

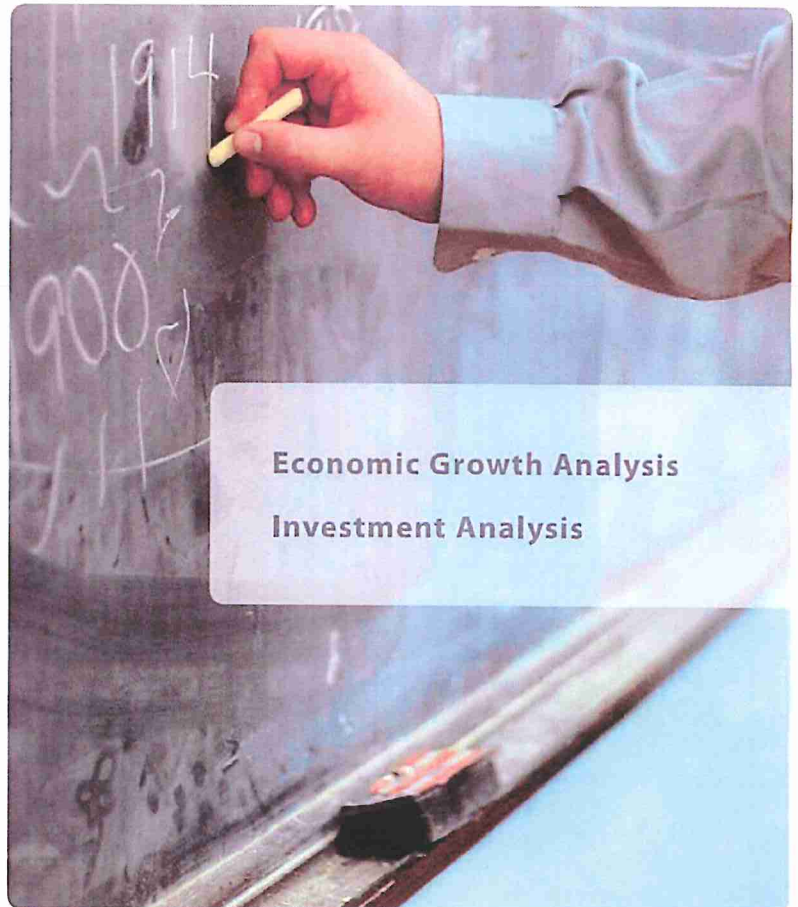
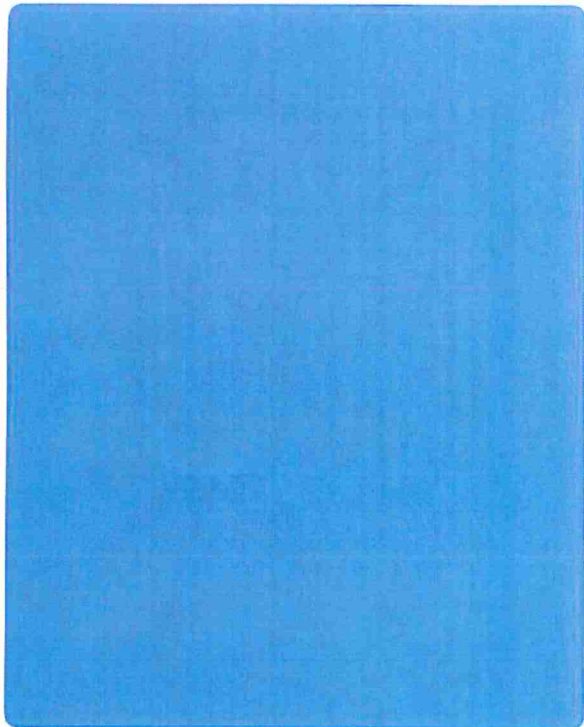
PRESIDENT'S REPORT



Executive Summary

The Economic Contribution of the

Florida College System
State of Florida



Economic Growth Analysis
Investment Analysis

emsi

March 2013



Socioeconomic Impact Study

STUDY HIGHLIGHTS

INVESTMENT ANALYSIS

- For every dollar students invest in the Florida College System, they receive a cumulative **\$6.00** in higher future income (discounted) over the course of their working careers.
- Florida benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$158.6 million** per year.
- Taxpayers see a rate of return of **9.4%** on their investment in the Florida College System.

ECONOMIC GROWTH ANALYSIS

- The net added income generated by the operations of the Florida College System (**\$1.3 billion**) and the spending of out-of-state students (**\$24.9 million**) contributes a total of **\$1.4 billion** in income to the Florida economy each year.
- The accumulated credits achieved by former students of the Florida College System over the past 30 years translate to **\$25.2 billion** in added state income in 2011-12 due to the higher earnings of students and increased output of businesses.

COLLEGES IN THE FLORIDA COLLEGE SYSTEM AND TOTAL ENROLLMENTS (CREDIT AND NON-CREDIT), FY 2011-12

College	Enrollments	College	Enrollments
Brevard Community College	27,350	Miami Dade College	139,994
Broward College	66,762	North Florida Community College	2,240
College of Central Florida	13,445	Northwest Florida State College	14,397
Chipola College	3,664	Palm Beach State College	47,856
Daytona State College	31,000	Pasco-Hernando Community College	17,965
Edison State College	24,522	Pensacola State College	21,396
Florida Gateway College	5,439	Polk State College	16,487
Florida Keys Community College	2,413	Santa Fe College	25,175
Florida State College at Jacksonville	66,013	Seminole State College of Florida	31,820
Gulf Coast State College	12,846	South Florida State College	6,160
Hillsborough Community College	45,803	St. Johns River State College	10,753
Indian River State College	29,684	St. Petersburg College	59,317
Lake-Sumter State College	7,775	Tallahassee Community College	37,088
State College of Florida, Manatee-Sarasota	21,316	Valencia College	64,861
		Florida College System total	855,541

Executive Summary

INTRODUCTION

How does the economy of the state of Florida benefit from the presence of the Florida College System?

In this study, EMST applies a comprehensive model designed to quantify the economic benefits of community and technical colleges and translate these into common sense benefit/cost and investment terms. The study includes two major analyses:

1. **Investment Analysis:** Treats education funding as an investment, calculating all measurable returns and comparing them to costs, from the perspectives of students, taxpayers, and society.

2. **Economic Growth Analysis:** Measures added income in the state due to college operations, student spending, and the accumulated skills of past and present students still in the workforce.

The economic impact model has been field-tested to generate more than 900 studies for community, technical, and further education colleges in the US, Canada, the UK, and Australia. To see the full documentation of the study, please contact the Florida College System.

THE RESULTS

Investment Analysis

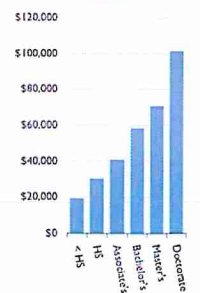
Student Perspective

Benefits of higher education are most obvious from the student perspective: students sacrifice current earnings (as well as money to pay for tuition) in return for a lifetime of higher income. Compared to someone with a high school diploma, associate's degree graduates earn \$10,600 more per year, on average, over the course of a working lifetime (undiscounted).

From an investment standpoint, students of the Florida College System enjoy a 16.8% rate of return on their investments of time and money. This compares favorably with returns on other investments, e.g., long-term return on stocks and bonds.

The corresponding benefit/cost ratio is 6.0, i.e., for every dollar students invest in education, they receive a cumulative of \$6.00 in higher future income over their working careers. This is a real return that accounts for any discounting that occurs during the entire period. The payback period is 9.1 years.

Earnings by Education Level in Florida



INVESTMENT ANALYSIS AT A GLANCE

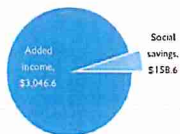
Stakeholder	Rate of Return	Benefit/Cost	Payback (Years)
Student perspective	16.8%	6.0	9.1
Social perspective	NA	26.2	NA
Taxpayer perspective	9.4%	2.9	13.8

Social Perspective

From the perspective of society as a whole, the benefits of education accrue to different publics. For example, students from the Florida College System expand the state's economic base through their higher incomes, while the businesses that employ them also become more productive through the students' added skills. These benefits, together with the associated ripple effects, contribute an estimated \$3.0 billion in taxable income to the Florida economy each year.

Studies have also shown that, as students achieve higher levels of education, they are less likely to smoke or abuse alcohol, draw welfare or unemployment benefits, or commit crimes. This translates into associated dollar savings (i.e., avoided costs) to the public equal to approximately \$158.6 million annually. These are benefits that are incidental to the operations of the Florida College System and accrue for years into the future, for as long as students remain active in the workforce.

