
The Path to Baltimore's "Best Prospect" Jobs without a College Degree:

Career Credentialing Programs at Baltimore's Community Colleges

Prepared for the Abell Foundation
By Barbara L. Hopkins, MPM, JD
Quick Study Consulting, LLC



March 2015

FOREWORD

Like many cities of its age and size, Baltimore faces an uneven job market. Certain sectors are booming; whereas others are dwindling, even disappearing, from the city's landscape. A four-year college degree is lauded by many as the key to opportunity, and yet, for many of the city's young residents, the path to completing that degree is fraught with insurmountable obstacles. The focus on "college for all" has obscured other postsecondary training opportunities that can lead to living-wage jobs and subsequent professional opportunities.

The facts are stark: Only one in five graduates of Baltimore City Public Schools matriculates to a four-year college immediately after high school. And less than one-third of these will successfully complete a baccalaureate degree. Another 30% of Baltimore's recent graduates enroll in Baltimore City Community College or Community College of Baltimore County with the goal of transferring to a four-year college. Instead, many leave with no credentials, but with significant debt.

There is no doubt that the value of a college degree has been effectively communicated to young people planning their futures; yet far too many fall short of this goal and are left with little to show for their effort and expense.

Missing from this conversation is information on alternative post-secondary pathways that lead to mid-skilled jobs, those jobs that pay more than \$34,000 annually, require less than a 4-year college degree, and can offer the first step on a more lucrative career ladder.

By and large, community colleges are the largest providers of these career credentialing programs—whether they are two-year Associate's degree programs, shorter-term certificate programs, or continuing education non-credit offerings. These programs are more affordable, more accessible and take less time to complete, and they often lead to a recognized industry certification.

Our goal is to better communicate what is known, and not yet known, about these career credentialing programs to high school students and graduates seeking an alternative path to four-year college. What programs exist? How accessible are they? And do students complete them, earn a certification, and land a higher paying job? In mapping out the city's "best prospect jobs" and the programs at Baltimore City Community College (BCCC) and the Community College of Baltimore County (CCBC) that align with those jobs, Barbara Hopkins has created the baseline for a vital conversation on behalf of the city's students, families, and teachers. She has also provided insights for community college leaders, policy makers and public officials. More can, and must, be done to evaluate and to improve these training opportunities, and support young people as they undertake them.

TABLE OF CONTENTS

A. The Challenge. The Opportunity	1
B. “Best Prospect” Jobs	2
C. Alignment of BCCC and CCBC Career Credential Programs	6
D. Program Accessibility	8
E. Enrollments and Outcomes	11
F. Progress on Which to Build	12
G. Recommendations	13
H. Conclusion	15



A. The Challenge. The Opportunity.

Every June, more than 2,000 young men and women graduate from Baltimore City Public Schools with no immediate plans for college and few, if any, ideas for a job. As employment seekers, they join 22 percent of Baltimore City youth between the ages of 20 and 24 years old who are also unemployed,¹ the more fortunate of whom have little else than a high school diploma on their resumes. In the wake of the “Great Recession,” these young adults will experience the same stagnant wages, unemployment, and underemployment across multiple industry sectors as older low-income city residents.

Yet according to recent studies by the Brookings Institution and the Opportunity Collaborative, there is demand in Baltimore for a small, but significant, number of mid-skilled jobs that pay a living wage and require some education or training beyond high school.² These “best prospect” jobs are “accessible to a good share of workers who are able to earn a decent living with some training, a certificate, and college-level courses but without having completed a four-year college degree.”³ The two studies provide important snapshots of employment demand and related training in Greater Baltimore. In particular, the Opportunity Collaborative’s *Baltimore Regional Talent Development Pipeline Study* suggests that opportunities exist for Baltimore’s low-income individuals to train for existing jobs or new opportunities in

the following sectors: (1) Health Care; (2) Construction; (3) Information Technology; (4) Transportation, Logistics, and Warehousing; (5) Business Services; (6) Manufacturing; and (7) Bioscience.⁴

Community colleges, offering low-cost career credentialing programs, have the potential to serve as a bridge connecting these young adults to the “best prospect” jobs in Baltimore. Indeed, the community colleges’ noncredit, credit certificate, and career associate degree programs promise a meaningful alternative to four-year degrees.

To date, however, little information has been available to assist Baltimore’s recent high school graduates and under-advantaged job seekers in identifying these promising mid-skilled jobs and the paths community colleges can provide to them. Moreover, high school students have been bombarded by the “college for all” campaign, messaging that reinforces the value of a baccalaureate degree but is largely silent on other postsecondary options. As a result, nearly 1,000 recent City Schools graduates enroll every year in Baltimore City Community College (BCCC) or the Community College of Baltimore County (CCBC)—most in a general studies program designed to transfer to a four-year college. Six years later, however, less than 4 percent of these students have typically earned a two-year, much less a four-year, degree.⁵ Career credentialing programs at the community colleges, geared toward

The first objective is to better provide Baltimore City high school students, recent graduates, and un- and underemployed individuals with direction about how to pursue postsecondary education and training that leads to mid-skilled careers without a four-year degree.

specific technical skills and competencies, suggest a compelling alternative for many of these students.

At the same time, community college leaders, city and state officials, and the community have insufficient information about the outcomes of students who enroll in these programs. Do these students complete the programs and earn the desired certifications? Do they find jobs in those fields and earn higher wages?

This study aims to: 1) highlight Baltimore's current and future mid-skilled job opportunities (the "best prospect" jobs) that do not require a four-year college degree; 2) examine the extent to which there are complementary programs with career credentials at the two community colleges serving the largest share of city residents pursuing postsecondary education: BCCC and CCBC; 3) explore the accessibility of these programs and identify areas where barriers to enrollment and completion exist at the two schools; 4) offer a preliminary assessment of the effectiveness of these community college career credentialing programs in terms of completion rates, resulting salary and gains in earnings; and 5) identify valuable reforms currently underway.

