

Building Toward Excellence: Strengthening Workforce Pathways at the City Colleges of Chicago



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Introduction

Millions of adults in the United States are living in poverty and suffering from low rates of employment and low earnings. Research on the shifting U.S. labor market has revealed that most job seekers will need education and training beyond a high school diploma to obtain a living-wage job.¹ While studies have shown that a college degree is one of the surest ways to secure high-wage jobs, recent evidence has shown that many “middle-skill” jobs, which require some postsecondary training but less than a 4-year degree, allow individuals to enter or reenter the labor force with higher earnings than jobs that only require a high school diploma.² Training for these jobs also tends to be shorter than a typical 4-year (or even 2-year) degree, providing a further boon to working adults who have difficulty foregoing work and income while upskilling.³

The promise of shorter-term workforce-focused training programs has become a growing area of interest in community colleges. Large federal, state, and philanthropic investments have been made in supporting community colleges’ development of these programs,⁴ and numerous research centers are now dedicated to understanding and strengthening community colleges’ workforce success.⁵ However, recent research has also documented some of the challenges that

Who Is AIR?

Established in 1946, the American Institutes for Research® (AIR®) is a nonpartisan, not-for-profit institution that conducts behavioral and social science research and delivers technical assistance both domestically and internationally in the areas of education, health, and the workforce. AIR’s work is driven by its mission to generate and use rigorous evidence that contributes to a better, more equitable world.

¹ Carnevale et al., 2016; Groshen & Holzer, 2021.

² Belfield & Bailey, 2017; Carnevale et al., 2018; Minaya & Scott-Clayton, 2017.

³ Peck et al (2022). Most career pathway training programs were six months or less.

⁴ Education Commission of the States, 2021; Keuhn & Eyster, 2020; State Council for Higher Education, n.d.

⁵ Center for the Analysis of Postsecondary Employment and Earnings, n.d.; Rutgers School of Management and Labor Relations, n.d.; WestEd Center for Economic Mobility, n.d.

community colleges face in aligning their programs with labor market and employer needs.⁶ Additionally, community college graduation rates are low,⁷ and labor market returns for those who earn credentials are mixed.⁸ At the same time, recent reviews of rigorous research on sector-focused workforce training and career pathway programs have revealed that those led by community colleges tend to have smaller impacts than those led by other agencies.⁹

AIR's Equity Initiative

In 2021, AIR launched the AIR Equity Initiative, a 5-year, \$100 million-plus investment in behavioral and social science research and technical assistance to address the underlying causes of systemic inequities and to increase opportunities for people and communities.

While some case studies have documented promising practices,¹⁰ much more needs to be learned about how to strengthen community colleges' workforce training pathways and about what practices hold the most promise for growing students' employment and earnings over the long term. Beginning in 2021, AIR sought to address these issues through the establishment of the PROMISE Center ("PROMISE" stands for "Promoting Resiliency, Opportunity, and Mobility in Service of Equity"), which seeks to adapt and scale effective workforce training practices in alternative

settings to reach broader, more diverse populations. Funded by a generous grant from AIR's Equity Initiative, one of the center's key goals is to improve workforce pathways in community colleges. AIR began this work through an inaugural researcher-practitioner partnership with City Colleges of Chicago (CCC). This brief provides an introduction to that partnership and our collaborative efforts to strengthen CCC's sector-focused workforce pathways as part of its Centers of Excellence (COE) model.

City Colleges of Chicago's Centers of Excellence Model

Serving over 60,000 students a year, CCC has been focused on aligning programs and offerings with Chicago's growing economy to provide better career opportunities to a highly diverse urban population. One key aspect of this work has been developing a more systematic approach to the integration of education and workforce training through their sector-focused COE. Each of the seven CCC colleges and the central district office lead at least one COE and provide leadership around a specific high-demand industry, sharing knowledge about Chicago's labor market needs within the sector, fostering employer and community partnerships, and

⁶ Fuller & Raman, 2022; Hart Research Associates, 2013; Holzer & Baum, 2017.

⁷ National Center for Education Statistics, 2022.

⁸ Backes et al., 2015; Belfield & Bailey, 2017; Ositelu et al., 2021; Peck et al., 2022.

⁹ Peck et al., 2022.

¹⁰ Davidson et al., 2019; Schwartz & Lipson, 2023.

providing guidance on quality programming (see Exhibit 1). Currently, there are COE in nine industry areas, which are (a) Healthcare; (b) Transportation, Distribution, and Logistics; (c) Business; (d) Engineering and Computer Science; (e) Advanced Manufacturing; (f) Information Technology; (g) Education; (h) Culinary Arts and Hospitality; and (e) Construction Technology (see Exhibit 2). The key goals for the COE are to create more upward mobility for students by improving their employment-related skills while also supporting the needs of the Chicago labor market in ways that benefit both workers and employers.