Total Annual Benefits to the Florida Public Due to the Florida College System (\$ Millions)



To compare benefits to costs, we project benefits into the future, discount them back to the present,

and weigh them against the \$1.2 billion that state taxpayers spent in FY 2011-12 to support the Florida College System. Following this procedure, it is estimated that the Florida College System provides a benefit/cost ratio of 26.2, i.e. every dollar of state tax money invested in the Florida College System today yields a cumulative of \$26.20 in benefits that accrue to all Florida residents, in terms of added taxable income and avoided social costs.

Taxpayer Perspective

Under the taxpayer perspective, only benefits that accrue to the state government are counted, namely, increased tax collections and reduced government expenditures. For example, in place of increased income, the taxpayer perspective includes only the increased state tax receipts from those higher incomes. Similarly, in place of overall crime, welfare, unemployment and health savings, the taxpayer perspective includes only those that translate to actual reductions in state government expenditures.

Note here that government often undertakes activities wanted by the public, but which may be unprofitable in the marketplace. This means that positive economic returns are generally not expected from government investments. From the taxpayer perspective, therefore, even a small positive return (a benefit/cost ratio equal to or greater than 1, or a rate of return equal to or greater than the 3% discount rate used in the taxpayer investment analysis) would be a favorable outcome.

For the Florida College System, the results indicate positive returns: a rate of return of 9.4% and a benefit/cost ratio of 2.9 (every dollar of state tax money invested in the Florida College System today returns \$2.90).

Economic Growth Analysis

The Florida College System affects the state economy in three ways: (1) through the in-state purchases of the Florida College System, including wages paid to faculty and staff; (2) through the spending of students who come from outside the state; and (3) through the increase in the skill base of the state workforce. These effects break down as follows:

College Operations Effect

The Florida College System creates income through the earnings of its faculty and staff, as well as through its own operating and capital expenditures. Adjusting for taxes and other monies withdrawn from the state economy in support of the Florida College System, it is estimated that the state economy receives a net of \$1.3 billion in added labor and non-labor income due to the operations of the Florida College System each year.

Student Spending Effect

Students from outside the state spend money for room and board, transportation, entertainment, and other miscellaneous personal expenses. These expenditures

create jobs and incomes for businesses. The spending of out-of-state students attending the Florida College System generates approximately \$24.9 million in added income in the Florida economy each year.

Student Productivity Effect

Every year students leave the Florida College System and join or rejoin the state workforce. Their added skills translate to higher income and a more robust state economy. Based on the historical enrollment and credit production of the Florida College System over the past 30-year period, it is estimated that the accumulated contribution of instruction received by former students at the Florida College System (both completers and non-completers) annually adds some \$25.2 billion in income to Florida.

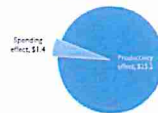
Total Effect

Altogether, the average annual added income due to the activities of the Florida College System and its former students equals \$26.6 billion. This is approximately equal to 4.0% of the total Florida economy.

ECONOMIC IMPACT ANALYSIS AT A GLANCE

Added Income	
College operations effect	\$1,345,166,000
Student spending effect	\$24,854,000
Total spending effect	\$1,370,020,000
Student productivity effect	\$25,201,180,000
GRAND TOTAL	\$26,571,201,000

Total Added Income in Florida (\$ Billions)

**CONCLUSION**

The results of this study demonstrate that the Florida College System is a sound investment from multiple perspectives. It enriches the lives of students and increases their lifetime incomes. It benefits taxpayers

by generating increased tax revenues from an enlarged economy and reducing the demand for taxpayer-supported social services. Finally, it contributes to the vitality of both the local and state economies.



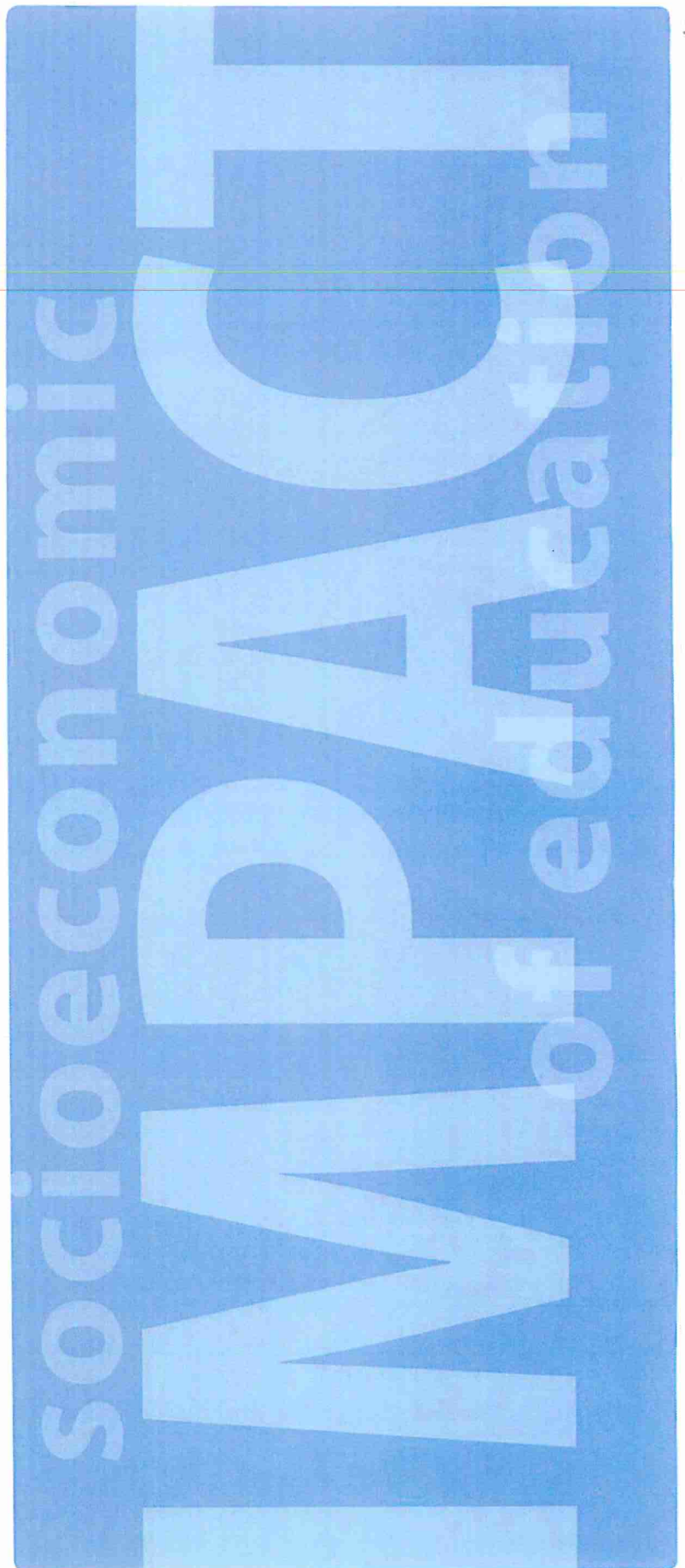
ABOUT THE STUDY

This report summarizes the results from “The Economic Contributions of the Florida College System” detailing the role that the Florida College System plays in promoting economic development, enhancing students’ careers, and improving quality of life. Data sources include, but are not limited to, 2011-12 academic and financial reports from the Florida College System, industry and employment data from the U.S. Bureau of Labor Statistics, earnings and demographic data from the U.S. Census Bureau, and a variety of studies and surveys relating education to social behavior.

Contact Us:

EMSI
1187 Alturas Dr.
Moscow, ID 83843
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The State of Workforce Development Initiatives at America's Community Colleges

by George Lorenzo

The SOURCE on Community College Issues, Trends & Strategies

April 2013



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Workforce Development - Paradox of the Community College Mission

When we “imagined” the production of a report on the status of workforce development in community colleges, we did so because it is one of the community college mission components that is frequently misunderstood or at least understood in different ways. It is also an area where Ferris has a long history with its 180+ career-oriented programs that have produced hundreds of thousands of graduates in a wide array of professional and technical fields. Established in 1885, Ferris prides itself on its workplace-focused programming and its extensive industry partnerships.

Our belief is that developing the American workforce to the skill levels essential for the viability of the national economy has never been more important. A confluence of factors – such as accountability expectations, workplace disruption, global competitiveness, the Degree Qualifications Profile (DQP), and costs of higher education - make this an exceptional time for rethinking how workforce programming is conceptualized in the community college (and beyond).

“Our belief is that developing the American workforce to the skill levels essential for the viability of the national economy has never been more important.”

So, how do stakeholders envision workforce development? Some think of it as developmental education, perhaps not exclusively, to develop today’s required basic literacy skills of writing, reading, calculating, and using computers. Some extend the basics to include workplace attitudes and abilities, such as problem-solving, critical thinking, and teamwork. Sometimes it incorporates English-as-a-second-language (ESL) programming. Examples of all of these are highlighted in this document.

