and Career Coordinator role centralizes the responsibilities of proactively engaging industry, creating workplace learning experiences, and staying up-to-date on labor trends.

Create Freshman-on-Track Early Warning Systems in high schools, especially those with low graduation rates. It is ultimately up to school districts to decide how to allocate the funds they receive from the state, but research strongly shows the value of early intervention in keeping students on track to graduation. Counselors should monitor freshmen attendance and offer support for those at risk of falling off track. Though districts allocate resources locally, there are also opportunities for the Professional Review Panel of the Evidence-Based Funding Formula to adjust recommended counselor ratios to reflect the higher cost of supporting freshmen and to determine whether the 1:250 recommended counselor-to-student ratio be adjusted to account for poverty rates within districts.

A COLLEGE ADMINISTRATOR'S PERSPECTIVE

Mark Carbonara is the Associate Director of Leadership Programs and Student Success at Dominican University in River Forest. He spoke with the Stand Illinois Policy Fellows about the preparedness of the students he sees day to day. The Fellows asked about his thoughts on what would help new college students be better prepared for success.

STAND: *What are some of the skills that students struggle with the most when arriving at college?*

MC: *I believe that some of the skills that students entering college are lacking when they arrive include study skills, time management, work ethic and professionalism, written and oral communication skills, and critical thinking skills.*

STAND: *How could high schools better prepare students for the challenges of college, not just academically but socially, economically, and personally?*

MC: *High schools can work to integrate some soft skill training and learning into projects and curricular assignments, like having students work on job shadowing, interviewing and rephrasing, critical thinking, and relatable case studies.*

STAND: *How can the pipeline be more supportive of first-generation college students?*

MC: *I believe that mentoring programs are a huge asset to all students but specifically those that are more marginalized on college campuses, including first-gen students. I believe that providing college preparation information to parents of students, in their native language, is extremely helpful to parental buy in of incoming students. Lastly, college visits or panels to meet success stories from their neighborhoods might be helpful as well.*

Freshmen are

3X

more likely to graduate from high school if they meet certain on-track indicators



SPOTLIGHT: STAND FOR CHILDREN OREGON

After years with one of the worst graduation rates in the country, Stand for Children Oregon drafted a ballot measure to create new opportunities for high school students in the areas of CTE, college readiness, and dropout prevention. It passed by a two-to-one margin in 2016, securing support across the political spectrum. The measure offered districts dedicated funding to be spent for high school students across the three targeted areas. Districts have flexibility in how they implement the measure, and Stand created the Oregon Center for High School Success as a cost-free resource and planning partner that supports more than 60 schools and districts. Recent data from the Oregon Department of Education provide a glimpse of the measure's potential: exposure to CTE improves graduation rates by up to 15 points,⁴⁰ and Ninth Grade Success—a dropout prevention strategy supported by the measure—more than doubles the likelihood of a student graduating.⁴¹

Key to this dropout prevention initiative is the freshman “on-track” early warning system, which involves analyzing attendance data and classroom grades in real time to identify students at-risk of falling off track. Teachers or counselors call home when students miss days unexcused, visit home when calls go unnoticed, meet with students to ask them what barriers they are facing, and build relationships with at-risk students to ensure they feel like an adult in the building cares about them. The system also fundamentally transforms the school culture: the attendance and grade data drives conversations among principals, counselors, and classroom teachers, with the ultimate goal of creating a network so tight that any student at-risk of slipping behind is identified, counseled, and supported before it is too late.

An invaluable tool developed by the University of Chicago has established that a freshman is *three times more likely* to graduate from high school if the freshman meets a few “on-track indicators” related to attendance and not failing certain classes. Counselors can reference this tool throughout a freshman’s year to keep them “on track” and to help them start high school on a strong footing.³⁸ (See the next section for more about the funding

formula and see the “Spotlight: Stand for Children Oregon” to learn about this state’s pragmatic and innovative approach.)

