



# LEADERSHIP ACADEMY FOR STUDENT SUCCESS

## Pathways Project Implementation Memorandum

**TO:** Laura Rittner, Executive Director, Success Center – OACC  
**FROM:** Dr. Daniel Burklo, Dr. Kelly Gray, Dr. Melinda Mohler, Dr. Russell Clark  
**RE:** Extending partnerships with high schools to motivate and prepare students to enter college-level coursework with a manufacturing career focus  
**DATE:** September 2, 2020

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### EXECUTIVE SUMMARY/INTRODUCTION

In today's workforce, 24% of current jobs require middle skills of a certificate or technical degree. According to the *College Credit Plus Annual Report 2017-2018*, "of the 23,408 high school graduates from the 2016 cohort, nearly 64% matriculated to an Ohio public college or university after high school." The remaining gap leaves 36% of students in potential need of career training. To meet workforce demand, community colleges must create or improve partnerships with high schools and local industries to motivate and prepare students to enter college level coursework with a manufacturing career focus. The goal of our project to increase CCP enrollment in manufacturing-related career programs by providing a recommendation of best practice models to connect industry partners, high schools, and community colleges and provide opportunities for exposure and exploration of possible career fields.

### RELEVANT LITERATURE REVIEWED

The purpose of this project is to extend partnerships with high schools to motivate and prepare students to enter college-level coursework with a manufacturing career focus. Literature reviewed for the project included studies on Collaboration, Manufacturing, Equity, and College Credit Plus.

In 2017, the Committee for Economic Development (CED) completed a "listening tour" of five communities, including Marysville, Oh. The purpose of this tour was to illuminate gaps between industry and parental aspirations in preparing students for manufacturing career pathways. The study revealed, ". . . a significant gap between what parents and employers want, and what high schools are delivering." The CED noted an "urgent need" for "counselors and/or mentors who can help students identify and chart a career pathway." (Building Supports, p.4)

During the development phase of the project, a topic that surfaced repeatedly was the expansion of manufacturing-related opportunities in rural communities and equitable outcomes for underserved populations in all regions. "Measuring Educational Quality and Improvement in College and Career Pathways: The Secondary Student Experience" provided excellent suggestions on closing opportunity gaps, boosting pathways engagement, and noted the use of manufacturing pathways as a tool to reach "out of school youth" for whom a traditional four-year pathway may not be a viable option.

The Ohio Manufacturing Foundations white paper was an excellent springboard for examining processes and programs already in place within the state of Ohio. Additional case studies and official reports on CCP, pathways, and manufacturing careers in Ohio illuminated the need for an increasing focus on early exposure to manufacturing careers for Ohio youth.

## **DATA EXAMINED**

Data examined for this project includes, but is not limited to, Ohio Census data for the years 2014-2018, official Ohio CCP reports, ODE School Report Card data from the years 2018-2019, U.S. Department of Labor industries reports, Ohio College Tech Prep annual reports, and ODE Career Pathways in manufacturing information.

The U.S. Bureau of Labor Statistics “Economy at a Glance” reveals the most current details on Non-Farm Wage and Salary Employment in Ohio, through July of 2020. Occupational Employment Statistics, also provided by the U.S. Bureau of Labor Statistics, highlights wage and employment estimates for the period ending May 2019.

The February 2019 Development Services Agency Ohio Poverty Report was instrumental in clarifying the need for early exposure to manufacturing career pathways for Ohio’s high school students. The correlation between educational attainment and poverty levels in Ohio is significant and reinforces the need for high quality, innovative career pathways focused on equitable practices. In, “What We Are Learning About Guided Pathways, Part I: A Reform Moves From Theory to Practice,” the authors note, “Students from educationally and economically disadvantage backgrounds. . . are often poorly prepared to navigate the college experience, which exacerbates equity gaps.” (Jenkins, et al. 1) Helping students explore career pathways during high school may help to address these gaps.

## **PROPOSED CHANGES/REFORMS TO BE ADOPTED**

The gap between what parents want, what industry needs, and what high schools and colleges teach appeared significant in the literature reviewed. Manufacturing jobs and wages of today are much different than those of previous generations. Educating parents and mentors is key to shifting the view of modern manufacturing. Not all well-paying career fields need a four-year degree, and many manufacturing jobs that are in high demand require a certificate or technical degree. Partnering K-12 and Higher Ed with industry will identify the skill set requirements to help students make a successful transition to college level coursework needed for a manufacturing career focus. We believe this partnership will lead to youth being exposed to, familiar with, and excited about the manufacturing field as a career option.

