



MANUFACTURING

Career Access Experience

*Improving Access
for Adult Education Learners*



*by Yolanda Flores
September 1, 2023*



Manufacturing Career Access Experience: Improving Access for Adult Education Learners

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INTRODUCTION

To achieve the Florida Chamber of Commerce’s mission of moving Florida from the 16th to the 10th largest economy in the world by 2030, and to secure Florida’s talent pipeline, there is a need to “create an integrated talent system to provide a sustainable skilled workforce that ensures the current and future prosperity of Florida employers, employees, and communities” (Florida Chamber of Commerce, 2018, p. 4). The Florida 2030 Blueprint, the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), and the Workforce Innovation and Opportunity Act (WIOA) have much in common as they all place emphasis on workforce development with a focus on learner groups from disadvantaged or special populations.

Table 1

Florida 2030 Blueprint	Perkins V	WIOA
Create an integrated talent system to provide a sustainable skilled workforce by adopting targeted strategies to increase certification and degrees for all populations with attention to at-risk groups, low-income populations, and older workers (Florida Chamber of Commerce, 2018).	One of the purposes of the Perkins V Act is to “develop more fully the academic knowledge and technical employability skills by increasing the employment opportunities for populations who are chronically unemployed or underemployed, including individuals with disabilities, individuals from economically disadvantaged families, out-of-workforce individuals, youth who are in, or have aged out of, the foster care system, and homeless individuals” (Strengthening Career and Technical Education for the 21 st Century Act, 2018).	WIOA is designed to help job seekers, including those with significant barriers to employment, into high-quality jobs and careers and help employers hire and retain skilled workers (WIOA, 2014).

Many of these disadvantaged or special populations, including English for Speakers of Other Languages (ESOL) students, are enrolled in adult education programs with the goal of improving their English skills, furthering their education, and/or enhancing their career prospects. According to 2020 U.S. Census data, there are 1,114,460 Floridians over the age of 25 who lack a high school diploma and 861,658 adults between the ages of 18 and 64 who do not speak English well or at all. Based on data from the National Reporting System for Adult Education,

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during the 2021–22 year, 106,563 adults ages 16 to 60 or older were served in statewide Florida adult education programs with the demographic breakdown of 57.4% Hispanic, 22% Black or African American, 17.3% White, and 3.3% other. Among adult education students, 70,129 (65%) were enrolled in ESOL (U.S. Department of Education, 2023).

However, few of these adult education learners are transitioning from adult education programs to Career Technical Education (CTE) programs that lead to high-wage, high-skill careers such as manufacturing. Gaining a better understanding of the reasons for a lack of transitioning from adult education programs to a manufacturing career pathway will allow education providers to better position programming, education, and outreach to these special populations.

PROJECT PURPOSE

This project was conducted in Collier County, Florida, in spring and summer 2023. Participating institutions included Lorenzo Walker Technical College (LWTC), Immokalee Technical College (ITECH), Collier County Public School Adult Education, Future Makers Coalition, and CareerSource Southwest Florida. Additionally, business partners such as the Southwest Regional Manufacturing Association of Florida staff participated in the professional development experience. The goal of this project was to elicit feedback from adult education staff/partners to better understand their perception of manufacturing and what information or support they need to help adult education students, specifically ESOL students, transition to postsecondary manufacturing programs. Besides family and friends, adult education students rely on teachers to provide information about career and educational opportunities and available financial support. According to *Advancing Adult Education Research: Post-WIOA*, “however, teachers may not have systems navigation skills or financial aid knowledge themselves” (National Center for Education Research, 2018, p. 6). Additionally, teachers/navigators may be impeded by beliefs and biases about an industry such as manufacturing or about the type of individual that can pursue this type of career. These beliefs and biases may impede instructors/navigators from providing instructional opportunities to expose adult education students to a career in manufacturing. The recommendation from the intervention included the following:

- Equip adult education teachers and navigators with the knowledge and resources needed to improve career exploration curriculum design and delivery.
- Inform business partners about the opportunity for adult education students to be contributors to the talent pipeline.
- Provide opportunities for adult education, CTE navigators and industry partners to engage in joint professional development opportunities.