Create individualized student learning plans that emphasize pathway completion. Guided by their College and Career Coordinator and the PaCE framework, students should be encouraged to explore careers in middle school and the early stages of high school. Their junior and senior years should be dedicated to pursuing college credit and progressively advanced career opportunities. To support this progression, counselors and College and Career Coordinators should be checking in with students throughout their high school experience to help them select the courses that will result in credits or a career credential when they graduate.

Guide students through post-secondary planning by using student, employment, and post-secondary data. ISBE recently launched Ed360, an innovative technology platform that allows educators to view real-time student data and predictive analytics. But participation is optional for school districts, though it is a powerful tool that offers tremendous potential for data-driven decision-making. This data would allow counselors and College and Career Coordinators to provide in-depth, personalized advising based on a student’s college and career aspirations and their history of academic achievement.

Be transparent about whether each Illinois high school has a meaningful college and career ready orientation. The Illinois State Report Card “grades” public schools and serves as the state’s official source for school data.³⁹ While a rich source for educators and the public, it falls short in reporting on how schools are doing in providing students with the academic, technical, and professional skills necessary to succeed in college and the workplace. Right now, the closest indicator of college and career readiness on the state report card is the percentage of students scoring a 21 or higher on the ACT. ISBE should add a specific College and Career Readiness Indicator to the Illinois State Report Card.

Fortunately, most of the hard work for creating this indicator has already been done. The state was required to create such an indicator as part of the state's new accountability plan required by the federal Every Student Succeeds Act. This new indicator combines several key measures of success for college and career readiness, such as GPA, access to workplace opportunities, completion of advanced coursework, attendance, and career planning. ISBE should not only add this indicator to the State Report Card, it should list the CTE pathways available at each school, with an emphasis on partnerships with local employers for internship opportunities or career guidance.

ADEQUATELY FUND EDUCATION AND SPEND WISELY

RECOMMENDATIONS

- Continue to increase the level of funding flowing through the Evidence-Based Funding Formula.
- Include elements within the Evidence-Based Funding Formula for pathways, adjusted counselor ratios, and College and Career Coordinators.
- Appropriate funding to develop the structure for ongoing programs within key CTE pathways.
- Increase funding for MAP grants in order to serve more students and increase the amount of the grants.

On August 31, 2017, Illinois turned a historical corner in K-12 education funding by enacting a new evidence-based funding formula for K-12. Under the new formula, the most under-funded school districts receive new state dollars first, with no district losing state funding over the prior year.

Illinois also took another step in the direction of equity by ending the Teachers' Retirement System (TRS) surcharge, which was taking up to \$100 million of federal funds from downstate and suburban classrooms serving lower-income students.

Collectively, the new formula, elimination of the TRS surcharge, and \$700 million in new funds have given a lifeline to many schools struggling for years to educate students in the most inequitably funded state in the country. **However, because Illinois failed to provide adequate state funding for such a prolonged period, the system is funded at less than 75% of adequacy.**

Higher education also took hits in recent years, as Springfield was embroiled in a budget crisis. Colleges, universities, and students counting on state grants were in limbo. Post-secondary institutions tightened their belts, closed down programs, and cut staff, while students who relied heavily on state financial aid were left empty-handed.

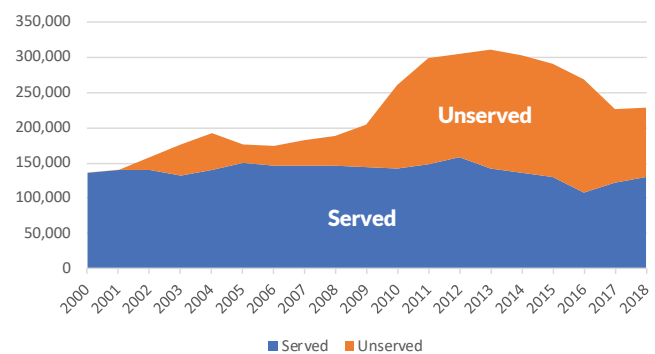
Those who were particularly impacted were low-income students relying on Monetary Award Program (MAP) grants. Illinois chronically falls short in funding MAP grant requests—the state's appropriation is only enough to cover about half of MAP grant eligibility each year. In addition, the value of MAP grants has not kept pace with inflation. A MAP grant in 2002 covered full tuition and fees at a public university; these days that same grant covers about one-third of that cost. For students needing remedial courses when they arrive in post-secondary schools, the shortfall in the MAP grant is even higher.