Exhibit 1. Map of City Colleges of Chicago

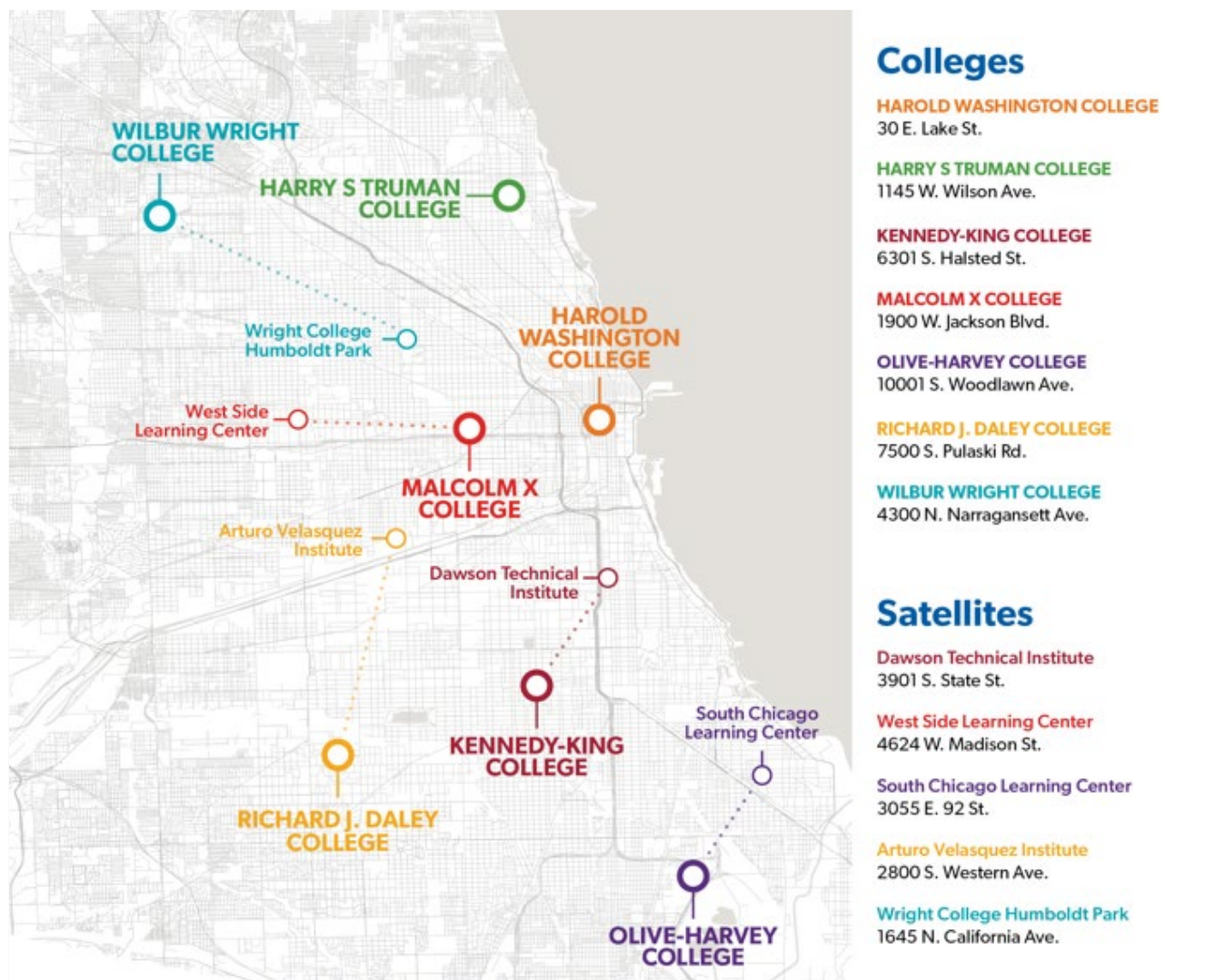


Exhibit 2. City Colleges of Chicago’s Centers of Excellence Sectors by College

College/district	COE sector focus
Harry S Truman College	Education
Harold Washington College	Business
Malcolm X College	Healthcare
Wilbur Wright College	Engineering and Computer Science
Olive-Harvey College	Transportation, Distribution, and Logistics
Kennedy-King College	Culinary and Hospitality; Construction Technology
Richard J. Daley College	Manufacturing
District office	Information Technology

Prior to partnering with AIR, CCC district leaders internally established principles and goals for the COE model (see Exhibit 3). However, they were interested in further strengthening various aspects of the model while also developing a more integrated understanding of the COE goals and implementation across the CCC system.