Others think of workforce development in ways formerly associated with the term “occupational education,” which typically consists of the associate-degree programs that were initially intended to deliver work-ready graduates in career areas such as associate-degree nursing, drafting, automotive service, and accounting. Early in the life of community colleges, these were unfortunately referred to as “terminal” degrees, with the expectation that graduates would enter the workforce rather than continuing their education toward the baccalaureate degree. Consequently, many of the occupational degrees did not transfer well into baccalaureate programs within universities, in part because the general education component was often less prominent in the program and, in my observations, due to a lack of understanding of the skills/abilities developed by learners in high-quality occupational programs.

Yet another take on the workforce development mission component is that it comprises those activities designed expressly to serve specific workforce needs, typically in collaboration with an employer, to produce individuals capable of operating particular industrial equipment, applying continuous quality improvement (CQI) or LEAN principles to manufacturing or office processes, or supervising employees. Often these programs are designed for incumbent workers, and sometimes they are designed to develop entry-level skills for prospective workers. Typically these programs are paid for by employers or funded through an array of special training grants offered by states or community-based, non-profit organizations, as examples. Also typical in this type of training is that no college transcript credit is recognized, so that many individuals who participate in this training do not progress toward any type of degree. Also typical of this training is that it is similar in content and rigor to that offered within the typical credit associate-degree program. At times, the level is higher than that achieved in the degree program, as some workers must develop more advanced skills than those associated with the associate-degree graduate.

There was a time, in the industrial era, where an important attribute of successful workers was to follow orders. In fact, it was only 15 years ago when one community's Chamber of Commerce survey reported that the most important asset for employees was "following directions." Today's literature suggests that the most important qualities are initiative, creativity, entrepreneurship, and/or innovation. Over time, the dichotomy between workforce development and higher education has become less distinct. Workforce development, regardless of its varied forms, must develop workers who can think critically, communicate effectively, utilize technology, behave ethically, work collaboratively, and demonstrate high-level skills in a variety of areas, including many that are very sophisticated. In fact, the skills needed for success in the workforce are precisely those reportedly developed in a strong general education program.

"One dialogue that we intend that this piece and others about workforce development should provoke is the fundamental rethinking of 'workforce development' in this millennium. Both workforce development in its varied credit and non-credit forms must lead to a new kind of validation – not just the degree or certificate."

Thus, one dialogue that we intend that this piece and others about workforce development should provoke is the fundamental rethinking of "workforce development" in this millennium. Both workforce development in its varied credit and non-credit forms must lead to a new kind of validation – not just the degree or certificate. We must document the abilities developed through workforce and general education, to assure that America's citizens develop the skills essential for their and our nation's success. This begs the question of getting beyond the rhetoric of a competency-based education and the development of certifications and/or badges. The time for distinguishing between credit and non-credit, training and education, and workforce and academic education is long past. Our shared challenge today is to make all learning meaningful, verifiable, and appropriate to the changed environment, regardless of the label we place on the delivering unit. Workforce and academic or general education share the challenge of demonstrating the value added as a result of varied learning experiences. We must join the efforts for documenting competencies and certifying achievements. We can *Imagine More*.

Sharing your commitment to our learners' great workplace and life success,

Roberta C. Teahen, Ph.D.

Associate Provost and Director, Doctorate in Community College Leadership
Ferris State University

Introduction

The old and common adage that “the more things change, the more things stay the same” can certainly be applied to community colleges in the 21st century. This seems especially true when it comes to the topic of workforce development (WFD) at community colleges. Going back into the early history of community colleges we can easily see, for instance, how two-year institutions responded to the growth and business demands that industrialization brought to our society as early as the 19th century.

In the mid to late 1940s, when the actual term “community college” came into existence, the Truman administration strongly endorsed increasing educational attainment that community colleges could provide. Similarly today, the Obama administration has shown its strong support of community colleges (started pre-election 2008) as a key driver for supplying workforce-oriented educational opportunities for all U.S. citizens.

The problem, however, is that not every two-year institution is on a productive track that enables them to build and offer the much needed courses and programs that our working population needs. The general impression in much of the literature about WFD confirms that while much progress has been made, there is still a great WFD need going unfulfilled. The American Association of Community Colleges, for instance, made it painfully clear through their 21st Century Commission on the Future of Community Colleges that “the connection between education and training and employment demands reveals serious shortcomings.”²¹

On the other hand, there are numerous community colleges that are definitely embarking on innovative and highly productive paths that bring their institutions into the limelight of WFD-oriented achievement. But there is no one-size-fits-all strategy that guarantees success other than what’s typical of any smart endeavor in the business world. Strong leader-

ship at the highest levels that trickles down into the culture of every employee at an institution, bringing camaraderie and producing effective like-minded goals; people recognizing that they must work together and not in silos; sound organizational and communication skills; and simple hard work and determination have always ruled the day. Without these relatively fundamental caveats, success becomes elusive.

For this special report we dug deeply into the scholarly literature on the topic of WFD in community colleges and interviewed more than 20 experts in the field who offered their keen perspectives on what’s required of institutions to be successful.



What is WFD at Community Colleges?

We begin with a definition. According to Larry Warford, a senior consultant on WFD for the League for Innovation in the Community College and president of Warford and Associates, WFD has unfortunately become a generic term that is more often than not associated strictly with vocational and technical skills training. Warford contends that WFD at community colleges is much more. A truly competent worker, for example, has more than just technical skills. Being able to reason and analyze, work as a team player, think critically, and communicate effectively both orally and in writing - all of those important foundational skills - are critical to workforce success, he explains. "So if you think about the overall community college curricula to include general education and liberal arts, as well as studies that convey technical skills, pretty much everything that happens in the community college is workforce training."

In addition to Warford's expansive point of view, it can easily be said that WFD is certainly not the same at every community college. At some institutions WFD is strictly continuing education noncredit courses and programs; at others it is a combination of industry-specific noncredit and credit; at others it is only noncredit and/or custom corporate training programs. There are also dedicated "corporate colleges" that offer a full slate of customized training and business consulting services, along with sophisticated meeting-space services that fall under the banner of WFD, such as the Corporate College division of Cuyahoga Community College in Northeast, Ohio² and the Corporate College at Lone Star College in Houston, Texas.³

WFD at community colleges can also entail providing low-cost remedial courses to dislocated workers or to English-as-a-Second-Language students, GED preparation courses, and career preparation and pre-employment-services courses. WFD can also mean ensuring that strong healthcare, business and industry-oriented two-year programs are properly aligned

"If you think about the overall community college curricula to include general education and liberal arts, as well as studies that convey technical skills, pretty much everything that happens in the community college is workforce training."

— Larry Warford

to four-year colleges and universities through meaningful transfer and articulation agreements into programs that ultimately lead to decent-paying jobs for its graduates.

"At some colleges it is career and technical programs that prepare the emerging workforce, and at other colleges it is a taking care of the incumbent workforce," explains Laura Weidner, dean of workforce development at Anne Arundel Community College. "At some colleges it's a combination of these two as well as providing services for the transitional workforce. Some colleges throw the entrepreneurial workforce into the mix, so there are all different kinds of ways to interpret workforce development at community colleges."

This kind of multi-faceted and diverse approach can be seen at the relatively small Iowa Valley Community College District's Continuing Education division (IVCE) that serves four counties in the state of Iowa and has a little more than 3,000 students at two community colleges - Marshalltown Community College and Ellsworth Community College. Starting with its business resources team, IVCE, through funding provided by the Iowa Legislature, helps area businesses with training services in everything from leadership skills, performance management, software instruction, OSHA, numerous manufacturing-oriented subjects, and much more. In addition, IVCE provides adult literacy and basic education programs, plenty of services to the unemployed and under employed, and is involved in a wide variety of contract training that is provided by a small group of internal business consultants and outreach specialists.⁴

According to Jacque Goodman, vice chancellor of IVCE, the entire staff is comprised of 38 full-time employees. "We are all aligned under the Iowa Valley Community College District vision, mission, and core values. That is what keeps us on target so that everything aligns to leadership, partnerships with business, and quality of instruction." She notes, for instance, that the district itself recently embarked on the implementation of a Baldrige Continuous Quality Improvement process, which is a system that measures both qualitative and quantitative aspects of performance and quality management. "That is helping us to better align with our business partners and to understand continuous quality improvement from their perspective," Goodman explains. As outlined specifically in their strategic agenda 2010-2013, the intent is to "develop and implement a unified, systemic, and systematic process to continuous quality improvement for all unit, departmental, and individual operations."⁵

St. Louis Community College (STLCC) in Missouri is another example, among many across the country, of an institution with wide-ranging, diverse and numerous WFD-oriented courses and programs. STLCC has four campuses that serve more than 80,000 students through credit courses, continuing education programs and workforce development programs. Within this relatively large community college system is the award-winning Workforce Solutions Group (WSG), comprised of more than 80 employees who operate STLCC's Corporate College, which features a 149,533 square foot Class A training, meeting and event facility that was purchased in 2010.