A COUNSELOR'S PERSPECTIVE

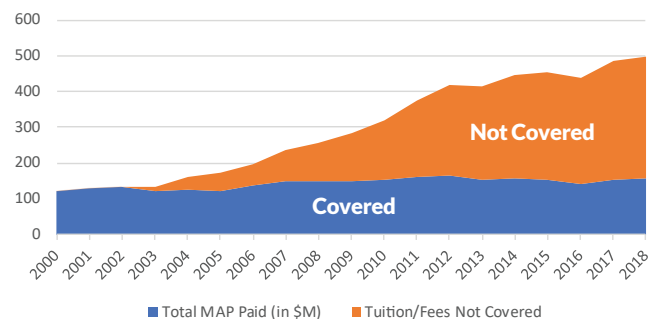
Amy Thompson, President-Elect of the Illinois Association for College Admission Counseling, spoke with a Stand Policy Fellow to discuss how important counselor positions are and what might help improve students' access to college and career training.⁴²

Thompson believes two steps forward would be fewer non-counseling responsibilities and more professional development opportunities for counselors. Thompson also considers both the number of counselors and how soon they are provided to be important. She says, "Better [counselor-to-student] ratios across all grades. College and career readiness does not magically start in high school or even in the last couple years of high school—it starts when school starts, and we need more elementary and middle school counselors as well as better ratios at all high schools across the state."

How Many Eligible MAP Students are Served?



How Much of Public University Tuition and Fees Does MAP Cover?



The uncertain and confusing landscape of post-secondary education has real consequences for students and for the state. Students, particularly first-generation college students, may inaccurately think certain colleges are out of their reach, be susceptible to unscrupulous lenders and education institutions, and miss out on financial savings opportunities. Illinois, in turn, may lose these students' work force contributions and buying power.



BRANDON'S STORY

Brandon was expelled from his public high school and spent his junior year and the first half of senior year at an alternative school. The focus at the alternative school was to get him prepared to re-integrate into a traditional high school. But after graduating one semester later, Brandon had no idea what his career goals were. As a first step, he applied and was accepted into a private two-year college, which he paid for with a federal loan. During his first semester, he got off track and ended up dropping out.

After taking a semester off, Brandon decided to try again at college, this time selecting the public community college, where he was placed into remedial courses. It took two semesters before Brandon could enroll in credit-bearing English and math courses. Thankfully for Brandon, the college gave him tools to improve his skills and stay in school through counseling, tutoring, a writing center, and a part-time job in the advising office. Although statistics were against him – just 20% of students who enroll in remedial math will ever actually earn math credits – Brandon worked hard and graduated in three years with his associate's degree. He is now pursuing a bachelor's degree at a university. Although the private college seems like a minor blip along his ultimately-successful path, that federal loan remains with him.

A strong College and Career Coordinator could have helped Brandon develop a plan for his post-secondary experience. Plus, if he had better access to tools to avoid remediation, like transitional math and English courses during his senior year of high school, that would have enabled his placement in credit-bearing community college courses upon passage.

WHAT ARE THE CHALLENGES?

When the funding formula passed, Springfield was quick to issue statements heralding its historic significance.