Exhibit 3. City Colleges of Chicago’s Centers of Excellence: Key Principles and Goals

COE principle	Goals
Partnerships	<ul style="list-style-type: none"> Establish an advisory council of employers with strong industry expertise that meets regularly and advises and affects program content Smoothly integrate work-based learning opportunities into the program Conduct regular analyses of labor market information when assessing programming Maintain a robust relationship with workforce boards and partners
Quality	<ul style="list-style-type: none"> Ensure that faculty and administrators have strong subject matter expertise Ensure that content and certifications align with industry needs and employment opportunities Offer instructors teaching guides and professional development opportunities Ensure that students are successfully obtaining credentials with no equity gaps
Innovation	<ul style="list-style-type: none"> Ensure that COE are consistently developing new programs in high-demand industries Ensure that noncredit (continuing education) programs are used as testing grounds for new programs Ensure that COE have state-of-the-art training facilities that align with industry needs Ensure that COE have secured external financial support and are integral in the college’s Strengthening Career and Technical Education for the 21st Century Act (Perkins V) plan

COE principle	Goals
Access	<ul style="list-style-type: none"> • Ensure that COE leaders have developed criteria for expansion and that they guide the implementation of programs at multiple locations • Ensure that course scheduling provides multiple options for full-time and part-time students • Ensure that programs offer stackable credentials with viable exit points and options for transfer to 4-year colleges • Ensure that options or bridges exist for adult learners and high school students • Ensure that advisors are trained to advise on COE pathways

City Colleges of Chicago, AIR Partnership, and Equity

Even though the COE model has been in operation for over a decade, CCC had not yet examined whether and how these expectations were being realized across the district. In 2021, AIR partnered with CCC to research how the COE were being implemented on the ground and to provide technical assistance expertise aimed at further strengthening their work. In line with AIR’s Equity Initiative, a key goal of the CCC and AIR partnership has been to analyze potential equity issues with different communities’ access to these training pathways. More specifically, we have sought to improve CCC’s reach into communities that have been isolated from opportunities as a result of segregation by race and place. CCC is a minority-serving institution, meaning that the majority of its student body is composed of students of color. As such, efforts to improve CCC’s workforce programs should translate into better employment outcomes for these historically marginalized groups. However, the location of specific COE in each of the seven colleges across Chicago could geographically limit individuals’ access to specific programs (see Exhibits 1 and 2). Additionally, some programs require the completion of prerequisite courses and institute competitive admissions processes, which could further limit the opportunities for some groups. We have paid particular attention to these issues throughout our work with CCC.¹¹

¹¹ For instance, Malcolm X College, which has the health care sector focus, is geographically accessible given its downtown location. However, other colleges, such as Richard J. Daley College, which is CCC’s advanced manufacturing COE, is more difficult to reach given its location southwest of the city and the limited options for public transportation. We discuss access issues in more detail below.

AIR's Formative Research on the Centers of Excellence

To support CCC in improving its COE programming and in increasing equitable education and workforce outcomes for students, AIR conducted qualitative and quantitative research to learn more about the strengths of COE and areas for further improvement. Our qualitative investigation included interviews with district leaders, college administrators, instructors, support staff, and employer partners and focused on a variety of topics related to the district's goals for the COEs, such as the quality of each COE's partnerships, program content and alignment with industry needs, new program innovation, and access to different COE sector pathways. AIR also analyzed quantitative data on each COE to examine enrollment and completion patterns over time and potential equity gaps in access and success by race, ethnicity, and gender. These data included all for-credit enrollments and awards earned between 2015 and 2021 for COE and non-COE students, as defined by CCC, overall as well as within each COE sector.

Findings from this research further underscored CCC leaders' interests in strengthening the COE model. In sum, our findings suggested the following:

- Many college leaders had questions about how to implement components of their COE and were interested in additional input into and guidance around core aspects of the model.
- While college leaders were familiar with the COE model, many of its aspects had not yet been fully institutionalized, and implementation was uneven across the focus sectors. For instance, the strength of colleges' relationships with employers varied, opportunities for work-based learning differed, and challenges existed with cross-college collaboration within particular industries.
- College leaders generally did not rely on quantitative data on COE enrollments and completions when assessing the strength of a COE. Similarly, while programming was informed by industry requirements, the use of labor market data to inform programming was sporadic and varied by sector.
- Access and enrollments varied across COEs. For instance, enrollments in information technology and health care were high and growing, but enrollments in engineering; manufacturing; and transportation, distribution, and logistics were very low. In interviews, college leaders attributed these differences to students' positive and negative perceptions of different industries, the colleges' locations and accessibility, and differing earning potential across various sectors.

