



Rethinking CTE: Initial District Reflections from Baltimore's CTE Reports

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A Tale of Two Reports

The Fund for Educational Excellence released its “Broken Pathways” report.

Feb. 2019

May 2019

Education Strategy Group released its report, “Preparing All Students for Economic and Career Success.”

What happens when our students leave us?



The high school class of 2009 had 4,280 graduates.

29%

enrolled in a
4-year college

23%

enrolled in a
2-year college

22%

went directly into
the workforce

26%

did not enroll in college
and did not appear to be
in the Maryland workforce

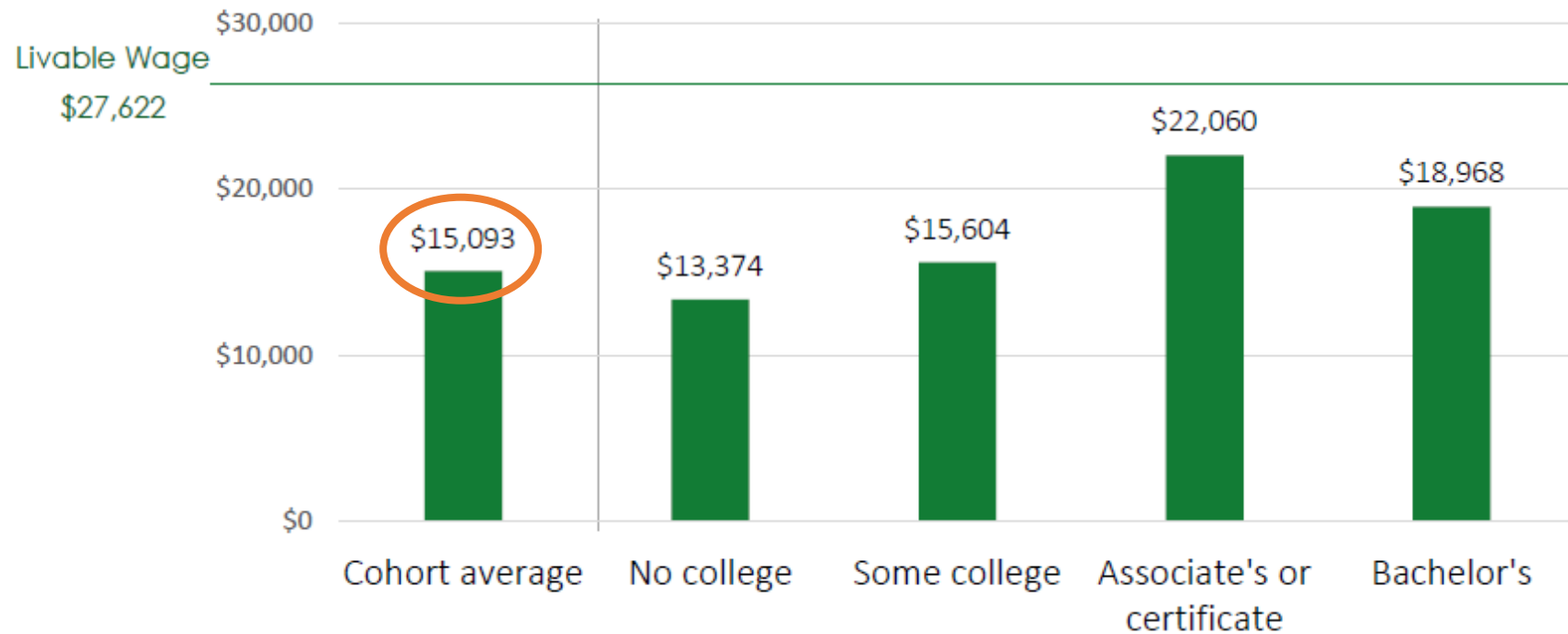
Data Source: Baltimore City Public Schools student data, Maryland Longitudinal Data System data on employment, wages, and postsecondary enrollment.