The goals are twofold. The first objective is to better provide Baltimore City high school students, recent graduates, and un- and underemployed individuals with direction about how to pursue postsecondary education and training that leads to mid-skilled careers without a four-year degree. The second objective is to advance a conversation at the community

colleges and within public policy circles about the steps necessary to better support students, workers, and employers in the Baltimore area. Given the profound need facing job seekers in Baltimore, such an inquiry is both vital and timely.

B. What are the "Best Prospect" Jobs?

Methodology

This study is primarily interested in those jobs that align with current and projected workforce needs, provide a decent living wage salary, and require postsecondary education of a two-year degree or less for entry into the field. Termed "best prospects", those occupations were identified by drawing on an established set of growth sectors for Baltimore. Data from the Bureau of Labor Statistics and local advertised job openings were also used to identify current and projected demand for each job, along with details on required education and median income.

Within those broad criteria, however, there are distinctions that mark those occupations as more or less desirable. For example, jobs with strong market demand and modest educational requirements represent the most desirable opportunities and are deemed Tier 1. Jobs with strong demand and higher educational requirements (Tier 2) or those with more modest demand but other redeeming qualities (Tier 3) rank slightly lower in desirability. See Table 1 for a breakdown of the characteristics of each tier.

TABLE 1. “Best Prospect” Job Tiers

<p>Tier 1: Strong Demand, Modest Educational Requirements for Career Entry</p>	<ul style="list-style-type: none"> •Demand: Current and/or future demand greater than or equal to 100 jobs in industry annually⁶ •Education: More than a high school degree but less than an associate degree •Median Annual Salary: At least \$30,000, or at least \$24,000 if characterized as “next economy,” “green/emerging,” or having “career pathway potential”
<p>Tier 2: Strong Demand, Higher Educational Requirements for Career Entry</p>	<ul style="list-style-type: none"> •Demand: Current and/or future demand greater than or equal to 100 jobs in industry annually •Education: Associate degree •Median Annual Salary: At least \$30,000, or at least \$24,000 if characterized as “next economy,” “green/emerging,” or having “career pathway potential”
<p>Tier 3: Lower Demand, Other Redeeming Qualities</p>	<ul style="list-style-type: none"> •Demand: Current and/or future demand of between 30 and 99 jobs in industry annually; projected growth of at least 15% annually •Education: Between high school diploma and an associate degree •Median Annual Salary: At least \$30,000 and characterized as “next economy,” “green/emerging,” or having “career pathway potential”

Within the tiers, there are special characteristics that may keep a lower paying or lower demand job from being removed from consideration. Those characteristics are explained in the table below.

Findings

There are 74 “best prospect” occupations in strong/high-growth sectors that require postsecondary education of an associate degree or less. Jobs in Health Care and Transportation are particularly attractive.

Of the 74 “best prospect” occupations, almost two-thirds (49) are classified as Tier 1 in our rating system, meaning that the demand for the occupation is high but the educational requirement is less than a two-year degree. These jobs range from carpenters, electricians, and medical assistants to HVAC installers, chefs, and massage therapists.

Furthermore, 91 percent of the “best prospect” jobs (across all tiers) have a median annual salary at or above \$34,000. Thirty percent have been characterized as having “career pathway potential” and are concentrated in the Health Care and Transportation sectors. These occupations are particularly suitable for a workforce development approach that helps low-skilled job seekers successfully progress by providing a clear sequence of education and training

courses, combined with comprehensive wrap-around support services that lead to careers in a particular industry sector.

In addition, 35 percent of these “best prospect” jobs have been characterized as “green/emerging,” with the greatest concentrations of projected job growth in the Construction; Manufacturing; and Trade, Transportation, and Utilities sectors. Finally, almost one-fifth of these jobs (18 percent) have been characterized as “next economy” jobs, meaning that demand for them *may* increase if recommended policy actions are implemented. The greatest concentration of these jobs is in the Manufacturing sector.


Special Characteristics of “Best Prospect” Jobs

Career Pathway Potential: Series of articulated educational and training programs and services that enable students, often while employed, to advance to higher levels of employment in an occupation or industry

Green/Emerging: Projected job growth in the future




Next Economy: Job demand may increase if recommended policies are implemented

TABLE 2. Baltimore’s “Best Prospect” Jobs Demand Summary

		CONSTRUCTION	
Tier 1: Strong Demand, Modest Educational Requirements for Career Entry	<ul style="list-style-type: none"> • Carpenters* • Construction Laborers* • Electricians* • First-Line Supervisors of Construction • Trade Workers* • Brick and Block Masons 	<ul style="list-style-type: none"> • First-Line Supervisors of Mechanics, Installers, and Repairers* • Operating Engineers* • Plumbers and Pipefitters* • Real Estate Agents* 	
Tier 2: Strong Demand, Higher Educational Requirements for Career Entry	<ul style="list-style-type: none"> • Construction Managers* • Electrical & Electronic Engineering Technicians 		
Tier 3: Lower Demand, Other Redeeming Qualities	<ul style="list-style-type: none"> • Cement Masons • Civil Engineering Technicians • Glaziers 		
		HEALTH CARE & SOCIAL ASSISTANCE	
Tier 1:	<ul style="list-style-type: none"> • Medical Assistants* • Medical Secretaries* • Practical Nurses* • Dental Assistants • Emergency Medical Technicians 	<ul style="list-style-type: none"> • Massage Therapists • Medical Coders • Pharmacy Technicians • Surgical Technicians 	
Tier 2:	<ul style="list-style-type: none"> • Medical Equipment Repairers* • Occupational Therapy Assistants* • Physical Therapy Assistants* 	<ul style="list-style-type: none"> • Registered Nurses* • Dental Hygienists • Medical Lab Technicians • Radiology Technicians • Respiratory Therapists 	
		LEISURE AND HOSPITALITY	
Tier 1:	<ul style="list-style-type: none"> • Chefs/Head Cooks 		
Tier 2:	<ul style="list-style-type: none"> • First-Line Supervisors of Food Preparation and Service Workers* 		