- Significant enrollment and completion gaps existed by race, ethnicity, and gender across programs and colleges. For instance, enrollments for males were higher than for females, and few women were enrolled in training for traditionally male industries, such as manufacturing, information technology, and construction. Additionally, Black student enrollments declined while Latino student enrollments rose,¹² which may be related to long-standing patterns of racial and economic isolation in Chicago.

These findings and recent research on effective sectoral program practices have helped inform the focus of AIR and CCC's collaboration. We launched several technical assistance teams aimed at further defining and strengthening the overall COE model as well as specific aspects of COE programming and supports. More specifically, AIR and CCC focused on (a) developing a more specific framework and guidance for overall COE structure and implementation, (b) analyzing current labor market trends to assess COE programming and alignment with industry needs, (c) creating supports for effective employer engagement, (d) creating districtwide guidance and requirements for implementing work-based learning, (e) developing measures and tools to more readily assess COE enrollments and performance, and (f) undertaking qualitative and quantitative research to gather student perspectives on COE programming and to assess equity issues in COE access for different racial and ethnic communities in the Chicago area. A brief introduction to each of the focus areas is provided below.

Technical Assistance to Strengthen City Colleges of Chicago's Centers of Excellence

Building a Strategic Framework for Center of Excellence Implementation

AIR has been working with CCC to develop a more grounded and action-oriented framework and approach that can support COE leaders in their planning, implementation, and ongoing operations. AIR began this process by conducting a series of meetings with district and college leaders to gather feedback on various elements of the COE model and to field key questions about its structure in 2022 and early 2023. AIR's team has been using this information to build a cross-district framework and playbook that provides guidance, support, and accountability measures for key elements of the model around COE leadership, industry and employer engagement, student access and success, and measures to assess the health and

¹² Enrollment and completion trends reported here are prior to the pandemic when enrollment rates dropped for all racial and ethnic groups.

vitality of the model. Elements within this framework are also guided by findings and work from each of the individual COE technical assistance strands highlighted below (see Exhibit 4). AIR hopes to support the implementation of the playbook across the district and share lessons with the field in 2024.

Exhibit 4. Our Research and Technical Assistance Support to Address Centers of Excellence Challenges

COE challenge	AIR technical assistance support					AIR research	
	Strengthen COE strategic framework	Analysis of labor market needs	Supports for employer engagement	Work-based learning guidance	COE performance measures	Student interviews	Race and place analysis
Unclear understanding of COE components	●			●			
Desire for more guidance on COE implementation	●			●			
Variable implementation of the COE model	●			●			
Inconsistent strength in employer partnerships	●		●	●			
Sporadic opportunities for work-based learning	●			●			
Challenges with cross-college collaboration	●			●			
COE performance not tied to data on enrollments and completions	●				●		
Limited use of labor market data in program planning	●	●					
Variable and low COE enrollments	●				●		●
Equity gaps in COE enrollment and completion	●				●		●
Anecdotal student voice						●	

Strengthening Center of Excellence Alignment With Labor Market Needs

To inform additional program development, AIR is working with CCC to analyze current Chicago-area labor market data to (a) consider whether COE programming aligns with current labor market needs and (b) forecast potential labor demands in future years. To do this, the AIR team accessed job listing data from the Chicago Metropolitan Statistical Area from EMSI (now Lightcast) to model the demand for skills over time within different occupations. This allowed us to identify skill demands 2 years into the future, map them to current CCC program offerings and curricula, and identify skills that are anticipated to grow significantly to inform COE program revisions and growth. Through this work, AIR is testing a variety of state-of-the-art forecasting models to predict skill demand and test for the robustness of skill-demand predictions. In addition to creating analyses that can be used in CCC's outreach and relationship building with employers (see below), we hope to create a scalable forecasting model that can be applied throughout the workforce development ecosystem to enable communities to build economic mobility and resiliency through identifying well-paying, in-demand jobs.