This project employed a presurvey, a professional development intervention and a postsurvey.

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BACKGROUND

The Manufacturing Career Cluster[®] was targeted because it is a high-wage, high-skill, in-demand industry with more than “20,200 manufacturing companies and over 371,000 workers in Florida” (Enterprise Florida, n.d.). Moreover, a review of Collier County data from school year (SY) 2019–20 to SY 2021–22 shows that despite many learners participating in adult education, very few are transitioning to a career in manufacturing.

In Collier County, Florida, the location of this project, the CCPS Adult Education program in SY 2021–22 served according to the Workforce Development Information System (WDIS), approximately 3,469 adult education students, of which 2,428 were ESOL students. A further review of the subpopulation data in the CTE programs offered at the technical colleges reveals very few students transitioning into manufacturing programs. Collier County CTE program enrollment data for the past three school years show no ESOL or Adult Basic Education (ABE) students enrolled, only one former GED student enrolled in Welding in SY 2020–21, and three former GED students enrolled in Welding in SY 2021–22.

TABLE 2. COLLIER COUNTY CTE STUDENTS
PRIOR ADULT EDUCATION ENROLLMENT

PROGRAM	2019-2020			2020-2021			2021-2022		
	ESOL	ABE	GED	ESOL	ABE	GED	ESOL	ABE	GED
Collier Manufacturing/Welding Program	0	0	0	0	0	1	0	0	0
Collier Manufacturing/CNC Production Program	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Collier Manufacturing/Machining Technologies	0	0	0	0	0	0	0	0	0

PROJECT DESCRIPTION

To understand current perceptions about manufacturing a presurvey was developed and shared with CTE/adult educators and community and business partners. Based on the analysis of the presurvey data, the Manufacturing Career Access Experience project was designed. This one-day project was developed in cooperation with the technical colleges and community and business partners. During the Manufacturing Career Access Experience, 20 participants were presented with a diverse array of enriching experiences. The adult and CTE educators and the community and business partners were afforded an overview of Perkins V, WIOA, and the Florida 2030 Blueprint. This overview aided participants in understanding the importance of addressing the needs of underserved populations, while also presenting more accessible career pathways to meet workforce demands. A hands-on robotics activity and welding simulation activity facilitated active learning, enabling participants to grasp core concepts that students in manufacturing programs would experience. Immersive learning continued with insightful tours of CNC Production and Machining Technologies facilities at ITECH as well as Welding lab at LWTC, providing an overview of the manufacturing programs at the technical colleges. The experience

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was further enhanced through a presentation from the executive director of the Southwest Regional Manufacturers Association of Florida. Lastly, a visit to Loos & Company, a manufacturer of aviation products, provided a behind-the-scenes tour of manufacturing operations.

Throughout the day, participants were exposed to videos, instructional strategies, and resources that could be used with adult education students. Most importantly, participants walked away with a network of individuals that they can leverage to provide enriching educational experiences for underserved populations, such as ESOL adult learners, to expose them to manufacturing careers. Participants shared a number of takeaways such as

- how many manufacturing companies are in Southwest Florida and the many different job opportunities they provide;
- the diversity of manufacturing such as aviation, plastics, food products, surgical tools, etc.; and
- excitement around the opportunity to guide students toward a career in manufacturing.

Furthermore, the participants had a number of suggestions for exposing more adult students to careers in manufacturing such as

- manufacturing guest speakers in the classroom,
- more opportunities for teachers and students to gain exposure to careers in manufacturing,
- ensuring that collaboration among partners is consistent, and
- tours and hands-on experience.