WSG has three operating units: Corporate Services, Continuing Education and Community Services. As noted on its website, "Corporate Services is one of the largest providers of training and consulting services in the St. Louis metropolitan area advancing over 10,000 employees from over 100 companies each year." Its Community Services unit "advances local communities by partnering with employers, community organizations, education and gov-



ernment to create job training opportunities for residents and a talent pipeline for employers." Its Continuing Education unit "annually advances over 40,000 individuals both personally and professionally with an extensive library of over 3,000 courses as well as over 4,000 online opportunities."⁶

Alpena Community College (ACC) is on the other end of the spectrum, substantially different from IVCE and WSG, at least in numbers. Located in Alpena, Michigan with about 2,000 students, only one administrator comprises Alpena's WFD program, Dean of Workforce Development Don McMaster. In addition to being responsible for managing all of ACC's corporate training efforts, which in and of itself is considerable, McMaster also functions as a grant writer who has written successful RFPs for two grants. A 26-year veteran in the field, McMaster was one of the main reasons why Alpena was successful in obtaining a \$2.8 million standalone Department of Labor Trade Adjustment Assistance Community College and Career Training grant (TAACCCT) for the development of training opportunities in five clean energy sectors across Northeastern Michigan. He can also take credit for winning a three-year, \$200,000 National Science Foundation (NSF) award to study carbon capture and CO₂ uptake in concrete and concrete masonry production through ACC's World Center for Concrete Technology.

McMaster explains that while he has always worked for a relatively small institution, he has seen many larger institutions that "are not

as nimble and responsive as smaller schools can be. There's often a bureaucracy that binds them down, and they lose the edge that they need to do this kind of work well. Sometimes it can be done by a small number of people pushing hard."

Qualifications for WFD Leaders at Community Colleges

Regardless of the size and/or bureaucracy of any WFD department, a new kind of WFD director is being sought out by community colleges to more effectively reinforce their efforts in this arena. For example, a recent job description for an Associate Director for the City University of New York Office of Workforce Partnerships had a relatively long list of qualifications, including six years of progressively responsible experience cultivating and managing partnerships with employers; the ability to navigate a complex political landscape; strong consultation, presentation, and group facilitation skills; an ability to manage multiple assignments with conflicting priorities; and much more.

At the West Kentucky Community and Technical College a job description for the Vice President of Community, Workforce and Economic Development called for knowledge of international protocol and economic development required to work with global, national, state, and local community and economic development leaders, as well as a minimum of five years experience at a senior staff level with frequent interactions with corporate leadership.

Deb Norris, Vice President of Workforce Development and Corporate Services at Sinclair Community College in Dayton, Ohio, is a good example of the kind of professional individual that, under the right circumstance, a sophisticated WFD department might be happy to hire. Her position at Sinclair was newly created in 2006. Her job is to truly understand the workforce needs of the employers in the Dayton region. In addition to managing and personally providing consulting services, she is responsible for the Advanced Integrated Manufac-

Many larger institutions "are not as nimble and responsive as smaller schools can be. There's often a bureaucracy that binds them down, and they lose the edge that they need to do this kind of work well. Sometimes it can be done by a small number of people pushing hard."

— Don McMaster

turing Center at Sinclair, a 1,500 square-foot model factory that assists local companies with modern, up-to-date training in Lean and Six Sigma process improvement, rapid prototyping, and CNC programming. Norris came to Sinclair with more than 25 years of business experience in sales, marketing, and management. Prior to coming on board with Sinclair, she worked for Fortune 500 companies, a technology startup, a business-to-business brand consulting agency, and a management consulting firm.⁷

Change and Growth Drivers

As WFD initiatives at community colleges continue to change and grow in importance to staff and students, obtaining a keener impression of the transformations and latest trends occurring in higher education, in general, can and should help WFD leaders in their decision-making processes that bring about change and growth.

- According to the Pew Hispanic Center, in 2011, for the first time, Hispanics made up one-quarter (25.2%) of 18- to 24-year-old students enrolled in two-year colleges. Plus, a record number of associate degrees were awarded to Latinos in 2010: 112,000.⁸
- A decade long trend in higher education that continues unabated shows that female enrollment growth increases (18%) continue to outpace male enrollment increases (10%).⁹

- There is a growing emphasis being placed on learning outcomes (what a student knows) and what earning an associate degree actually means. This line of thinking is strongly supported by the Lumina Foundation's Degree Qualifications Profile, which is a framework for clearly defining the learning represented by college degrees.¹⁰
- The National Association of Manufacturers estimates that 600,000 manufacturing jobs remain unfilled because companies can't find skilled applicants. In the field of Information Technology, employers are also finding it difficult to find the right set of skilled applicants. There's also a high demand for qualified workers with finance, taxation, and project-management skills.¹¹
- The manufacturing workforce is aging with the average age of a skilled machinist currently at 56-years-old.¹²
- Community colleges need to take into account the growth of postsecondary education models that are competency-based, personalized, emphasize lifelong learning and overall can evolve to meet rapidly changing employer needs, especially for prospective students seeking flexible and less-time-consuming career-based educational opportunities.¹³
- It is estimated that it will take more than 30 months (as of Spring 2013) to restore the jobs that were lost in 2008-09.¹⁴
- The jobs lost during the recession, and many other jobs from the past few decades, are not coming back as technology raises productivity and automates routine work such as assembly-line jobs. Additionally, jobs related to information processing and routine transactions, such as answering customer calls, cashing checks, and making deposits, have been dramatically affected by technology and automation.¹⁵
- The fastest-growing category of employment in advanced economies like the U.S. are in "interaction" jobs, meaning jobs that involve complex interactions and require deep knowledge, and independent judgment – jobs of the knowledge economy that include managers and salespeople and professionals such as doctors, lawyers, and teachers.¹⁶
- Part-time and temporary employment among prime-age workers has risen 1.5 to 2 times as fast as total employment since 1990.¹⁷
- Today's working-age Americans are less likely to relocate to find work. U.S. labor mobility is at a 50-year low and only half the level as 1989.¹⁸

According to George Boggs, CEO emeritus of AACC and former superintendent/president of Palomar College in California for 15 years, many community colleges are either getting along just fine with their WFD efforts and are in a comfort zone in which they are not putting a great deal of effort into figuring out new strategies, while other institutions are struggling just to survive. He suggests that community college leaders who are debating whether or not to reinvigorate their WFD programs to "make it a visible priority and set up a high-level task force that involves business leadership from the community, faculty members, some of your trustees, and perhaps some expert consultants to facilitate and act as advisors."

Boggs also mentions that there is a strong need for training in the area of cybersecurity. "The country is going to need thousands of new

"There are certifications that faculty members will have to go through if a college wants to launch cybersecurity programs. You can't just put your IT faculty into that without additional training. The colleges are going to have to gear up their faculty."

— George Boggs

cybersecurity specialists because we are at war in cyberspace with countries like Iran and China.” The challenge here is that community colleges need to provide strong professional development opportunities that will enable their faculty to remain up to speed on this quickly changing field. “There are certifications that faculty members will have to go through if a college wants to launch cybersecurity programs,” Boggs says. “You can’t just put your IT faculty into that without additional training. The colleges are going to have to gear up their faculty.”

Success Factors

Regardless of how the workings of any community college WFD department are defined and what recent statistics tell us about the future landscape of higher education and job and career growth realities, “each college’s approach is based on local industry clusters and the college’s core resources and expertise. While each community college is a reflection of its unique environment, there are common success trends in terms of approaches, methods and innovations that any community college can replicate.”¹⁹

Some of these common-sense trends were described in a recent white paper published by the National Council for Continuing Education & Training (NCCET). Representatives from NCCET talked with WFD experts at four colleges identified as having innovative WFD-oriented programs – Anne Arundel Community College, Bismarck State College, Central Piedmont Community College, and Williston State College – and surveyed NCCET members, asking to identify key ingredients to success in WFD programming. Ten “common-sense” best practices were identified, as outlined, in brief, below:

1. Focus on a unique industry need in your geographic area.
2. Create an advisory board comprised of CEOs and other executive-level professionals in order to gain industry perspectives and insights.