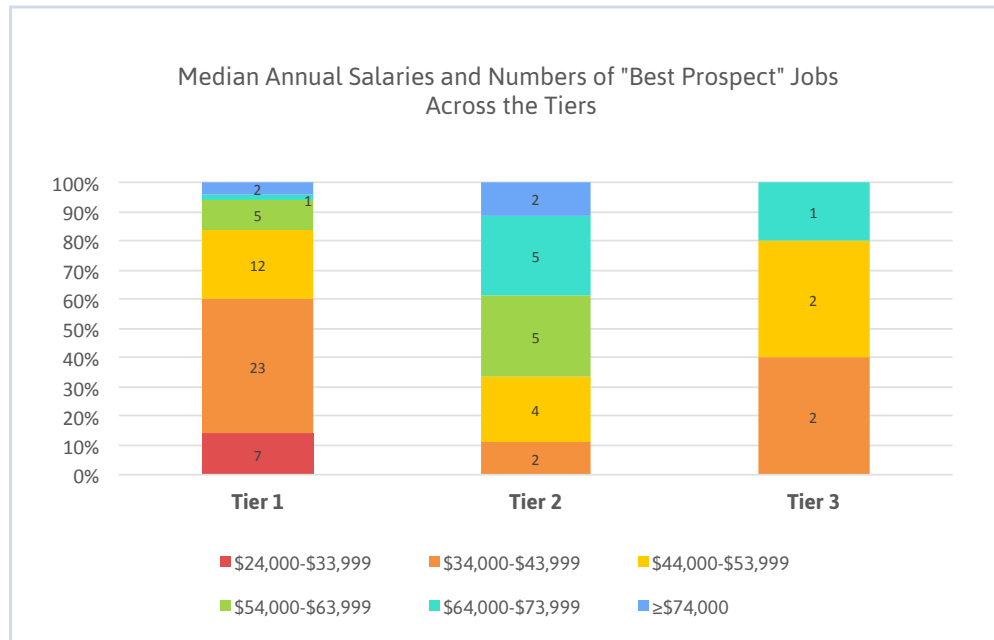
*Indicates programs with the strongest current and/or projected demand

TABLE 2.
Baltimore's
"Best Prospect"
Jobs Demand
Summary
Continued

 MANUFACTURING		
Tier 1:	<ul style="list-style-type: none"> • First-Line Supervisors of Production/Operating Workers* • Inspectors, Testers, Sorters, Samplers, and Weighers* • Machinists* 	<ul style="list-style-type: none"> • Industrial Machinery Mechanics • Team Assemblers • Welders
 PROFESSIONAL BUSINESS & INFO SERVICES		
Tier 1:	<ul style="list-style-type: none"> • Administrative Services Managers* • Bookkeeping, Accounting, and Auditing Clerks* • Computer User Support Specialists* • Maintenance and Repair Workers* • Billing and Posting Clerks 	<ul style="list-style-type: none"> • Human Resources Assistants, Except Payroll • Payroll and Timekeeping Clerks • Purchasing Agents
Tier 2:	<ul style="list-style-type: none"> • Business Operations Specialists* • Computer Network Support Specialists* • Executive Secretaries* • Information Security Analysts* • Web Developers* • Advertising Sales Agents 	<ul style="list-style-type: none"> • Biological Technicians • Graphic Designers • Life, Physical, and Social Science Technicians, All Other (Precision Agriculture Technicians Quality Control Analysts, Remote Sensing Technicians) • Secretaries*
 TRADE, TRANSPORTATION & UTILITIES		
Tier 1:	<ul style="list-style-type: none"> • Automotive Service Technicians* • Customer Service Representatives* • Heating, Air Conditioning, and Refrigeration Mechanics/Installers* • Industrial Truck and Tractor Operators* • Laborers, and Freight, Stock, and Material Movers Hand* • Shipping, Receiving, and Traffic Clerks* • Truck Drivers, Heavy and Tractor-Trailer* • Truck Drivers, Light Truck or Delivery Services Driver* 	<ul style="list-style-type: none"> • Bus and Truck Mechanics and Diesel Engine Specialists • Dispatchers • First-line Supervisors, of Helpers, Laborers, and Material Movers, Hand • First-Line Supervisors/Managers of Transportation and Material Moving Machine & Vehicle Operators • Production, Planning, and Expediting Clerks • Transportation, Storage, and Distribution Managers • Wholesale & Retail Buyers
Tier 3:	<ul style="list-style-type: none"> • Aircraft Mechanics and Service Technicians. • Cargo and Freight Agents 	

*Indicates programs with the strongest current and/or projected demand

FIGURE 1. Median Annual Salaries Across The Tiers



Higher educational requirements lead to higher median annual salaries: 90 percent of the jobs in Tier 2 require an associate degree, but pay a median annual salary at or above \$44,000 (see Figure 1).