At the conclusion of the one-day professional development, a postsurvey was used to solicit feedback from participants and to assess the change in perception about manufacturing. The success of the Manufacturing Career Access Experience can be summed by a participant's comment that stated: "Honestly, my perceptions have been changed having attended the workshop!"

The manufacturing perception shift led to the development and submission of an Equitable Pipeline grant to create a manufacturing integrated education and training program. Through joint efforts, LWTC and CCPS Adult Education with support from manufacturing industry partners cooperated in the writing of the grant and were awarded \$122,000. The manufacturing IET program is tailored to equip individuals, particularly those with limited English proficiency, who are employed in entry-level roles within local manufacturing companies with the skills to transition to CNC, Machining, or Welding programs or into higher paying jobs within the company. Instruction is centered on reading, math, and language skills, all contextualized within the manufacturing framework. The curriculum includes workplace safety, industry-specific mathematics, blueprint reading, basic geometric dimensioning and tolerance, and foundational drill press setup and operation. This collaborative endeavor underscores the potential for creating

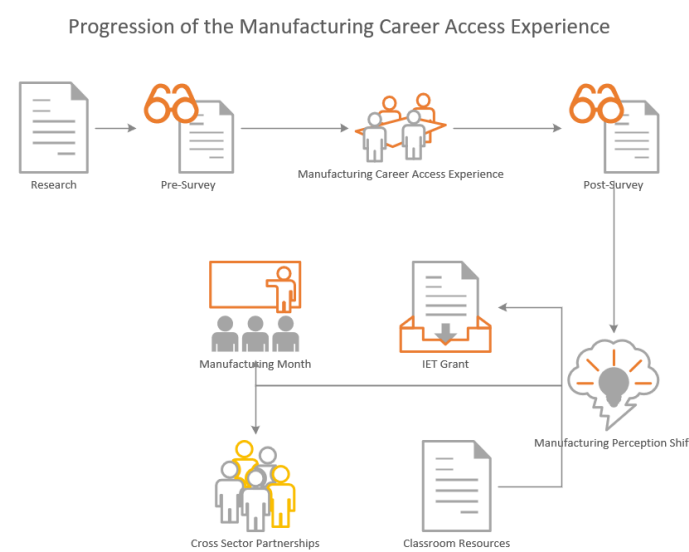
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effective pathways toward meaningful careers for adult education students while catering to the specific demands of local industries.

Finally, other outcomes of the Manufacturing Career Access Experience were the creation of classroom resources, planning for student participation in Manufacturing Month, and cross-sector partnerships.

FIGURE 1.



METHOD OF EVALUATION

This project's purpose for conducting a presurvey and a postsurvey was to measure and quantify the shifts in participants' perceptions, opinions, or understanding of a particular subject, in this case, the Manufacturing Career Cluster. Data from the surveys allowed for the determination of changes in educators'/partners' beliefs about manufacturing before and after their participation in the Manufacturing Career Access Experience professional development.

The presurvey was designed to gain a better understanding of the viewpoints and opinions about manufacturing from CTE advisors, adult education instructors and advisors, and community partner navigators. The survey was emailed to individuals from specific institutions: Immokalee Technical College, LWTC, Future Makers Coalition, and CareerSource Southwest Florida. The survey covered topics related to manufacturing such as perceptions of the industry, potential barriers to entry, opportunities, and general attitudes toward manufacturing careers. Participants

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were asked about their current employment setting, their role within the organization, and their views on the strength of the manufacturing industry in Florida. They were also prompted to associate words with manufacturing jobs and express their familiarity with manufacturing companies in Southwest Florida. The survey explored whether participants had provided information about manufacturing careers to adult education learners and, if so, what kind of information was shared. Additionally, respondents were asked about their knowledge of manufacturing workforce trends and their confidence in sharing related information with students. Awareness of CTE manufacturing programs, admissions requirements, financial resources, and the resources they had for informing students about manufacturing careers were also inquired about. Interest in participating in professional development on manufacturing careers, thoughts on essential information for staff, any additional sharing, and demographic details were sought. Lastly, participants had the option to provide contact information for future engagement in focus groups or professional development opportunities.