Postsecondary Pathways Report, Baltimore's Promise.2017

**BALTIMORE'S
PROMISE**

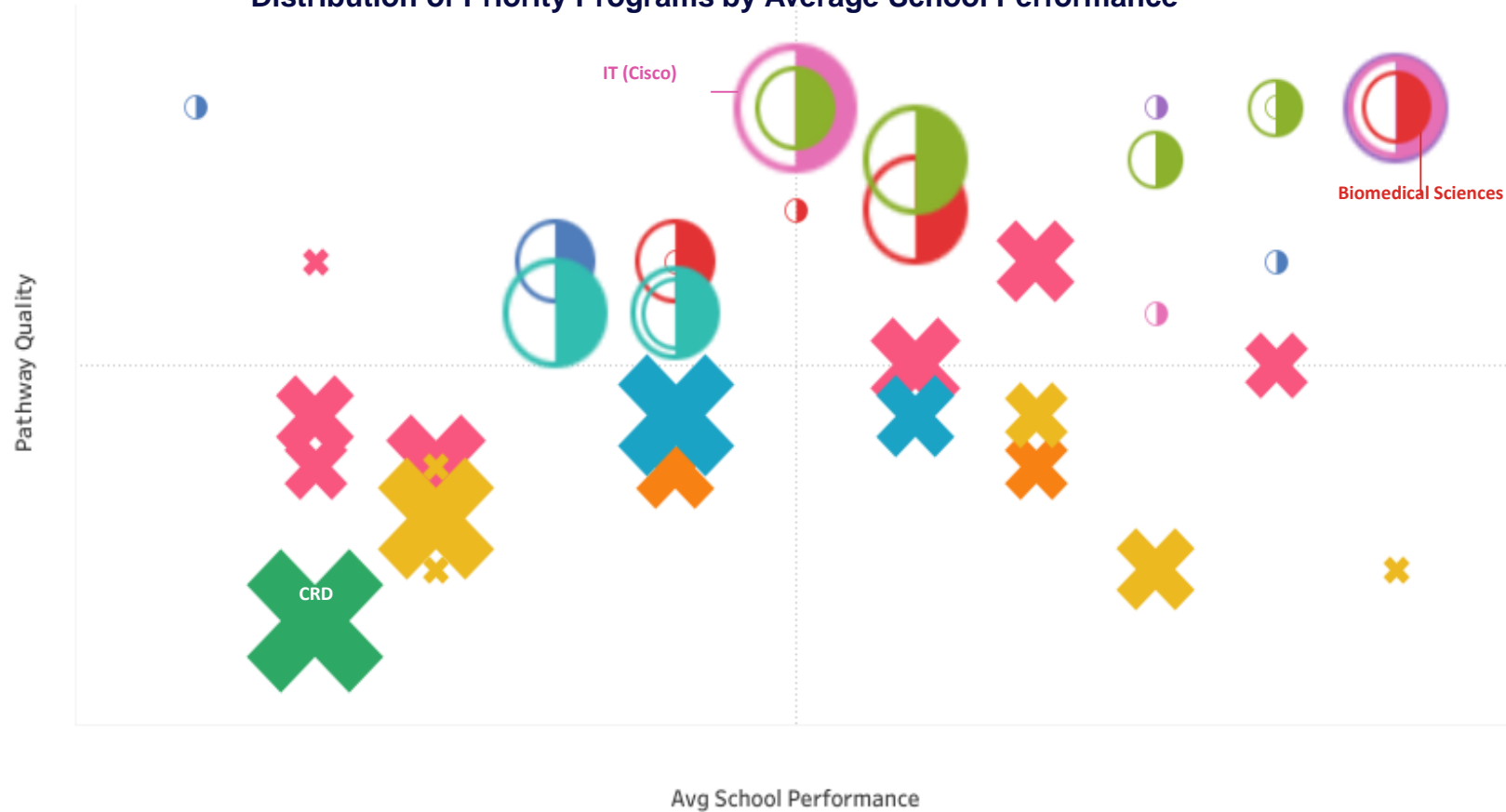
What happens when our students leave us?