Half of the Tier 2 jobs, as well as nearly half of those in Tier 3 and a quarter of those in Tier 1, have "career pathway potential," meaning that they are particularly suitable for a workforce development approach that helps low-skilled job seekers successfully complete education programs by providing "a clear sequence of education and training courses, combined with comprehensive wrap-around support services that lead to careers in a particular industry sector."⁷

C. Are there programs at BCCC and/ or CCBC that align with these "best prospect" jobs?

Methodology

After establishing the "best prospect" jobs in the Baltimore region, a list of education or training program titles associated with those occupations was developed. Information from the Maryland Higher Education Commission for the period of 2002-2012 helped to identify relevant education and training programs at BCCC and CCBC. This led to an analysis of the relationship

between the demand for jobs and the supply of education programs, using enrollment and completion rates for the relevant certificate and degree programs from the community colleges. Finally, The Jacob France Institute at the University of Baltimore linked program completers to data from the colleges, Bureau of Labor Statistics, and Social Security Administration in order to evaluate the impact of the programs on pre- and post- training salaries.

A Primer on Career Credentialing Programs

A note on the value of credentials is important here. The U.S. Department of Labor defines a credential as an award in recognition of an individual's attainment of measurable technical or occupational skills necessary to obtain employment or advance within an occupation.⁸ These skills are typically based on standards established by employers and are valuable to them because they document skill attainment, thereby enhancing the ability of employers to fill skilled positions, identify talent pipelines, and compete.⁹ For employees, credentials are a ticket to higher earnings, greater mobility, and enhanced job security.¹⁰

TABLE 3. Types Of Career Credentials

Certificate	Certification	Licensure
<ul style="list-style-type: none"> • Results from an educational process • For both newcomers and experienced professionals • Awarded by educational programs or institutions • Indicates completion of a course or series of courses with specific focus; different from a degree • Course content set by faculty and/or administration at institution • End result indicates knowledge of course content 	<ul style="list-style-type: none"> • Results from a voluntary assessment process • Typically requires some amount of professional experience • Awarded by a third-party, standard-setting organization • Indicates mastery/competency as measured against a defensible set of standards, usually by application or exam; puts public on notice of competency; and results in a credential, typically with a designation (e.g., CPA) after one's name • Standards set by industry • Has ongoing requirements to maintain, e.g., continuing education units (CEUs) 	<ul style="list-style-type: none"> • Represents state's grant of legal authority, pursuant to the state's police powers, to practice a profession within a designated scope of practice • Under the licensure system, states define, by statute, the tasks and function or scope of practice of a profession and provide that these tasks may be legally performed only by those who are licensed • Licensure prohibits anyone who is not licensed from practicing, regardless of whether or not the individual has been certified by a private organization

Above, in Table 3, we provide definitions to distinguish features of community college career credentialing programs.

Confusion between the terms certificate and certification arises because students may earn a certificate as a result of completing a series of courses but they may not be able to land a job without also earning a certification, an industry credential indicating mastery or competency. Similarly, confusion between the terms "certification" and "licensure" arises because many states call their licensure processes "certification." This confusion is often escalated when states incorporate the standards and requirements of private certifying bodies in their licensing statutes and require that an individual meet those requirements ("be certified") in order to have state authorization to practice ("be licensed").

Findings

Together, the two community colleges offer diverse career training programs that generally match the "best prospect" jobs in Baltimore, and more than half of the programs are associated with industry-validated certifications. However, research

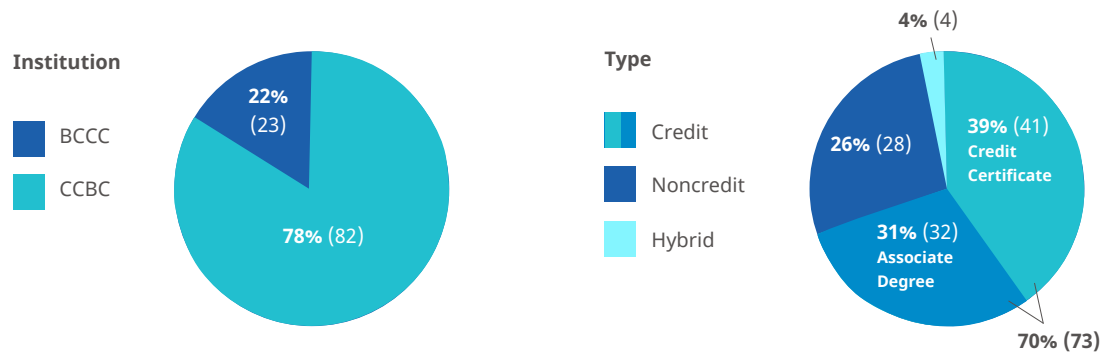
uncovered there are fewer "best prospect" job-related offerings at BCCC in comparison to CCBC. Moreover, there are important training gaps in the offerings of both community colleges, particularly in the Transportation sector.

During the time period covered by this study (2002-2012), there were 105 programs at BCCC and CCBC that align with one or more of the 74 "best prospect" jobs (Figure 2).¹¹ The vast majority (70 percent) of the 105 programs are credit-bearing certificate and career degree programs, which means they are designed to lead to a specific certificate or associate degree. These programs require a sequence of graded courses and, at times, require ACCUPLACER placement testing with the possibility of required developmental courses. Noncredit programs make up 26 percent of the total, and hybrid apprenticeship programs comprise the remaining 4 percent. More than half of the programs (56 programs) offer the chance to earn an industry-recognized credential that will aid in getting a job.

However, the offerings at the two institutions are uneven. CCBC houses 78 percent of the programs aligned with "best prospect" jobs

The 105 Programs at BCCC and CCBC that align with the 74 "best prospect" jobs

FIGURE 2.
Program
Alignment



compared to BCCC's 22 percent. There are no offerings aligned with "best prospect" jobs at BCCC in either the Leisure and Hospitality or the Manufacturing industries, and there is just one such offering in the Trade, Transportation, and Utilities industry. In addition, while noncredit opportunities abound at CCBC, they are comparably absent at BCCC, a result that is troubling given the accessibility challenges described below.