The process would begin with identifying key, well-known manufacturers in the region. These companies, at least initially, are typically recognized by students - and just as importantly, student’s parents - as good places to work with good paying career opportunities. These companies are often challenged with acquiring the appropriate talent in skilled workers, specifically at the entry level. These positions usually require a small set of particular skills, are well-paying jobs, and provide an entry point for advanced careers.

At the same time, identification of area high schools to collaborate with would occur. Ideally, this would involve high schools located near each of the manufacturers. The full partnership includes manufacturers, K-12, and community colleges working together to educate, recruit, etc. Curriculum would be developed in a joint fashion, selecting the learning outcomes, courses, and skills that meet the needs of employers. The community college curriculum would meet the high school CCP criteria and be packaged into 15 credit hour and 30 credit hour blocks to support CCP standards. Credits would be stackable, leading to both entry-level manufacturing positions and advanced certificates and degrees.

To promote the program jointly, manufacturers would host tours and events to show parents and perspective students not just the company, but the opportunities and benefits (high pay) of the entry level positions. The employer can explain the skills needed, with education partners explaining how the courses work towards meeting the skills required as well as stackable credentials that follow.

Timelines for implementation include the first six months to establish critical partnerships between industry, k-12, and community college. Within the first three to nine months, complete an industry needs analysis, determining first the most needed positions and related skill sets across the manufacturers. From this, determine general curriculum (consensus) that supports the entry level position (skill sets) of the manufacturers, align needed skill sets to learning outcomes and related courses at the community college. Further, develop the curriculum to assure 15 credit hours of transferable credit that also aligns with high school requirements. This will be the “certificate” earned while in high school from the community college that is recognized by area manufacturers/industry partners.

Logistics would also be determined within the first three to nine months. Establish a group of high schools within close proximity to one of the main manufacturers and determine where the coursework will be provided. Potentially this could be held at the manufacturer but should at least include several opportunities for tours of the companies. Determine when (days and times) the courses will be running and how the students will get to and from the education site. Again, the manufacturer, high school, and community college partners should collectively promote this information.

The initial year may involve a smaller group of partners with the intention of expanding to additional partner schools and industries moving forward. As partner manufacturers and high schools increase, more educational sites will be established. Also, advanced skills curriculum could be explored in more defined areas or positions of need.

By providing more exposure to manufacturing career options available, and introducing youth and their parents to area manufactures and coursework, we are hopeful students will have a greater motivation to seek training available to better prepare them for college level coursework needed to be successful in a manufacturing career. Assisting students with an end goal in mind and potential work experience while attending classes should develop a greater motivation to complete coursework. The short-term completion of coursework and certification allow students to achieve success in increments, provides a higher probability of completion, and places students into a career path earlier, helping them to focus on future coursework. Many manufacturers will pay for continued education, so once students earn credits for an entry level position and establish a relationship with a manufacturer, they will be more inclined to complete a degree and will have a higher probability of financial support.

## **IMPLEMENTATION CHALLENGES**

One challenge is the historically competitive nature of business. We believe this can be overcome by bringing multiple partners together to identify common skills and needs, ultimately providing a broader service to numerous industries and allowing for greater resource allocation than any one industry partner or educational system could achieve individually. As a result, more opportunities for training and education will be provided.

The North Carolina TechMath model (Miles et al) identified teacher professional development needs relating to problem-based learning and technology in classrooms. Regional partnerships would again allow for resource pooling to overcome this challenge. Industry and higher education partners bring resources where a K-12 educational system may be lacking. This study cited the need for involvement of all levels in education including superintendents and administrators, educators, and counselors. The Career Academy Model (Hackman et al) also supports the collaboration of industry and education in bringing work-based learning experiences into the classroom and involving industry guest speakers to enhance this process.

Parental and academic views of manufacturing may also present a challenge to implementation. Allowing industry partners to identify the technical skills necessary in manufacturing careers will demonstrate the changes in modern manufacturing and illuminate the need for manufacturing skills, as well as the potential for career growth and increased wages for Ohio youth.

## **CONCLUSION**

Initial review of the numbers of high school students matriculating to colleges or universities in Ohio left a gap of 36% of that population as a potential target for career training. Many manufacturing jobs today need middle skills attained in certifications or technical degrees. Based on the success of models reviewed, we believe moving from the traditional partnership models to a regional impact model will improve student outcomes. Higher Ed cannot continue to partner with K-12 and industry separately but must bring all partners to the same table. Larger partnerships will allow for a balance of inequities within regions and better service to our communities.

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