The presurvey, which was emailed approximately 2 months ahead of the workshop, yielded valuable insights into the perspectives of adult education staff and partners within the manufacturing career sector. The survey received responses from 22 participants, with the ethnic distribution being 59% White, 31% Hispanic, and 10% Black. These respondents included teachers, navigators, advisors, and administrators from adult education programs, technical colleges, community organizations, and CareerSource centers. An overarching consensus emerged among the respondents regarding the robustness of the manufacturing industry in Florida. Their perceptions of manufacturing jobs were multifaceted, associating them with contrasting attributes such as being both dirty and clean and both dangerous and safe, as well as high paying yet challenging. Although awareness about manufacturing companies in Southwest Florida varied, a majority had engaged in providing information about manufacturing careers to adult learners, particularly those enrolled in ESOL, ABE, and GED programs. While respondents displayed varying degrees of familiarity with current and emerging manufacturing workforce trends, their awareness of CTE manufacturing programs in Southwest Florida was moderate. There was a mixed understanding of admission requirements and financial resources available to students in these programs. Respondents held divergent opinions on whether they possessed adequate resources to effectively guide adult education students in exploring manufacturing career opportunities. Interestingly, most participants expressed a keen interest in engaging in professional development centered around careers and employment in the manufacturing sector. They emphasized the critical need for comprehensive information dissemination covering program details, tuition assistance, job training, placement prospects, local employment opportunities, and wage and growth trajectories within the manufacturing field.

The postsurvey aimed to assess participants' perceptions, knowledge gained from a workshop, and ideas for promoting manufacturing careers among adult education students. The responses reflected positive awareness and interest in enhancing exposure to the manufacturing field. The participants' work backgrounds varied, with seven respondents coming from adult education programs, six from technical colleges, three from community partners, and one from CareerSource. Their roles included instructors, advisors/navigators, and administrators.

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Impressions about the manufacturing sector were largely positive, with unanimous agreement or strong agreement from all respondents regarding the value of manufacturing career opportunities. Respondents associated manufacturing jobs with positive traits, such as cleanliness, safety, and high pay, though some noted the challenging aspects. A majority felt well informed about manufacturing companies in Southwest Florida after having participated in the Manufacturing Career Access Experience.

The impact of the workshop was significant, as all respondents confirmed an increased understanding of workforce trends and labor market data, which in turn boosted their confidence in sharing manufacturing-related information. Respondents were also remarkably aware of CTE manufacturing programs, with a majority indicating high levels of awareness. On the topic of admissions requirements for manufacturing programs, opinions were divided, with varying degrees of familiarity. These variations can be attributed to the topic not being an agenda item due to time constraints. The postsurvey reflected a generally positive reception of the professional development activities, with participants reporting improved knowledge, increased confidence, and greater awareness of key aspects within the manufacturing career sector.

Overall, both surveys provided insights into participants' perceptions and their readiness to promote manufacturing careers among adult education students, highlighting a positive awareness and enthusiasm for enhancing exposure to the manufacturing field. Furthermore, participants provided suggestions for more information about initiatives aimed at changing the perception of the manufacturing industry and suggested strategies to enhance collaboration, teacher awareness, connections with employers, and tours to expose more adult education students to manufacturing careers.

Finally, there was strong interest in participating in Manufacturing Month. This annual event is held in October, and this year it will kick off with National Manufacturing Day on Friday, October 6, 2023. The initiative is designed to excite students about the incredible career pathways that manufacturing offers. The goal is to increase awareness and change misperceptions about the industry through hands-on exposure.