The Governor said it was “a reminder of the good things we can accomplish when we put politics aside and focus on what’s important: our children and our future.” Senate President Cullerton noted that “going forward, it declares our commitment to fairness and equity in funding public education

across our great state.” House Speaker Madigan stated, “as we move forward, it will be vitally important that the Legislature remain vigilant in protecting the funding mechanism passed.... By continuing to work together, we can ensure all students throughout the state are receiving the support they need to be successful.”⁴³

A big challenge for K-12 funding is keeping Springfield focused on these calls to action. It was not until schools were teetering on the edge of closing their doors that the new formula passed. With the K-12 system still funded at less than 75% of adequacy, it is vitally important that legislators and advocates stay vigilant in fighting for increased levels of funding for the new formula.

Another challenge is making sure the funding formula stays relevant and reflects the best research. The Professional Review Panel, the group of experts and stakeholders appointed to ensure the funding formula reaches its potential, will need to stay laser focused on equity.⁴⁴

Moving to higher education, the inflation-adjusted cost of tuition and fees at Illinois public universities has more than doubled since 2002, while the income for lower-income families has decreased slightly.

Illinois is a “high sticker price” state, meaning that colleges in Illinois often have higher tuition rates, but also award greater amounts of financial aid. Students who do not understand this may think college is unaffordable, though with some support from their schools, they could learn about this concept and options available to them. All of this makes the situation harder and more pressure-sensitive on students from underserved communities: a low-income student with top math scores has about the same odds of graduating from college—about 40%—as a wealthy student with mediocre scores.⁴⁵

The challenges facing Illinois, and the need for well-coordinated action across K-12 and higher education in the funding arena, are reflected in the state’s high remediation rates; that is, the numbers of high school graduates who are so unpre-

pared for college that they have to take remedial courses to catch up. **Almost half of Illinois community college students fall into this category.**⁴⁶ Despite having high school diplomas, they are placed in developmental math or English courses that do not earn college credit.

Every time this happens, students and taxpayers are hit twice: at the high-school level, when these foundational subjects should have been taught and mastered, and again at the college level, when students must take remedial courses.

RECOMMENDATIONS

State policymakers and advocates can pursue several policies to ease the burden on Illinois students and taxpayers.

Continue to increase the level of funding flowing through the Evidence-Based Funding Formula.

If Illinois continues to allocate new dollars to the funding formula at the rate of \$350 million a year, it could take 20 years to reach funding adequacy. At that pace, today's newborn will graduate high school without adequate funding being achieved.

Include elements within the Evidence-Based Funding Formula for pathways, adjusted counselor ratios, and College and Career Coordinators. The funding formula currently uses 34 research-based practices to establish the amount each school district needs to be adequately funded. The Professional Review Panel should recommend a career pathway element to provide direction to schools as they prioritize their limited resources. The panel should also refine the counselor-to-student ratios, currently 1:250, to reflect the fact that lower-income students and first-generation college-goers need more counseling support. Furthermore, adding an element reflecting the need for one College and Career Coordinator position per 400 high school students would help schools be proactive in creating workplace learning experiences and developing partnerships with area industries.

While the decision on how to spend state funds ultimately largely rests with school districts, the combination of these added elements, increased funding, and the adoption of recommendations such as those in this report incentivizes districts to direct their funds towards college and career readiness.

In the meantime, districts should actively apply for grant opportunities through WIOA Illinois Works, an online resource that connects communities to the opportunities provided through the federal Workforce Innovation and Opportunity Act of 2015. There are three grant programs to support college and career readiness: the Illinois Talent Pipeline Program which funds projects developing work-based learning opportunities, the Youth Career Pathways Program funding projects that serve youth with barriers that prevent continued education and employment, and the WIOA Statewide Workforce Innovation Program, which funds projects that support the goals of the WIOA Unified State Plan, including innovative workforce pilot and research projects.