There are also important gaps in the offerings provided by the community colleges (Table 4). Through 2012/13 educational programming was not offered for 17 jobs across the six industry sectors; however, the lack of training was most glaring in the Trade, Transportation, and Utilities sector where 8 "best prospect" jobs lacked training programs. Arguably, the most serious challenge for would-be job seekers across all industry sectors is the absence of training programs at either CCBC or BCCC for 10 occupations in the Tier 1 group. Including jobs such as head cook, industrial machinery mechanic, dispatchers and bus mechanics, these occupations typically require the lowest costs and the shortest time to completion, which makes the absence of associated programs particularly problematic.¹²

The research also identifies the programs aligned with "best prospect" occupations that have been cancelled by the community colleges (Table 5). Nine of the 10 cancelled programs were at BCCC. The rationales provided for the decisions to cancel include a lack of student demand,

"ensuring academic programs are relevant and responsive to future market trends and new economy jobs", and "maximizing student employability."¹³

But these reasons are incongruent with the evidence provided here of market demand, particularly for supervisory roles in hospitality management and for emergency medical services professionals.

D. How accessible are the career credentialing programs?

Although BCCC and CCBC have the capacity for greater enrollment in most programs, barriers such as ACCUPLACER testing, selective academic criteria, duration of program, and high out-of-county tuition rates can make some of these programs difficult to access. Credit programs (either certificate or degree) are generally less accessible than non-credit programs. However, because many non-credit programs lack sources of grant or scholarship support (such as PELL grants) they too can be out of reach for many low-income individuals.

The community colleges have additional training capacity across many program areas. The Tier 1 programs (at least on the credit side for which there is enrollment information) are by and large under-enrolled. Health care programs, represented mostly in Tier 2, are the exception, as they often have more qualified applicants than they can serve.

Continued on Page 10

TABLE 4. Gaps in Program Alignment








GAPS: “Best Prospect” Jobs With No Community College Training (11 in Tier 1)	Sector	“Best Prospect” Job (Tier) –
	 CONSTRUCTION	<ul style="list-style-type: none"> • Brick and Block Mason (1) • Cement Mason (3) • Glazier (3)
	 HEALTH CARE & SOCIAL ASSISTANCE	<ul style="list-style-type: none"> • Medical Equipment Repairer (2)
	 LEISURE AND HOSPITALITY	<ul style="list-style-type: none"> • Chef/Head Cook (1)
	 MANUFACTURING	<ul style="list-style-type: none"> • Industrial Machinery Mechanic (1) • Team Assembler (1)
	 PROFESSIONAL BUSINESS & INFO SERVICES	<ul style="list-style-type: none"> • Maintenance and Repair Worker (1) • Life, Physical, and Social Science Technicians, All Other (2)
	 TRADE, TRANSPORTATION & UTILITIES	<ul style="list-style-type: none"> • Shipping, Receiving, and Traffic Clerk (1) • Industrial Truck/Tractor Operator (1) • Dispatcher (1) • Wholesale and Retail Buyers (1) • Aircraft Mechanic and Service Technician (3) • Labor and Freight, Stock and Materials Movers (1) • Cargo and Freight Agent (3)

TABLE 5. Gaps in Program Alignment

Cancelled Programs Aligned with “Best Prospects”	Sector	Program (Institution)
	 HEALTH CARE & SOCIAL ASSISTANCE	<ul style="list-style-type: none"> • EMT Degree and 3 EMT Certificates (BCCC) ¹⁴ • Surgical Technology Certificate (BCCC)
	 LEISURE AND HOSPITALITY	<ul style="list-style-type: none"> • Hospitality Management Degree (BCCC)
	 PROFESSIONAL BUSINESS & INFO SERVICES	<ul style="list-style-type: none"> • Biomanufacturing and Biotech Degree (CCBC) • Network Specialist Certificate (BCCC) • Web Developer Certificate (BCCC)
 TRADE, TRANSPORTATION & UTILITIES	<ul style="list-style-type: none"> • Diesel & Equipment Maintenance Technician Degree (CCBC) 	

TABLE 6.

Special Characteristics of Community College Programs	Sector	Offer Credential	Have Enrollment Cap	Have Selective Admission	Reduced Tuition Rates
 CONSTRUCTION	5	-	-	3	
 HEALTH CARE & SOCIAL ASSISTANCE	27	2	18	5	
 LEISURE AND HOSPITALITY	1	-	-	-	
 MANUFACTURING	2	-	-	-	
 PROFESSIONAL BUSINESS & INFO SERVICES	8	-	-	-	
 TRADE, TRANSPORTATION & UTILITIES	9	-	-	8	

Continued from Page 8

As a general rule, credit degree programs at both BCCC and CCBC are more heavily enrolled — despite being more expensive — than credit certificate programs, but there are still openings in a number of credit degree programs. Determining the enrollment of noncredit programs is more difficult because they often do not follow a uniform semester schedule, and the state does not insist on the same rules for reporting enrollment data for noncredit programs.

Credit programs (both certificate and degree) present more accessibility challenges than noncredit programs. With some exceptions, a student seeking to enter a credit program will need to take and pass the ACCUPLACER placement test and could face months or even years of developmental coursework before being able to enroll in a certificate or degree program. This is largely because State law requires students pursuing a 2-year degree program to successfully complete one course at or above the level of College Algebra, without regard to whether the job that lies at the end of the program of study requires that specific math proficiency.¹⁵ While Maryland passed legislation in 2013 to address the

inadequate preparation of high school students for college math,¹⁶ little attention has been given to the question of whether college math, i.e. college algebra, is actually appropriate as a "one-size-fits-all" requirement across all credit programs statewide. State law is silent about math requirements on the non-credit side, and thus ACCUPLACER is generally not an issue.