Figure 1. Median annual income six years after high school for all graduates, by college completion status (class of 2009).



Equity in Access

Distribution of Priority Programs by Average School Performance



Priority Industry?

● Yes

✕ No

Cluster

Arts, Media, & Comms

Business Management and Finance

Career Research & Development

Construction & Development

Consumer Services, Hospitality, & Touris..

Environmental, Agriculture, & Natural R..

Health & Biosciences

Human Resource Services

Information Technology

Manufacturing, Engineering, & Technolo..

Transportation Technologies

Schools In

1

2

4

6

8

≥ 10

Industry-Aligned Pathways

Manufacturing,
Engineering,
and Technology

Health and
Biosciences

Information
Technology

Business
Management
and Finance

Construction
and
Development

Transportation
Technologies



Fund Recommendations

If we really want CTE in City Schools to give students a leg up to a meaningful, well-paying career, we need to **implement CTE as it is intended to be implemented in today's labor market**. Much of what we call CTE in City Schools right now looks like the old vocational-technical model developed to give students who were not bound for college a pathway to a family-sustaining job. Most of the jobs that CTE pathways are aligned to today require additional training and coursework beyond an initial certification earned in high school in order to earn a family-sustaining salary, or even a self-sustaining salary.

- 1) **Locate nearly all CTE programming at two or three easily accessible centers.** Students enrolled in CTE programs would take their CTE classes at these centers and core academic classes at their home schools.
- 2) **Establish academic prerequisites for CTE programs.** Other Maryland counties have prerequisite courses for their CTE programs, and students who want to enroll have to maintain a C average or better.
- 3) **Develop course schedules for students that are aligned to their goals.** City Schools should use block scheduling to maximize CTE students' time in their CTE classes.
- 4) **Invest in staffing models that make sense.** With at least a thousand students participating in CTE courses in three locations, each center would need at least one and possibly several dedicated teachers per program. Each center should also have a small team of work-based learning coordinators on-site to match students with internship opportunities and one counselor for every 250 students.
- 5) **Prioritize partnerships and communication with regional industry and employers.** Stakeholders in local industry and business should review curriculum, ensure that information is aligned with the most up-to-date industry practices, and advocate in the larger community for programs connected to their industry.

ESG Recommendations

Alignment

Increase program of study alignment to in-demand, high-skill, high-wage occupations.

Quality

Ensure each program of study offers early postsec opportunities and/or a high-value IRC
(as well as access to college prep strategies like transition courses).

Skill

Partner with the employer community to build and scale industry-aligned work-based learning experiences

Access

Strengthen student advisement and placement services that govern CTE enrollment.

Equity

Expand student access to priority programs of study by placing them in open access schools across the district.

Build robust data systems to track student progress

Areas of Investment

Category	Recommendations	Need
Alignment	<p>Increase program of study to high wage/high-skill occupations (ESG)</p> <p>Prioritize partnerships and communication with regional partners (Fund)</p>	<p>Funding to purchase and new curriculum for pathways</p> <p>Policy analyst to determine correct programming placements and types given student interests, locations, and high-wage, high-skill careers (also listed in access)</p>
Quality	<p>Ensure each program of study offers early postsecondary opportunities and/or a high-value IRC (ESG)</p>	<p>Dual enrollment expansion and funding to build partnerships with local IHEs</p>