3. Design programs that build on your existing expertise and curriculum.
4. Leverage local, state, and federal funding where available.
5. Design flexible delivery methods, such as fully online and hybrid models.
6. Offer both noncredit and credit courses and programs that enrich lifelong learning.
7. Recruit internal and external advocates (champions) who can provide resources, advice and possible funding.
8. Respond quickly to any industry requests.
9. Know what outcomes you are expecting and have a process to quantify success and capture lessons learned.
10. Listen to industry input and always adapt and innovate.²⁰

An AACC Commission brief also provided a good number of recommendations that can help colleges move down successful pathways in their efforts to bring about meaningful change in the WFD arena. Inside the brief, it was noted, for instance, that “the community college academy has to give up the sanctity of the academy for academic’s sake,” and that community colleges “need to change their self-view from the traditional academic model to a new flexible educational institution that is equal parts academic- and workforce-oriented.”²¹

Contract Training

Keith Bird, Senior Policy Fellow for Workforce and Postsecondary Education at the Corporation for A Skilled Workforce and former Chancellor of the Kentucky Community and Technical College System for ten years, suggests that at many community colleges comprehensive strategic planning within the larger context of institutional planning for developing sound WFD initiatives needs to take place in order to take an institution down a path toward success. He explains that “colleges require detailed financial reports, strong return-on-investment evaluations, and strong performance metrics that provide a comprehensive picture of costs, revenue, function, and mission.” Bird adds that, to begin with, many community colleges, and especially smaller colleges, don’t have the right levels of internal resources to build out satisfactory strategic plans. “Plus, sometimes the people who get into the workforce area, in many cases don’t have the experience, particularly when it comes to contract training.”

Contract training is often referred to under different names, such as corporate training or customized training. It basically entails entering into a contract with an employer to provide guidance and instruction geared specifically toward what their employees need to learn and know in order to be more productive and help make the companies they work for more competitive. It can entail assessing both incoming and incumbent employee skills to see where any weaknesses in a company’s workforce may exist, including in the area of soft skills, and then providing a customized program to address such weaknesses. It can also entail providing sales training services and/or leadership skills training services that are relevant to a particular industry.

In recent years, due primarily to the recession, many companies have downsized their training efforts. In addition, companies seek more than just training services. They want solutions that ultimately bring about a more productive workforce and increased sales. This places a re-

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sponsibility on community college WFD departments to have a highly seasoned, knowledgeable teaching and advising staff, with top-notch and modern pedagogy, which is both costly and difficult to find.

Professional Development at NMC

At Northwestern Michigan College (NMC) in Traverse City, the continuous professional development of its small Training Department staff (six professionals in all) is a vital part of its annual self-sustaining budget, says NMC Director of Training Rich Wolin. “We are always sending staff members out for professional development on an annual basis,” he says, adding that, for example, one of the department’s trainers recently became a certified salesforce.com expert. “Now he is not only helping us out, but doing that service for others in our area.”

NMC’s Training Department also offers a number of programs related to the application of Lean Enterprise philosophies. Lean principles



“Professional development is a critical part of our budget. My argument is (for funding such efforts) is that if I can’t have people at the front end of the learning, then there is nothing that we have to sell to the market.”

— Rich Wolin

traditionally have been used in manufacturing settings, though in recent years these practices have been embraced by both the office environment and healthcare industry. “We sent people out to get certified in lean health and lean office when those first came out,” Wolin says. “Professional development is a critical part of our budget. My argument is (for funding such efforts) is that if I can’t have people at the front end of the learning, then there is nothing that we have to sell to the market.”

Selling contact training to the local market in Northwestern Michigan includes offering relevant training services in leadership and team skills and advanced manufacturing, in addition to the lean business practices. “In manufacturing we do basic math, math for manufacturing and blueprint reading. Then we get into some of the higher level stuff like Metrology, Metallurgy, and Statistical Process Control,” Wolin says. “We do a lot of coaching on project implementation and we do a little bit with Six Sigma Green Belt training and problem solving.” The most successful programs, Wolin says, are in the lean business practices and in the leadership and team skills.



Innovative Approaches

Of course, contract training programs that bring profits into WFD departments are only one area of importance for maintaining viability at the institutional level. Another education approach that is not really new but growing rapidly in popularity, and thus generating profitable results, is the offering of certificate programs in fields where there is a strong demand for workers with very specific skills. These programs can typically be completed in one year or less and are designed to equip students with a specialized skill set for immediate employment. They typically consist of anywhere from 9 to 24 credits that are embedded inside a full associate degree program. There are many successful certificate programs being offered by community colleges across the country.

Valencia's Certificates

One good example of such certificate programs can be found at Valencia College, where 34 Associate in Science degree programs have a total of 67 certificates. These AS degrees and underlying certificates are backed by an infrastructure that includes 15 career program advisors who work within the departments that host and develop each program. The advisors provide a full slate of services to students.

According to Joan Tiller, former Assistant Vice President for Workforce Development and Dean of Business Administration for 26 years at Valencia, career advisors report directly to student affairs, ensuring that every advisor gets all of the appropriate training that's needed to do their jobs effectively. They also have a close relationship with the deans of their respective departments and are well aware of all of the course requirements for the programs they work with when advising students. They consistently communicate directly with students on such issues as transcripts and educational plans, as well as getting them into the right classes needed for completion. “They have more than enough familiarity with the programs,”

on,” Law says. Like Valencia College, SPC has a very active advisory committee with more than 500 members from the community representing every program offered by the college. Law explains how SPC counts on these advisors for “meaningful input – I mean reviewing the curriculum and reviewing the strategic key learning outcomes. If we have strategic equipment purchases, we get their input on that – all of these things.” In addition, Law explains that he makes a concerted effort to ensure that all of SPC’s WFD labors are not separate from the rest of the college. “We have spread this through our academic structure,” he says. “We make sure that our deans have responsibilities. If we are going to do a certificate in health, the responsibility has to come from the existing health program leadership.”

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— Bill Law

SPC also has a robust level of certificate offerings. Law points out that SPC is also moving aggressively in programs for veterans, opportunities in manufacturing, programs in information technology, and public safety programs. In addition, SPC provides contract training services, through its EpiCenter (where SPC’s Corporate Training Center is housed), to a relatively large health industry that is based in Pinellas County, as well as to numerous other local businesses with a focus on technology, professional development, licensed professions, and business solutions. As noted on its website, “The EpiCenter is a joint-use facility between St. Petersburg College and Pinellas County where professionals from business, government and academia come together to provide a unique blend of information and services.”²³

Of course, Florida can be considered a bellwether state with a booming health care in-

dustry bolstered by a non-stop migration of retirees, plus a phenomenal world-recognized tourist trade that comes with extraordinary culinary and hospitality businesses supported by companies like Universal Studios and Disney. Health care, tourism, and culinary and hospitality-related courses and programs alone ultimately bring in increasing numbers of student enrollments and a great deal of financial and curriculum development support from deep-pocketed local employers. Other community colleges are not so fortunate. They may not have large and growing industry sectors in their backyards that come directly to them through fairly minimal outreach and sales efforts on the part of the colleges themselves, as employers look for both customized noncredit employee training opportunities as well as credit-bearing programs relevant to their needs.

The New Michigan

In the state of Michigan, business opportunities are quite different than business opportunities are in Florida, but there is plenty of WFD innovation happening at Michigan’s community colleges, starting with Macomb Community College, where President James Jacobs says “workforce development and workforce preparation is part of, and embedded in, everything one does in postsecondary education.”

Jacobs adds that the task of any WFD department includes not only thinking about the general skills and the overall needs of all employers and how they have changed over the last two to three decades, “but to also take

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Jacobs is a big proponent of community engagement and having a keen understanding of a community's needs and making strong connections and collaborations with groups outside of the college that can lead to opportunities that help bring about decent-paying jobs and overall economic growth for a region. This is evident in a recent in-depth report that was created through discussions between Macomb Community College, The Macomb County

Executive's Office and Data Drive Detroit, and funded by the Kresge Foundation, titled "Discover the New Macomb County." Jacobs notes in the opening letter of the report that "good public policy begins with accurate knowledge." In that spirit, the report outlines the shifts occurring in the suburban Detroit county's population, income, and economy. In many ways, much of its findings are similar to what's occurring in counties across the country that are located near major metropolitan areas. For instance, the report highlighted two major trends that have an impact on how Macomb Community College plans out its academic programs in areas that meet both its business climate and human population needs for decent employment: 1. An increase in the average age of its residents due to greater life longevity and lower birth rates. 2. An increase in the number of immigrants moving into the county with low levels of education.²⁴

Looking Closer at an Emerging Workforce

The New Macomb County report also noted how the automotive industry has become more high tech and smaller, requiring a more tech-savvy, better-educated

Community Colleges and Green Collar Jobs

Community colleges are a primary source of job training for most Americans. Often in the spotlight for their ability to respond quickly to the needs of the surrounding community, these institutions offer affordable training for current industries as well as for emerging jobs of the future. The last decade has brought a growing awareness of environmental issues, and recently coined "green

collar jobs" are emerging as a result. In a report titled "A Green Career Pathways Framework: Postsecondary and Employment Success for Low-Income, Disconnected Youth," published by the Corps Network, it was noted that "green skills are being added to existing occupations (in fields such as energy and engineering) and new jobs that are primarily green are rapidly emerging." Community colleges are responding to this

growing need for green collar workers by offering innovative green programs and courses in a wide variety of areas.