Accessibility also depends on the academic discipline and its related admissions policies. Most health care programs are credit-bearing and have a selective admissions policy, meaning only a limited number of highly qualified applicants will be permitted to enroll. Other programs, including some in the Construction; Health Care; Trade, Transportation, and Utilities sectors, are eligible for the "Health Manpower" or "Statewide" designations, which enables out-of-jurisdiction students to enroll at in-jurisdiction rates. Unfortunately, these policies also contribute to stiffer competition for seats in those programs for Baltimore City residents.

Tuition rates also influence accessibility. As a state-owned institution, BCCC programs are offered to all state residents at the same cost,

There were 105 programs at BCCC and CCBC that align with one or more of the 74 "best prospects" jobs... CCBC houses 78 percent of the programs aligned with those jobs.

a cost lower than that of CCBC's programs. At \$88 per credit hour in 2013, BCCC's tuition was 24 percent less than CCBC's in-county rate of \$109 per credit hour. More significantly, BCCC's tuition is 136 percent less than CCBC's out-of-county rate of \$208 per credit hour, which is what a city resident would pay to attend CCBC absent the "Health Manpower" or "Statewide" designation on a program of study. For city residents, then, CCBC is more than twice the cost of BCCC.

Tuition for non-credit courses at both BCCC and CCBC is lower than it is for credit-bearing courses, potentially making those opportunities more affordable and, thus, more accessible. While qualified students can apply PELL funds to cover the costs of attending non-credit programs that reach the federally-mandated number of 600-course hours, there are only a handful of non-credit programs on our "best prospect" list that meet this requirement. The reality for low-income students is that the lower cost of non-credit programs is not a panacea absent a source of funding to cover the costs of attendance.

E. How effective are these programs in terms of enrollment, completion, and certification? What outcomes do they produce over time for graduates?

Given the low level of reporting standards in place during the period of time covered by this study, it is impossible to answer these

questions. The state did not then require student-level reporting that would allow researchers to follow an individual or cohort of students from program enrollment through completion. Moreover, there was no central reporting of certificates awarded by the state or professional associations, leaving community colleges and researchers in the dark as to the total numbers of certifications granted to students who participated in their career credentialing programs.

Similarly, data on earnings gains were difficult to capture at the individual level. Therefore, while there were positive earnings outcomes for certain program completers, particularly in Health and Professional, Business, and Information Services fields, the effectiveness of many of these community college programs is largely unknown.

Still, researchers were able to evaluate the limited earnings data available for some program completers. Using student-level data volunteered by BCCC and CCBC, the Jacob France Institute collected information from the State Unemployment Insurance Wage Database on the percentage of 2007-2011 completers whose Social Security numbers are identified in a given quarter. These data do not tell the whole story because they exclude information about those who are self-employed or those who have found employment in another state or in the federal government.

FIGURE 3.

Program Outcomes	
	<ul style="list-style-type: none"> • The study sought to assess program outcomes in terms of enrollment, completion, credential attainment, employment of graduates, satisfaction of workforce needs, and earnings gains. However, much of the outcomes data was unavailable. • Where earnings gains information is available, outcomes across most sectors are modest relative to those in Health Care and Social Assistance. • Unable to evaluate outcomes for the 30% of programs that are noncredit or hybrid. • For credit programs: <ul style="list-style-type: none"> - Enrollments and completions are higher in longer, more expensive degree programs than in certificate programs. - Completions are generally low in Construction; Leisure and Hospitality; Manufacturing; and Trade, Transportation, and Utilities relative to completions in Professional, Business, and Information Services, and Health Care and Social Assistance. Completions across all programs are low relative to demand.

This research yielded earnings data for participants in only 30 of the 105 career programs (28 percent) included in the study. Comparing earnings prior to training with earnings eight quarters post-credential, researchers found a wide range of gains: from 9 percent for graduates of BCCC's Business Management degree program to an over 600 percent increase for those who completed Dental Hygiene degree programs at BCCC or CCBC. Given the inability to track individual student data, and the difficulty in gathering earnings data for a majority of completers, few conclusions can be drawn about a range of measures of effectiveness.

Nevertheless, where there are earnings data, it is clear that Health Care program completers achieve the most impressive gains across the greatest number of jobs; more modest gains have been achieved by completers in a number of programs in the Professional, Business, and Information Services area.

Based on current data, however, the numbers of students completing programs aligned with "best prospect" jobs fall short, in most cases, of the projections necessary to meet demand for those same positions. In other words, there are more jobs than qualified employees.

F. Progress on which to build

As previously noted, the data for this report were drawn from 2002 and 2012. Since that time, more significant revisions have been made in program reporting and record keeping requirements, and a handful of changes have been made to the

community colleges' course offerings. These changes are important to highlight, as they represent progress on which to build. At the same time, the status of the implementation of these changes reveals just how much remains to be accomplished.

First, the introduction of new record keeping and reporting requirements. The Maryland Higher Education Commission has long required the state's institutions of higher education to report annually on composite numbers of students enrolled and degrees awarded. During the decade covered by this study, MHEC did not require student-level reporting on the part of institutions, making it next to impossible to evaluate individual student persistence from enrollment to graduation. To complicate matters further, during this same period of time, similar issues frustrated our ability to evaluate licensure and certification outcomes. First, there was no single organization collecting the results of certification and licensure exams statewide. Second, the certification and licensure bodies, like the institutions of higher education, were also not required to report student-level data.