Supports for Effective Employer Engagement

Employers routinely engage with CCC on a variety of levels, including hosting work-based learning opportunities and practicums for students, helping design specific training programs for industry jobs, and participating in citywide workforce development and employment councils. However, college leaders noted a need for more strategic engagement with employers by industry and a need for more systems that would support the tracking, monitoring, and growth of these relationships across the district. AIR has been working with district and college leaders to more fully articulate their vision for this work and promote the colleges' investment in sector partnerships. This has included providing guidance on the use of labor market information, the development of employer advisory councils, and the identification of best practices for employer and industry engagement. This work is also closely tied to AIR and CCC's efforts to analyze projected skills demands based on Chicago-area jobs data (see above), build a cross-district framework for offering and tracking work-based learning opportunities, and develop measures and tools to monitor COE enrollments and health.

Integrating Work-Based Learning into the City College of Chicago Student Experience

CCC leaders believe work-based learning offers a unique opportunity for students to develop critical knowledge, skills, and networks related to their chosen career pathway. While these experiences are built into some programs, work-based learning has not been systematically implemented across the district. AIR is supporting the district and colleges in developing the

requisite systems, policies, practices, and cultures to promote equitable access to quality work-based learning opportunities. AIR began this work in winter 2022 by convening a cross-district workgroup consisting of directors and deans responsible for specific industry programs (such as health care or manufacturing), workforce partnerships, and career services and development. AIR has been supporting this team over the course of 2022 and 2023 to develop guidance around establishing employer partnerships, coordinating student supports, measuring employability skills, and establishing work-based learning data collection procedures.

Developing Measures and Tools to Track Center of Excellence Performance

As noted in our qualitative findings, COEs were generally not tracking the performance and health of different COE programs, and the district hoped to develop measures and tools that would support more program accountability. AIR has been partnering with the district to develop more user-friendly data dashboards that monitor performance on key metrics, including enrollments, participation in work-based learning, program completion, and labor market outcomes, such as employment and earnings. The dashboard will allow these metrics to be tracked for each COE, for each college, and for particular student groups by race, ethnicity, gender, and age. The goal is for these dashboards to aid college leaders in tracking the performance of different COE programs and to use these data to continuously improve program offerings and students' success.

Qualitative and Quantitative Research

Along with a concerted effort to provide technical assistance to support COE development, AIR has also continued to investigate ways that the COEs might be further strengthened. Introductions to two strands of this work are provided below.

Raising Student Voices

As noted in our formative research, COE enrollments and completions have differed across programs and student groups. College leaders have believed that these differences were due at least in part to students' perceptions of different career tracks. However, these perceptions appeared to be based on conversations with individual students and not necessarily a deeper investigation into students' perspectives and beliefs about different career fields. In summer 2023, AIR researchers began conducting interviews with students across different COE programs to better understand students' perceptions of the labor market and the support they need to successfully complete credentials that will lead to skilled, in-demand jobs. In these interviews, students were asked to articulate their definition of a "good job," what factors

influenced their career choices, and their perceptions of how well CCC was supporting their education and career goals. AIR is sharing findings from this work with CCC in winter 2024 and will share broader findings with the field later in 2024.

Equity of Access by Race and Place

AIR's Equity Initiative has been keenly focused on uncovering and mitigating the harmful effects of segregation by race and place. The initiative has been particularly interested in trying to overcome these challenges through a place-based approach that focuses on building and strengthening services within specific cities or regions. Chicago's historic challenges with segregation and efforts to overcome these difficulties made it a particularly strong area for investment. CCC's COE structure, with its college-based sector focus, also creates access challenges for individuals who may not live close to the college-sector hub. This is particularly true for campuses that have limited public transportation, such as Richard J. Daley (COE for Advanced Manufacturing), or that are far from Chicago's South Side, where many Black and Latino residents live. In order to address these issues, AIR is undertaking an analysis of individuals' access to different COE using microlevel student data. We are analyzing the locations of the seven CCC colleges along with students' residential locations to understand how racial segregation in Chicago may affect the access of disadvantaged students, especially those of color, to COE programs. A key goal is to identify whether all students have access to the best workforce training opportunities at CCC and identify potential equity gaps for students.

What Is Next?

Building strong workforce training programs across our nation's community colleges has become a key focus of national and state policy in recent years. Students' enrollments—and successes—in these programs represent a critical area in which postsecondary institutions can positively affect their communities' upward mobility, and CCC's COE model provides an important test case for learning about innovations on the ground as well as how to serve diverse populations in a large and changing urban environment.

Over the next year, AIR and CCC will publish a variety of resources and reports aimed at strengthening the field's efforts to support this growth, including lessons on developing and adapting new policies and practices as well as tools for further embedding promising workforce practices into a postsecondary setting. We hope that learnings from our partnership will help contribute to the growing body of research focused on strengthening postsecondary approaches to workforce training that can further meet the needs of the dynamic U.S. labor

market while also increasing the economic mobility of individuals who have been more isolated from these opportunities.

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