Areas of Investment

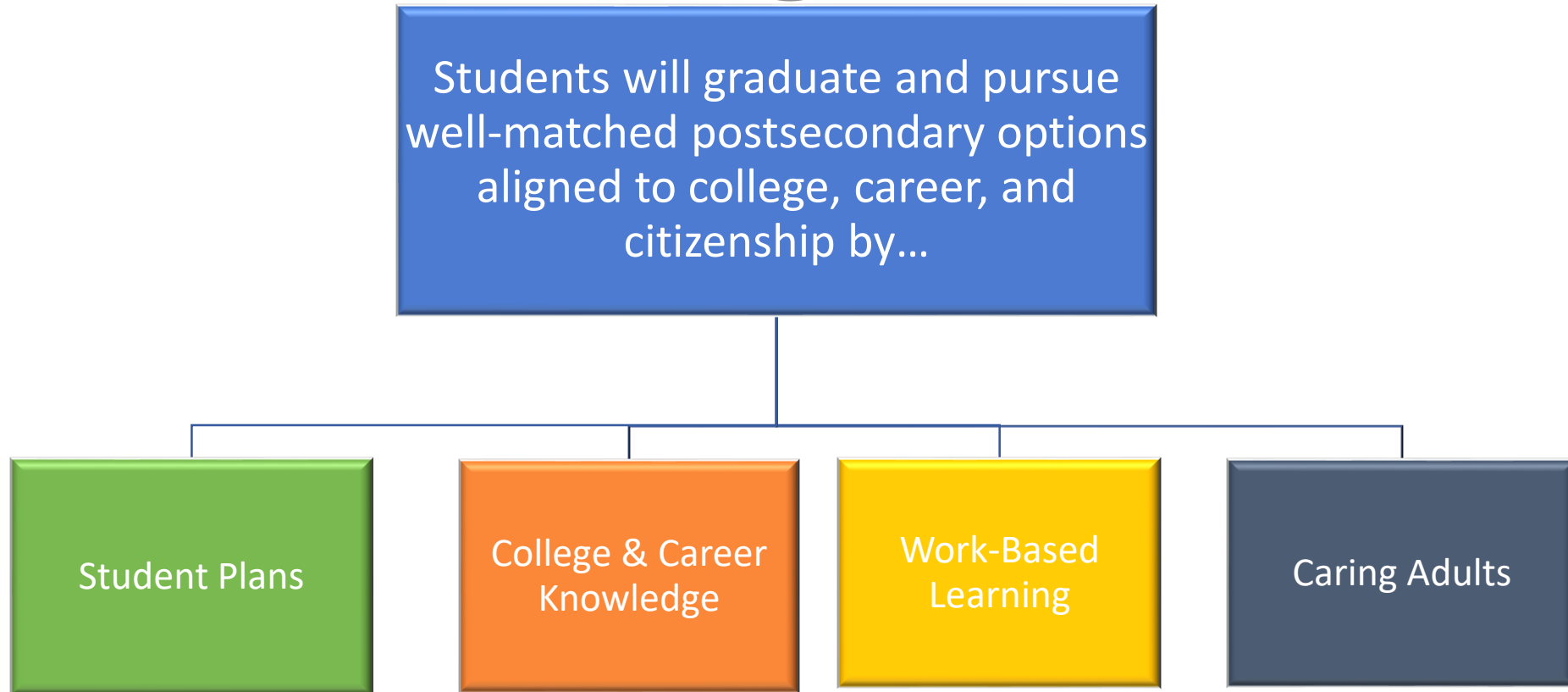
Category	Recommendations	Need
Skill	<p>Partner with the employer community to build and scale industry-aligned work-based learning experiences (ESG)</p> <p>Invest in staffing models that make sense (Fund)</p>	<p>Funding for salary differentials to make hard-to-fill CTE teacher salaries market competitive</p> <p>Development of work-based learning infrastructure investment</p> <p>Support for teacher professional development</p>
Advisement	<p>Strengthen student advisement and placement services that govern CTE enrollment.</p> <p>Develop course schedules for students that align with their goals.</p>	<p>Digitizing of student plans</p> <p>CTE programming in middle school</p> <p>College and career readiness programming for parents</p>