Sustainable programs are taking center stage across a broad range of skill sets and occupations, including transportation, manufacturing, agriculture, construction, architecture, business, and energy technology. With the support of partners such as the American Asso-

ciation of Community Colleges, Bill & Melinda Gates Foundation, the W.T Kellogg Foundation, Jobs for the Future, and the National Wildlife Federation, community colleges are embracing the prospect of green programs and incorporating required skills into their curricula in innovative ways. For example, in 2006, the Los Angeles Trade Technical College in California adopted a Green College Initiative comprised of four

workforce. In addition, wages in the automotive industry have changed.

The production jobs that once sustained a large middle class, providing high pay even for low skill, have declined in number, pay less well and require higher skill. These Macomb County trends mirror those occurring nationally. All of this change is creating a New Macomb County, where economic growth and quality of life depend now more than even before on industry diversification and highly educated residents.²⁵

The manufacturing industry has also been getting smaller and leaner across the country, with Macomb County losing 50,700 jobs in the manufacturing sector alone in 2000 through 2010. The construction industry has also seen a job loss over the same decade.

Both sectors offered high-wage, low-skill jobs, and both had a predominately male workforce. Neither sector has substantially recovered from the recession. As a result, a large number of men remain displaced from the workforce without the education and skills to help them succeed in the New Economy. Over the decade, the health care

sector increased by roughly 10,000 jobs (38 percent), the accommodations and food sector increased by roughly 4,000 jobs (18 percent) and the education sector increased by 1,300 (98 percent). But combined, the job gains in these expanding sectors were insufficient to counter the losses in manufacturing and construction.²⁶

How has Macomb Community College responded to these factors about industry changes, the local economy, and employment? In 2010, the college was awarded a \$1.4 million NSF grant to support the building of a center for automotive technology that is focused on the growth of electric cars and the futuristic development of driverless, intelligent automobiles. Jacobs says this is an area of WFD at Macomb that requires an understanding of what kind of jobs are evolving into the future. "A lot of times people see the workforce development mission to be how many classes you have or what kind of equipment you have – that is part of it, but another part of the workforce development mission for any good community college is to look into the future to see what is emerging," he explains. "You have to plan out what you see happening and take certain risks and bets, to

areas: green built environment, clean and green campus, public awareness, and green education and training programs. As part of this initiative, fourteen (14) green-focused degree and certificate programs were developed, including Hybrid & Electrical Vehicle Technology, a Renewable Energy AS degree with an emphasis in Solar Technology or Energy Efficiency, an Energy Systems Technology

Fundamentals Certificate of Achievement, a Supply Water Technology AS degree with an emphasis in Water Purification, and many more.

"Green" may be the buzzword in higher education programming, but many are still hesitant that green programs will lead to jobs. In a You Tube video, titled "GREENFORCE- the Power of Community Colleges in a Future of Green Jobs," Kevin

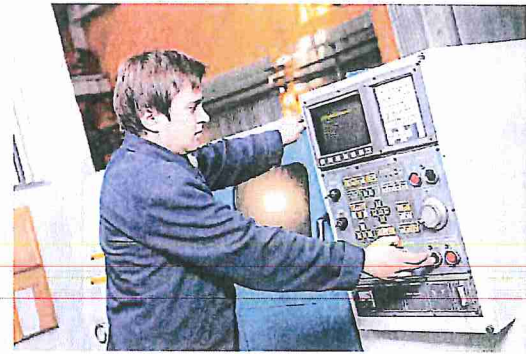
Coyle, Vice President for Education and Training at the National Wildlife Federation, likens green jobs to the Internet 20 years ago. In the mid 90s, it was understood that the Internet was going to be a driving force in the future but no one quite knew how or why. Today, there is scarcely a job to be found that is not impacted by the Internet in some way. "The world is moving toward a low-carbon

economy . . . The revolution that we saw with the Internet, we are about to see with green jobs," Coyle said. The combination of countrywide support for energy independence and legislative mandates for a cleaner environment point to the fact that green collar jobs representing a variety of skill sets do exist and will continue to grow exponentially.

— Lori Gonko

an extent. That is what we are doing with the automobile industry.”

In order to increase the focus on providing instruction that is more up to date with the high tech needs of the manufacturing sector, for example, Macomb Community College’s WFD division now offers eight unique 40-hour courses that fall under the job-title framework of a multi-skilled technician. These courses, which are geared for entry and mid-level positions in automation-related jobs, feature learning proficiencies that are required in such industry sectors as defense, aerospace, automotive, material processing and medical. The multi-skilled technician courses are shared by multiple companies to reduce training costs, and the cost is determined by the total number of students attending.²⁷



Reaching Out to Those Who Need It Most

A more challenging education area that is difficult for any community college WFD or continuing education department to offer entails developing effective strategies that assist potential students who do not possess even the basic skills needed to be considered for jobs that pay even slightly more than minimum wage. This relates to people who fall under the aforementioned trend of immigrants moving into the county with low levels of education. It also speaks to the older student de-

Staying Relevant in a Global Society

Education, business, and governmental leaders across the United States are calling for an educated and globally competent workforce, and community colleges are in a position to provide those much-needed education and training opportunities to their communities. As community colleges look at developing workforce initiatives with a global emphasis, there are some key factors to take under consideration.

Global Competence
There is not a consensus of what it means to be ‘globally competent.’ Bill Hunter, Lehigh University Representative to the United Nations, in his much cited dissertation titled “Knowledge, Skills, Attitudes and Experiences Necessary to Become Globally Competent,” defines *global competence* as “having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively

outside one’s environment.” The Stanley Foundation and the American Council on International Intercultural Education (ACIIE), in “Educating for the Global Community: A Framework for Community Colleges,” considers global competency to include “an appreciation of complexity, conflict management, the inevitability of change, and the interconnectedness between and among humans and their environment. Globally competent citizens know they have an impact on the world and that the world influences

them. They recognize their ability and responsibility to make choices that affect the future.” In addition to gaining technical skills that employers are looking for, workers with these broad, integrated competencies are essential in building a competitive workforce.

Workforce Development
There appears to be a gap between what employers are looking for in their new hires and what students are learning that will prepare them for the global environment. Gaining these skills

mographic who falls under the additional aforementioned trend of an increase in the average age of the county's residents who have been let go from their jobs and are now dislocated after years of working at low-skill manufacturing production jobs that in the past were relatively plentiful and paid a decent wage.

Jacobs says that the market for these two groups has a lot to do with the expediency for getting a job quickly. One example of helping to fulfill that kind of need is in the Macomb Community College Certified Nurse Assistant (CNA) program, which launched in March 2009 and is offered through the Center for Continuing Education. The CNA program is designed to move people quickly into job opportunities. It has 128 hours of training – 53 hours beyond the state-required minimum – over the course of six weeks. Upon completion of the class, students are eligible to take the state test for certification as a nursing assistant. "Here we can pretty much guarantee if you pass the licensing exam that you will get a job in a nursing home right away (with a average starting pay of

\$10 to \$15 per hour)," Jacob explains, adding that, although the program awards continuing education contact hours, it does ultimately provide a strong foundation for these students to further their education through a for-credit nursing or other healthcare field. "Here the question is do they have the foundation skills in math, communications, and reading," Jacobs says. "We are working on figuring out how to contextualize that to get people to accelerate quickly through so they can move into a learning experience that will get them credits and a degree (and a better-paying job)."



and competencies will not only benefit learners in future employment, they are essential components for a company's ability to be a competitive force in the global economy. Not only does workforce development focus on skill acquisition, it is a necessary component to economic development, job creation, and quality of life. Whether you view workforce development as skill attainment, skill enhancement, or degree completion, companies need workers who can bring innovative, creative,

entrepreneurial skills and a global mindset to their work.

High-Skill Occupations

Low-skill and production-type jobs have been easily outsourced to countries that pay low wages. We are now seeing high-skilled jobs becoming vulnerable to offshoring. As noted in "Thrive. The Skills Imperative," by the Council on Competitiveness, we must be strategic in training and educating global, highly skilled workers in hard-to-replicate occupations. We must respond by

developing a strategy that provides the necessary education and training for these occupations.