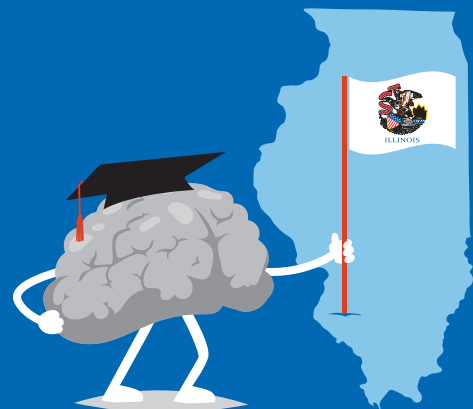
Appropriate funding to develop the structure for ongoing programs within key CTE pathways.

Right now, Agricultural Education is the only pathway that has its own dedicated line in the state budget. The agriculture sector has been able to develop a broader statewide infrastructure and more specific concentrations within the sector, such as Agribusiness and Mechanics. This sort of centralized support from policymakers would be low-cost and could have high impact within other pathway areas. Funding tied directly to wage and employment data and providing additional funding to advance CTE courses would not only encourage districts to begin prioritizing pipelines for high-demand industries but also promote CTE pathways instead of one-off courses, so that students ultimately earn a credential instead of just completing another class.

Increase funding for MAP grants in order to serve more students and increase the amount of the grants. The recently enacted budget adjusted timing for MAP grants, extending them from one to four years, which is a positive step. More needs to be done by leaders in Springfield to provide Illinois students with certainty regarding this vital financial resource for their post-secondary education, including an increase to the funding for MAP grants. Furthermore, increasing the amount of each grant would go hand-in-hand with an increase in the program's funding. As costs continue to rise for Illinois college students, MAP grants must rise to meet them so that cost does not deter our state's students from continuing their education after high school.

CONCLUSION

Every Illinois student has the right to a high-quality high school experience that prepares them for the real world. Illinois, at the state level and within some districts, has made strides toward making this vision a reality, but there is more work to do. To achieve these goals, all of us—policymakers, school districts, parents, teachers, advocates, businesses, and community leaders—must play a role. Working together and for the benefit of Illinois' future, we can create new and innovative pathways to success for our students right here in Illinois.