SUMMARY OF FINDINGS

CTE postsecondary educational institutions have the perfect opportunity to partner with adult education providers to address the needs of employers in high-wage, high-skill, in-demand industries, such as manufacturing, by developing strategies to encourage adult education learners to pursue high-value career pathways. The adult education system, and technical colleges, have an opportunity to connect with one another and work on improving the transition of adult education students into high-wage, high-skill, in-demand industries. There is a wealth of resources available to assist educators in becoming more familiar with the manufacturing industry; opportunities need to be provided to allow educators to make the connection. Currently, there are 12 Regional Manufacturing Associations in Florida that can provide support to both business and education including tours, guest speakers, networking, and educational events such

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as Manufacturing Month. The aim of Manufacturing Month is to help manufacturers develop a pipeline of qualified and diversified talent by inspiring the next generation of manufacturers. These outreach efforts have traditionally been targeted at high schools and have not included technical colleges or adult education students. By including the executive director of Southwest Regional Manufacturers Association of Florida in the Manufacturing Career Access Experience, he became cognizant of how the pipeline can exponentially grow if these efforts included the adult education population. Furthermore, the teachers, advisors/navigators, administrators, and community partners became more aware of the resources that presently exist and how willing the industry is to provide support to expose adult students to the industry.

Teachers, advisors/navigators, administrators, and community partners have demonstrated a strong appetite for immersive, cross-sector, and practical experiences. Establishing avenues for collaboration and networking among educators, institutions, and industry partners is crucial. The presentations, hands-on activities, and guided tour of the aviation manufacturing facility proved valuable for the participants. Their engagement was marked by a multitude of inquiries about educational requirements, wage information, and employment opportunities. The Manufacturing Career Access Experience stands as a promising professional development framework, with the potential to be replicated throughout Florida and beyond. It serves as a means to provide postsecondary CTE institutions, adult education providers, and community and industry partners with industry-specific exposure and resources, enabling them to effectively share information with adult education students including ESOL, ABE, and GED students.

Collaborative efforts among postsecondary CTE institutions, adult education providers, and community and industry partners are essential for the identification and funding of IET programs that pave the way for viable career pathways for adult education students. The educational institutions need to take advantage of funding opportunities when they become available. An example of leveraging opportunities was the Equitable Pipeline request for proposal that aligned with this project.

RECOMMENDATIONS

Recommendation #1

Provide joint experiential professional development opportunities for postsecondary CTE staff, adult education providers, and industry partners to expose participants to specific industries. Participants will gain invaluable insights into specific industries and a better understanding of opportunities within the industry.

- CTE, adult education, and community staff/navigators will be equipped with information about career opportunities, career growth prospects, and the skills and qualifications needed to succeed in specific industries. Also, they will be able to guide students toward programs that lead to high-wage, high-skill, in-demand careers.

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- CTE and adult education administrators and staff will benefit from direct exposure to the industry, enhancing their ability to align their curricula and tailor their instruction to introduce adult education students to high-wage, high-skill, in-demand careers. Networking with CTE and industry partners can lead to potential field trips, guest speakers, and employment for adult education students.
- Industry partners can gain insight into the adult education learner and contribute to the development of a skilled talent pool that will meet their workforce needs.

Recommendation #2

Build relationships and explore opportunities with industry associations. Industry associations often have education departments dedicated to working with educators in identifying best practices, providing resources, and building curricula to expose students to the industry.

- Introduce industry associations to adult education programs and their benefits. Highlight how these programs can enhance the skills and capabilities of their workforce.
- Participate in manufacturing industry events such as National Manufacturing Month.
- Stay informed by periodically reviewing the manufacturer's association website for upcoming events or opportunities.

Recommendation #3

Leverage resources for the development and implementation of quality IET career pathways

- Strategize how to maximize WIOA and Perkins funds to facilitate the adult learner transitioning into CTE programs.
- Research federal, state, foundation, and community grant opportunities.
- Build relationships with private and community funders such as community foundations and service clubs to access support for student scholarships, equipment, supplies, etc.

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