Community College Response

Community colleges will best serve their communities by working closely with organizations and businesses to identify skills gaps, work together to develop and revise curriculum, and provide skills and global competency training. Leveraging partnerships between educational institutions and businesses is a critical component in building the

talent pool that is necessary to attract high tech, emerging industries to our communities.

Rather than looking at skill attainment as a means to an end, we need to look holistically at the need to continuously update, upgrade, and expand workforce training throughout one's life. This mindset is necessary to compete and remain relevant in our global society.

— Susan DeCamillis

There are many CNA programs being offered by community colleges across the country. In California, for instance, a good number of community colleges prepare students for the State of California Certification Examination as a Certified Nursing Assistant and Certified Home Health Aide.

Another good example of how a community college reaches out to a population of dislocated and low-skilled workers can be found at Mott Community College in Flint, Michigan. Here Director of Workforce Development Robert Matthews works with a WFD staff of 60 people spread throughout the Flint geographic region at a variety of workforce centers, including the college's Workforce Education Center headquarters, which is located off campus next door to a Michigan Works! Career Alliance Center. Matthews explains, as exemplified by all seven Mott Community College WFD and continuing education satellite locations, how the department he works for is known for extending their efforts and relationships "beyond the walls of the institution in nontraditional ways."

In a city known for high unemployment, high crime, and high poverty rates, Mott Community College's WFD division believes in applying a strong focus toward engaging and reaching out to people face-to-face in the area's local neighborhoods where many residents cannot afford or even consider a forward move into some kind of postsecondary education pathway. A prime example of this is the college's Community Technology Centers (CTC), which were created in 2000 through funding from the U.S. Department of Education and the U.S. Department of Commerce in collaboration with three community-based organizations – The Disability Network, The Faith Development Corp and The American G.I. Forum of Flint. The Centers offer tuition-free technology-based programs that help bridge the "Digital Divide" by providing hands-on learning opportunities that lead to career development for the under-served communities where they are located.

"We went into these neighborhoods to work with folks and get them to think about learn-

"We have a large Hispanic population that we serve, and we are starting to see more Burmese. So we provide English-as-a-Second Language courses, citizenship classes, and family literacy – these are all programs that are very important to that population."

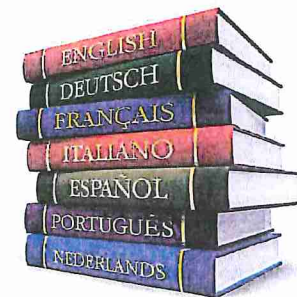
— Jacque Goodman

ing basic technology and providing them with information on how to apply to college and for financial aid," says Matthews. "There was a big push at the time to address digital divide issues, but more importantly, we were addressing the changes that were occurring in our city and region as many folks started to feel the impact of what was happening in the automotive industry. We reached out to these people in their neighborhoods as opposed to waiting for them to come to the campus, giving them the opportunity to take the first steps in their educational journeys."

Making Ends Meet

Programs like the CNA at Macomb and the CTC at Mott are not profitable enterprises. They do, however, genuinely and altruistically help to meet the American non-profit community college's traditional mission of serving the true needs of the people in their given communities. Such efforts typically kick off through charitable grants and partnerships but they struggle to remain sustainable when the funding ultimately dries up. So, in order to survive, such programs often depend on the success of other WFD programs that bring in what can be considered profitable revenues. That's how it works, for instance, at the earlier noted Iowa Valley Community College District's Continuing Education division (IVCE).

"We have a large Hispanic population that we serve,



and we are starting to see more Burmese,” Goodman explains. “So we provide English-as-a-Second Language courses, citizenship classes, and family literacy – these are all programs that are very important to that population. We serve anywhere from 800 participants in a given year through our Education and Training Center.” They also offer GED classes in English and Spanish. The GED/ESL courses cost \$25 per quarter. Citizenship classes are \$50, and that includes the textbook. Family literacy courses are offered at a “nominal fee.” In short, these are not profitable programs, Goodman says. How do they survive? “We subsidize them through other programs that are making money,” she explains. At IVCE that would be, for example, their Utility Technician Training Program and their Machine Operator Training Program. In addition, Goodman says that anything related to health care, such as their Customized Health Training Program, and, in manufacturing, their Industrial Maintenance Technology Program, are financially successful. “Manufacturing is our largest private sector employer, so we put a lot of emphasis on making sure we can retain those jobs in our communities,” Goodman says.

Grants

Another way that community college WFD initiatives remain financially viable, or even get off the ground, is through grants. Two of the more substantial grant-giving entities for community colleges are the Department of Labor and Department of Education Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program and the National Science Foundation’s Advanced Technological Education (ATE) Program.

The \$2 billion, four-year TAACCCT program as of the time of this writing had awarded a grand total of \$1 billion in grants in two rounds thus far to 133 two-year institutions to specifically develop local employer partnerships and expand job training. The awardees are a combination of winning RFPs submitted from individual campuses and member consortiums.

As noted in a press release about the program published at the TAACCCT website:

In total, 297 schools will receive grants as individual applicants or as members of a consortium. The grants include 27 awards to community college and university consortia totaling \$359,237,048 and 27 awards to individual institutions totaling \$78,262,952. Twenty-five states that were without a winning individual submission will be contacted to develop a qualifying \$2.5 million project.

Educational institutions will use these funds to create affordable training programs that meet industry needs, invest in staff and educational resources, and provide access to free, digital learning materials. All education materials developed through the grants will be available for use by the public and other education providers through a Creative Commons license.²⁸

As one example of a consortium grant winner from round two, consortium lead institution William Rainey Harper College in Palatine, Illinois was awarded a \$12.9 million TAACCCT grant aimed at preparing students at 20 Illinois community colleges to fill available jobs in the manufacturing sector through the adoption of Harper’s new Advanced Manufacturing program. The program was created in collaboration with regional manufacturers to replenish the pipeline of skilled workers. It offers certificates and paid internships and also has a dual-enrollment element geared toward enticing high school students into manufacturing-sector careers.²⁹



The program, which is noted as an “Earn and Learn Career Lattice,” is an 18-hour Manufacturing Production 12-month certificate with specializations in Mechatronics Automation, Precision Machining, Metal Fabrication and Supply Chain Management/Logistics. It prepares certificate completers for paid internships and entry-level positions as well as for transfer into the college’s Associate of Applied Science in Manufacturing Technology and eventually advancement to a four-year institution to pursue a bachelor’s degree (pending Illinois Community College Board approval at the time of this writing in March 2013). The program also prepares students for a nationally recognized credential offered by the Manufacturing Skills Standards Council.³⁰

Also, as noted in a description of the award posted at the TACconnect website:

The Earn and Learn Advanced Manufacturing Career Lattice Program targets Trade Adjustment Assistance workers, veterans

and others seeking additional training to secure and/or maintain employment by earning stackable, portable certificates and degrees leading to highly paid jobs within advanced manufacturing while simultaneously working in the industry. Participants enter the program at multiple points based on assessment results that match skills and education needs.³¹

“This is a good example of a local solution to a national problem,” notes Harper College President Ken Ender. He adds that while completing the certificate program should qualify students for entry or second-tier positions in manufacturing, “you have got to stay in the sector for five to ten years to really start making what I would call real money that literally will sustain not just yourself but a family. We try to focus specifically in developing those kinds of pathways.”

For another TAACCCT grant example, as noted earlier in this report, Alpena Community Col-

Multicraft Technology at Sauk Valley Community College

Students at Sauk Valley Community College (SVCC) interested in entering the manufacturing workforce can enroll in an innovative, multi-disciplined program that meets the needs of the local manufacturing community. The Associate in Applied Science degree in Multicraft Technology has an emphasis in Electrical, Alternative Energy, Electronics, Welding, HVAC, Programmable Logic Controllers, and Wind Energy. The program was created in response to the local

manufacturing community’s needs, with a keen focus towards helping students learn about today’s changing industrial technology skill set. In addition to obtaining these skills, the Multicraft Technology program provides the knowledge base that allows technicians to troubleshoot manufacturing and plant systems.

The curriculum includes the technical courses from the various disciplines, but also requires a strong general education core of communications,

humanities, mathematics, and physical science. Placement into the program requires ACT’s WorkKeys testing or successful completion of SVCC’s Certified Manufacturing Assistant course. Graduates of the program are prepared to enter the workforce as engineering technicians, field service engineers, plant maintenance technicians, and application engineers.

Local companies are now seeking and advertising for Multicraft Technology

graduates. In keeping with the growth of the program, for a new manufacturing taskforce of faculty, staff, and local manufacturers was created. The taskforce meets monthly and seeks input from local manufacturers on how to effectively align the program with their unique industry needs, as well as to share new innovative practices within the field. Recently, for instance, the taskforce discussed and approved of the need to have SVCC instructors certified by the

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— Ken Ender

lege was awarded a \$2.8 million individual college grant in round one for its clean energy programs with a focus on the following key industries: Concrete, Cement and Building Products; Maritime Technology; Biofuels and Energy Conservation; Energy Efficient Construction; and Renewable Energy.