ENDNOTES

- 1 In 2016, 19,275 more Illinois high school graduates left the state for post-secondary education than entered the state. Only New Jersey had a worse net student out-migration. Chicago Tribune Editorial Board, "How can Illinois stop brain drain? Try fixing higher ed.," Chicago Tribune, April 13, 2018. <http://www.chicagotribune.com/news/opinion/editorials/ct-edit-illinois-brain-drain-exodus-20180409-story.html>.
- 2 Illinois State Board of Education, 2016 Guidance Document.
- 3 Public Act 099-0674, Section 20, created the Competency-Based, High School Graduation Requirements Pilot Program. Schools from Belvidere School District 100, Community Unit School District 300, Maine Township High School District 207, Paris Cooperative High School, Urbana School District 116, Peoria Public School District 150, Huntley Community School District, Rantoul Township High School District 193, Williamsfield Community Unit School District 210, Kankakee School District 111, Proviso Township High School District 209, East St. Louis School District 189, Ridgewood High School District 234, Round Lake Community Unit School District 116, and Chicago Public Schools District 299 are currently participating in the pilot. In September 2018, ISBE announced Illinois Valley Central School District 321, Mattoon CUSD 2, Quincy School District 172, and Warren CUSD 205 joined the pilot. Illinois State Board of Education, "Competency Pilot," <https://www.isbe.net/Pages/CompetencyPilot.aspx>.
- 4 Amadou Diallo, "A school once known for gang activity is now sending kids to college", Hechinger Report, November 21, 2017. <https://hechingerreport.org/school-known-gang-activity-now-sending-kids-college/>.
- 5 Courtney's story is a profile based on the course offerings of an actual high school in Illinois.
- 6 Illinois PaCE Postsecondary and Career Expectations, https://www.isbe.net/Documents/PaCE_Revisions.pdf.
- 7 Illinois Report Card, 2016-2017, <https://www.illinoisreportcard.com/>.
- 8 U.S. Department of Education Office of Civil Rights, 2015.
- 9 The traditional high school math sequence is Algebra I, Geometry, Algebra II, then their senior year, students can select their math class based on their chosen career path. Those courses might include a Transitional Math class, Pre-Calculus, Trigonometry, or Statistics, though only a total of three years of math is required for graduation. Increasingly, districts are enrolling eighth grade students in Algebra I, which frees up an additional year for students to pursue other courses.
- 10 University of Illinois at Urbana-Champaign, "Acceptable High School Courses," Undergraduate Admissions, University of Illinois at Urbana-Champaign.
- 11 The traditional science sequence is Biology, Chemistry, Physics, then their senior year, students can choose their science class that best fits their chosen career pathway. These might include Environmental Science, Advanced Chemistry or Biochemistry, or Anatomy and Physiology, though only a total of two years of science is required for graduation.
- 12 University of Chicago, "Preparing for College," Preparing for College, UChicago Promise, <https://promise.uchicago.edu/students/preparing.html>.
- 13 U.S. Department of Education Office of Civil Rights, 2013-2014.
- 14 Northwestern University, "Foreign Language Proficiency Requirement".
- 15 Feldmann, Mark, "Illinois Educator Shortage Crisis: Survey Conducted by IARSS," Illinois Association of Regional School Superintendents, no. 1 (2018): <http://www.advanceillinois.org/wp-content/uploads/2017/12/IARSS-Illinois-Educator-Shortage-2017.pdf>.
- 16 SB 2838 (Bertino-Tarrant/Manley) amending the existing Dual Credit Quality Act (110 ILCS 27).
- 17 The Higher Learning Commission, an accreditation agency for many higher education institutions in several states including Illinois, requires teachers to have a master's degree with 18 hours of credit in the content area taught. A 2016 survey conducted by ICCB, ISBE, and IBHE found that only fourteen percent of high school teachers were qualified to teach dual credits while half of respondents stated they already had a master's degree but not the 18 hours of credit in the content area. Ashley Becker and Glenn Wood, "The State of Dual Credit After Policy Changes to Faculty Qualifications in Illinois," Center for the Study of Education Policy, Illinois State University (2017). <https://education.illinoisstate.edu/downloads/csep/policypapers/2017-number811-dual-credit-policy-brief.docx>.
- 18 Illinois Virtual Education Review Committee Report, April 25, 2016, <https://www.isbe.net/Documents/VERC-final-report160425.pdf>.
- 19 Compare & Connect K-12 "Education SuperHighway," "Compareandconnect12.org."
- 20 The Joyce Foundation, "2017 Clean Jobs Illinois Report," Clean Jobs Midwest, <http://www.joycefdn.org/assets/images/CJM-2017-All-ExecSum.pdf>.
- 21 Elejalde-Ruiz, Alexia, "Is manufacturing the answer to the joblessness that plagues parts of Chicago?," Chicago Tribune, June 10, 2018. <http://www.chicagotribune.com/business/ct-biz-manufacturing-jobs-unemployment-0607-story.html>.
- 22 Bureau of Labor Statistics, "Job openings levels and rates by industry and region, seasonally adjusted," April 2018.
- 23 Bureau of Labor Statistics, "May 2017 National Occupational Employment and Wage Estimates United States," Occupational Employment Statistics, Bureau of Labor Statistics https://www.bls.gov/oes/current/oes_nat.htm.
- 24 Gottfried, Michael and Plasman, Jay "Linking the Timing of Career and Technical Education Course-taking With High School Dropout and College-Going Behavior." American Educational Research Journal 55, no. 2 (2007) 325-361. doi: 10.3102/0002831217734805 .
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850 W. Jackson Blvd., Suite 330
Chicago, IL 60607

601 W. Monroe St.
Springfield, IL 62704

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Stop Illinois Brain Drain: Building Pathways to Prosperity for High School Students

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