This landscape has changed in the last couple of years, driven principally by passage of legislation in 2010 creating the Maryland Longitudinal Data System (MLDS), which is managed by a new State agency, the Maryland Longitudinal Data System Center (MLDSC). The MLDSC is a statewide clearinghouse for student-level data from educational institutions and workforce agencies. It is intended to link

The numbers of students completing programs aligned with "best prospect" jobs falls short, in most cases, of the projections necessary to meet demand for those same positions. In other words, there are more jobs than qualified employees.

individual records from the K-12 systems to individual records in postsecondary and occupational contexts. This radical change in the coordination and accessibility of the state's data keeping will open up new research and evaluation opportunities and better inform consumers.

Another recent change with the potential to improve understandings of program effectiveness is MHEC's revision in 2012 of its Maryland Annual Collection (MAC), the core public data collections from Maryland postsecondary institutions.¹⁷ Under the new MAC plan, post-secondary institutions will provide student-level data on enrollment and completion for credit bearing and remedial coursework, degree completion, and other metrics intended to paint a picture of student persistence. Although many of the details have yet to be established, institutions will also be required to provide student-level information on noncredit and continuing education programs.¹⁸

The devil is in the details on both of these critical data-collection revisions. Despite the expectation that MLDS would be operational in December 2014 and that the new MAC requirements would be in effect, neither has been fully implemented.¹⁹ The hope is that, when they are, researchers will be better able to address questions about individual student progress, program completion data, and earnings outcomes.

Recent years have also seen the addition of new courses and programs. Since 2012, an

additional three programs that align with "best prospect" jobs have been added to the offerings at BCCC and CCBC. These programs include a non-credit Bus and Truck Mechanic Program (CCBC), a Cyber Security and Assurance Degree Program (BCCC), and an Electrical Engineering Degree Program (BCCC). Looking ahead, CCBC intends to introduce a non-credit Industrial Machinery Mechanic Program in 2015, and BCCC has a proposal pending with MHEC to add an Emergency Medical Services program back into its credit offerings.

G. Recommendations

1. Insist that the Maryland Longitudinal Data System (MLDS) be implemented widely and immediately, and that these findings be publicly shared. Improved data collection and reporting must be a high priority for both credit and noncredit career credentialing programs at Maryland community colleges. The absence of this data created holes in this report and, more seriously, in understanding how effectively community colleges are serving would-be job seekers. The creation of new protocols and new systems is a necessary first step. But oversight and accountability are vital to ensuring that the systems are effective. Without access to valid and reliable data on enrollment, completion, certification, and employment, those returns are simply unknowable. The public deserves more information.

2. Encourage BCCC/CCBC to continue to investigate the gaps in training programs, particularly in the Trade, Transportation, and Utilities sector, and consider introducing new programs to fill these gaps. Pay particular attention to programming for occupations in Tier 1, owing to the lower cost and time to completion that are typically associated with programs in this tier.

3. Given the greater breadth and depth of programming that exists at CCBC and the limited number of programs in “best prospect” job areas at BCCC, **explore strategies to lessen the financial burden of Baltimore City residents attending CCBC.**

4. Eliminate whether ACCUPLACER placement testing for all career credentialing credit programs unless a case can be made for its relevance to a “best prospect” job. In instances where it is necessary, make every effort to help students prepare for and pass the test, thereby avoiding as many developmental courses as possible. This step is particularly important in light of the barriers to employment identified in a recent Opportunity Collaborative study, which showed that among the region’s job seekers, 30 percent indicated that low math skills were a barrier to employment, 28 percent reported having difficulties with basic computer skills, and 14 percent reported literacy as a barrier.²⁰ In particular, **investigate the use of existing high school credentials, including the new PARCC high school assessments in English and Algebra II** in lieu of ACCUPLACER.

5. Advocate for expanded eligibility for PELL funding to students in relevant non-credit career training programs; investigate new sources of scholarship funding for those programs that do not currently qualify for PELL grants. The U.S. Department of Education and the U.S. Department of Labor are running an experiment that temporarily expands eligibility for Pell grants to students who enroll in shorter term vocational and career training courses. CCBC is participating in this pilot with 10 of its programs. The pilot will inform policy

makers on the effects of expanded Pell grants on educational attainment, student debt, employment and earnings. In the meantime, other potential scholarship opportunities exist or can be created. For example, the Central Scholarship Bureau, with Abell Foundation funding, offers a need-based scholarship to students planning to attend a non-degree certificate program at a community college or an approved private career school.

6. Convene Baltimore City Public Schools, community colleges, and nonprofits providing services to career-seeking, often low-income, individuals in Baltimore to design strategies for communicating the most expedient educational pathways to “best prospect” jobs. The group should focus on the 108 education and training programs at BCCC and CCBC associated with those jobs and address why so many of these opportunities are not better enrolled. Particular attention should be given to those shorter-term, less-expensive programs associated with Tier 1 occupations. The group should develop strategies to make those programs more accessible to low-income individuals.

7. Create job seeker-friendly communications about these high-value postsecondary educational opportunities through print, online, and other resources and train those who are in front-line roles as to those opportunities. The Job Opportunities Task Force recommends that Maryland consider adapting the online Salary Surfer tool introduced by the California Community College Chancellor’s office.²¹ This online tool allows students to select a career field of study and link it with median annual salary before and up to five years after program completion to better evaluate the value of a certificate or degree program. The state could also consider developing its own online tool that integrates student interests with related job opportunities, educational programs, and earnings data.

Conclusion

Previous research by the Brookings Institution and the Opportunity Collaborative identified the existence of mid-skilled jobs in Baltimore that pay a living wage and require a two year degree or less. Research for this study found 74 of these “best prospect” jobs across a range of six job sectors and concluded that 91percent of those jobs translated to expected median annual earnings of over \$34,000. BCCC and CCBC currently offer 105 noncredit, credit certificate, and credit degree programs that are aligned with these “best prospect” jobs and that, theoretically, provide a path to these mid-skilled careers.