Areas of Investment

Recommendation Area	Recommendations	Need
Expand Student Access	<p>Expand student access to priority programs of study by placing them in open access schools across the district (ESG)</p> <p>Locate nearly all CTE programming at two or three easily accessible centers (Fund)</p> <p>Establish program-specific academic prerequisites for CTE programs (Fund)</p>	Policy analyst to determine correct programming placements and types given student interest, locations, and high-wage, high-skill careers (also listed in access).
Robust Data Systems	Invest in robust data systems	Work-based Learning Database Purchase

Key Levers for College and Career Readiness

12



If we do this right...



The work ahead



Alignment of CTE pathways with labor market demand

- Which programs should be expanded?
- Which programs should be sunset or decreased?
- What certifications do students need in a pathway to earn a living wage?
- How can we meaningfully expand CTE opportunities to middle school?

In progress:

- 3 new construction pathways (electrical, HVAC, plumbing)
- Talent Ready initiative focusing on IT pathways

Challenges:

- Many of the most popular programs are not aligned with high-wage, high-skill jobs.
- Students struggling academically find existing certifications challenging, so increasing certification standards could result in even lower pass rates.

Pedagogical support for teachers

- How do we support teachers with basic instructional skills and classroom management?
- How do we help teachers learn strategies for math and English remediation in their CTE classrooms?
- How do we provide regular coaching and feedback?

In progress:

- Backward-planning toward certification
- Professional learning community for first-year CTE teachers

Challenges:

- CTE teachers' collaborative planning times typically do not align with those of core content teachers
- Limited current staffing makes providing coaching support for teachers difficult.

Work-based learning expansion

- How do we track existing programming?
- How do we vet new opportunities?
- How do we match students with these opportunities?
- How do we develop a feedback loop that includes both employers and students?

In progress:

- Apprenticeship MD
- Individual student plans

Challenges:

- District staff capacity to do business development and student matching is limited at the level required for success
- A legal and digital infrastructure is needed to collect, record, and disseminate opportunities to students and schools.

Employer engagement

- What kind of engagement would feel meaningful to employers?
- How should we organize the Program Advisory Committees and the Local Advisory Committee?
- How do we include employers to support curriculum alignment, mentoring, and work-based learning opportunities?

In progress:

- Shifting from school-based to citywide program advisory committees

Challenges:

- Nationally, PACs and LACs have been a challenge to engage in ways that are more than just compliance-oriented.
- With over 30 programs, the PACs are a challenge to staff well.

Increasing dual enrollment and dual credit

- What is our dual enrollment strategy?
- How do we spend limited funds?

In progress:

- 3 P-TECH programs (IT, health sciences, transportation technologies)
- Increased dual enrollment participation from 93 in 2013-14 to 345 in 2017-18

Challenge:

- Limited dual enrollment funding requires difficult tradeoffs when determining which courses to fund
- Building collaborative, high-quality partnerships with local colleges and universities

Communications

- How do we provide better information about the role that rightly-aligned CTE programming can play in student outcomes?
- How do we improve the CTE information related to the choice process?
- How do we include CTE as part of a broader conversation about Baltimore's high schools and our young people's career readiness?
- How do we expand CTE programming to middle grades?

In progress:

- Joint event with the Fund in Fall 2019 focused on family engagement
- Individualized student plans for 6th, 8th, 9th, and 12th graders

Challenges:

- Resources needed to digitize student plans, so they are easier to update and track.
- Communication about CTE has been relatively limited, so many families are unaware of its potential.

Staffing structure

- What responsibilities do we maintain in-house?
- What do we outsource?
- What are the best practices and approaches used across the nation?

In progress:

- Director of career readiness search
- Currently interviewing for 3 vacant district positions

Challenge:

- With more tasks than capacity, and a significant portion of work aligned to MSDE compliance, the team has not been able to provide the level of service to teachers, students, or employers that we would want to provide.

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