Some of the elements of Alpena's award include a project that trains workers for a local prototype plant to make car fuel from cellulosic ethanol, which is distilled from wood products. The college is the first to develop such a program. Another program under the grant is an associate in applied science degree in marine technology in partnership with the Thun-

der Bay Underwater National Marine Sanctuary on Lake Huron.³²

The Marine Technology Program at ACC is designed to allow maximum flexibility for entry-level employment in the marine industry. The marine technology industry is a broad field with many branches, and it interrelates widely with other branches of technology, such as resource extraction, environmental management, manufacturing, robotics, communication, and recreation. Students completing the program will achieve an Associate in Applied Science in Marine Technology and will have access to a variety of jobs and careers such as: ROV Technician, Shipboard Technician, Design Engineer, Hydrographic Surveyor, Marine Electronics Technician, and Marine Research Technician.³³

Alpena's McMaster, who wrote the RFP, explains that "if you don't find external dollars, then you are struggling like a lot of other small community colleges that don't have sufficient money to work with. So there is a fair incentive

Manufacturing Skill Standards Council (MSSC), a training, assessment and certification system focused on the core skills and knowledge needed by front-line production and material handling workers. Courses in the program will also be more closely aligned to MSSC specifications.

The program also provides a work-based training component with an internship at local manufacturing companies. Steve McPherson, SVCC Associate Professor of

Electronics/Technology, says that "employers were requesting that prospective employees have a wider range of skills, rather than just one specialization. After placing a few interns from the Multicraft Technology program, local employers have been pleased and the program is being well-received."

Robert Urbanski, the Director of Human Resources at Frantz Manufacturing in Sterling, Illinois, has recently worked with two interns from the program and has been

pleased with the quality and skill of the students. Urbanski says that the students have made great contributions to their electrical and fabrication needs and added that both students would be employable for their company. Frantz Manufacturing also serves as a member of the Manufacturing Taskforce at SVCC.

McPherson indicates that the creation of a unique Mathematics course that is blended with the technology curriculum will be the next effort to meet

student and industry needs. The Mathematics course will differ from traditional math courses in that it will include application problems designed to directly reflect what the students would use in the manufacturing field.

With a growing program and a strong workforce council to support it, the Multicraft Technology program will provide students with an opportunity to increase their broad range of skills and join today's workforce.

— Jon Mandrell

"If you don't find external dollars, then you are struggling like a lot of other small community colleges that don't have sufficient money to work with. So there is a fair incentive to being successful in pursuing external resources."

— Don McMaster

to being successful in pursuing external resources." McMaster adds that he is constantly monitoring the landscape for grant opportunities.

Other interesting projects, among many, funded by TAACCCT include a \$20 million award to Kingsborough Community College, which is leading a consortium of eight colleges in New York City to develop career pathways for displaced factory workers. In Virginia, Tidewater Community College was awarded \$24-million to lead a consortium that focuses on training displaced workers for new careers in health sciences.³⁴

NSF Grants

In the popular area of Science, Technology, Engineering and Mathematics (STEM) programs, look no further than the NSF ATE website where evidence is presented about how this organization has helped community colleges develop programs covering everything from advanced manufacturing, biotechnology and electronics to energy and environmental technologies and information, geospatial and security technologies.

With an emphasis on two-year colleges, the Advanced Technological Education (ATE) program focuses on the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions and employers to promote improvement in the education of science and engineering technicians at the undergraduate and secondary school levels.

The ATE program supports curriculum development; professional development of college faculty and secondary school teachers; career pathways to two-year colleges from secondary schools and from two-year colleges to four-year institutions; and other activities. Another goal is articulation between two-year and four-year programs for K-12 prospective teachers that focus on technological education. The program also invites proposals focusing on research to advance the knowledge base related to technician education.³⁵

One of the more recently funded ATE Centers is The National Center for Supply Chain Technology Education (SCTE), established in August 2011 under a four-year \$3.5 million award. SCTE is governed and managed by Norco College of the Riverside Community College District in California, in partnership with four other community colleges located along major national supply chain routes: Jefferson Community and Technical College in Louisville, Kentucky; Oakton Community College in Des Plaines, Illinois; Sinclair Community College in Dayton, Ohio; and Tacoma Community College in Tacoma, Washington. This consortium wants to increase the number of skilled supply chain technicians through the development of new courses and programs.

In the counties of Riverside and San Bernardino, California alone, the supply chain workforce is projected to increase by 23%. Plus, new technologies that support the nation's supply chain are becoming more advanced and increasingly in need of STEM-prepared technicians. SCTE is creating "the next generation of education and training curricula for supply chain technicians." Through the support it is getting from training and operations professionals from such companies as Target, UPS, Converse/Nike, Toyota, the Port of Long Beach, Kroger and many others in the field of supply chain management, SCTE has been busy with the development and delivery of professional development training related to these technologies.³⁶

Other Grant-Funding Initiatives

In addition to TAACCCT and ATE, the Bill & Melinda Gates Foundation's Postsecondary Success Strategy initiative, as well as the Lumina Foundation and other philanthropic organizations and government programs have contributed hundreds of millions of dollars toward community college efforts to educate Americans to ultimately find gainful employment through educational programs that speak directly toward building much needed work skills.

The Gates Foundation's Postsecondary Success Strategy's clearly stated goal is "to ensure that all low-income young adults have affordable access to a quality postsecondary education that is tailored to their individual needs and educational goals and leads to timely completion of a degree or certificate with labor-market value."³⁷ One of its key partners in the area of WFD is Jobs for the Future, whose many national initiatives serve young students and working adults who need multiple pathways to advance their learning and their careers.³⁸ Complete College America is another foundation partner with a WFD focus and a mission to work with states to increase the number of Americans with quality career certificates or college degrees and to close attainment gaps for traditionally underrepresented populations. □

At the Lumina Foundation, there is a strong focus on increasing higher education attainment through its Goal 2025 "to increase the proportion of Americans with high-quality college degrees, certificates and credentials to 60 percent by 2025." Plans are to accomplish this goal in conjunction with helping to meet our nation's workforce demands. Lumina's strategic plans call for the organization to "work side by side with employers, metro areas, and regions to encourage broader adoption of Goal 2025 and create and strengthen the collaborative partnerships needed to increase attainment and more closely align postsecondary education with workforce and civic needs."⁴⁰

The Need for Professional Grant Writers

All of these grant-funding entities require community colleges to pay very close attention to the numerous opportunities these organizations provide typically through some sort of solicited or unsolicited RFP procedure. This places a high level of importance on community colleges to have a professional grant-writing/proposal-production staff on board to monitor opportunities and act on them effectively. In a previous SOURCE special report, a group of community college leaders was asked about how community colleges, already strapped for funds, could possibly meet this kind of challenge. Their responses ranged from "it is extremely difficult," and "it's time to get serious about it" to "it's extremely more competitive," and "we are like a Johnny Come Lately in that arena compared to our university colleagues."⁴¹

In short, in many cases there looks to be an important need here that is unfortunately going unfulfilled. Nonetheless, a good number of community colleges have figured out how to meet this increasingly important request, as evidenced by the many winners of grants from the aforementioned funding agencies. Many of these grant recipients have small or even non-existent professionally educated grant-writing staffs who had to, so to speak, push the envelope and move beyond their internal short comings due to a lack of funds. That's what community colleges have always done, and continue to do, in a world that requires extraordinary action.

In Conclusion

Finally, it is important to stress that this special report obviously did not cover numerous other notable community college efforts in the WFD arena. Maricopa Community Colleges in Arizona, the Washington Community and Technical Colleges system, Ivy Tech Community Colleges in Indiana, Economic & Workforce Development through the California Community Colleges, the Kentucky

Community and Technical College System, and many more community colleges throughout the U.S. help America's businesses with strong education and training services that continue to contribute to the overall future development of our nation's highly skilled and productive workforce.

The issues, trends and strategies mentioned throughout this special report do make a difference in the productive lives of individuals and in business improvement. Without these WFD efforts, the seemingly endless needs of our changing population and changing industries, both new and traditional, would not be addressed. It is not difficult to see from such examples that America's community colleges remain, as their history has proven year after year, a vitally important and substantial component of our nation's higher education system.

Doing more with less has always been a hallmark of the community college world that is still, unfortunately, evident today. America's community colleges have demonstrated their agility and their ability to significantly contribute to the development of American workers and the growth of business. This crucial role being actively implemented at community colleges everywhere deserves to be better supported by communities and states that truly benefit from this valuable resource.

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