But that path is a rocky one. Gaps in the community colleges’ offerings and barriers to accessibility and information limit the number of students who can take full advantage of these training opportunities. Perseverance can pay off, though, as available earnings data shows that students who complete their programs can see an increase in earnings ranging from 9 percent to over 600 percent.

Still, the available data from the community colleges is incomplete, making it difficult to create a comprehensive picture of program enrollment and completion, let alone the resulting changes to earnings. This lack of data presents real obstacles for students, families, and counselors looking for information about skills training opportunities that result in mid-skilled jobs. It also challenges the community colleges and public officials looking to make a case for the value that community college career credentialing programs offer. Whether the creation of the Maryland Longitudinal Data System, and changes made by supporting agencies like the Maryland Higher Education Commission, will address these challenges effectively is yet unknown, and will likely require additional advocacy on the part of legislators, advocates and the public.

About the Author

Since 2003, Barbara Hopkins has been a Principal of Quick Study Consulting, a firm dedicated to management consulting in the nonprofit sector, and has been deeply engaged in advancing Baltimore workforce pipeline initiatives. Her clients include the Baltimore Alliance for Careers in Health Care, Baltimore City Public Schools, the Job Opportunities Task Force, Baltimore Workforce Investment Board (BWIB), Maryland Hospital Association, and Johns Hopkins Hospital.

Prior to her consulting work, Ms. Hopkins spent eleven years at Baltimore City Community College serving in various capacities before becoming the Vice President for External Affairs.

Endnotes

1 U.S. Census Bureau, 2008-2012 American Community Survey (5 year survey). <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

2 Opportunity Collaborative, Baltimore Regional Talent Development Pipeline Study (Baltimore Metropolitan Council, October 2013).

3 J. Vey, Building from Strength: Creating Opportunity in Baltimore's Next Economy (Brookings Institution, 2012), p.48.

4 Opportunity Collaborative, Baltimore Regional Talent Development Pipeline Study (Baltimore Metropolitan Council, October 2013).

5 Durham, Rachel, and Olson, Linda, College Enrollment and Degree Completion of Baltimore City Graduates through the Class of 2012 (Baltimore Education Research Consortium, July 2013). <http://baltimore-berc.org/wp-content/uploads/2013/07/Collegereportjuly2013.pdf>

6 The demand and earnings thresholds were developed as follows: In the data set, the median number of jobs projected to be created annually, based on data available from the Bureau of Labor Statistics, hovered at 100. The same held true for the data on median advertised job openings, leading us to pick 100 as the minimum for both median advertised job openings (current demand) and average annual jobs created owing to growth and net replacement (future demand). Without having one or more of the special characteristics discussed above, jobs falling below 100 on both measures of demand did not make the "best prospects" list.

7 Opportunity Collaborative, Baltimore Regional Talent Development Pipeline Study (Baltimore Metropolitan Council, October 2013), p.21.

8 U.S. Department of Labor, Workforce One, Credentials for Youth, Success in the 21st Century (Available at: <https://youth.workforce3one.org/page/credentials>).

9 Ibid.

10 Ibid.

11 Since 2012, an additional 3 programs have been added. They include a non-credit Bus and Truck Mechanic Program (CCBC), a Cyber Security and Assurance Degree Program (BCCC) and an Electrical Engineering Degree Program (BCCC).

12 After canceling a credit Bus and Truck Mechanic program in 2011, CCBC piloted a new non-credit program by the same name in fall 2014. The college also intends to introduce a non-credit Industrial Machinery Mechanic Program in 2015.

13 Baltimore City Community College, Program Deletions/Collapsing Fact Sheet. Material Prepared for the BCCC Board of Trustees, Academic Affairs Committee. Baltimore, 2011.

14 BCCC has a proposal pending with MHEC to add an Emergency Medical Services program back into its credit offerings.

15 See Code of Md. Reg. tit. 13B, Section 06.01.03.C(4) (2013).

16 See, e.g., the College and Career Readiness and Completion Act of 2013, 2013 Md. Laws 533.

17 Md. Higher Education Commission, Md. Annual Collection Revision Report (November 2012)(Available at <http://www.mhec.state.md.us/publications/research/2012Studies/MACRevisionReport.pdf>).

18 Ibid., p. 5.

19 See <https://wcp.p20.memsc.org/EducatorandResearcher.html>

20 Opportunity Collaborative, Barriers to Employment Opportunities in the Baltimore Region (Baltimore Metropolitan Council, June 2014) Available at: http://www.opportunitycollaborative.org/assets/Barriers_Study_Final_052714.pdf?18cd4b&18cd4b.

21 Priced Out: Making College More Affordable for Low-income Marylanders. Job Opportunities Task Force, September 2014

.....
A B E L L
.....
F O U N D A T I O N
.....

111 South Calvert Street, Suite 2300
Baltimore, Maryland 21202-6174

.....
The
Abell Report
.....

Published by the Abell Foundation
Volume 28, Number 2

**The Path to Baltimore's "Best
Prospect" Jobs without a College
Degree: Career Credentialing Programs
at Baltimore's Community Colleges**

March 2015

About the Abell Foundation

The Abell Foundation is dedicated to the enhancement of the quality of life in Maryland, with a particular focus on Baltimore. The Foundation places a strong emphasis on opening the doors of opportunity to the disenfranchised, believing that no community can thrive if those who live on the margins of it are not included.

Inherent in the working philosophy of the Abell Foundation is the strong belief that a community faced with complicated, seemingly intractable challenges is well-served by thought-provoking, research-based information. To that end, the Foundation publishes background studies of selected issues on the public agenda for the benefit of government officials; leaders in business, industry and academia; and the general public.

For a complete collection of Abell publications, please visit our website at www.abell.org/publications