

The Manufacturing Bridge Course

A look into a non-traditional virtual work-based learning experience for adult learners.

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S A U K V A L L E Y C O M M U N I T Y C O L L E G E

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in lifelong learning, public service, and economic development.*

Why the Manufacturing Bridge course was created

1. To help our students explore the manufacturing pathway by learning from professionals in the field, engaging in work-based learning experiences, and participating in a virtual learning platform.
2. To provide contextualized instruction in reading, language, and math to educate our students on the necessary academic skills to be successful in a post-secondary training program.
3. To transition our students to post-secondary training to earn an industry-recognized certificate and/or degree which will allow students to gain employment in an in-demand industry, manufacturing.
4. To encourage students to enter the workforce in the manufacturing field upon completion of training.



Who did we serve in this course

- Adult learners who have an interest in the manufacturing career pathway
- Adult learners who know they want to enter the pathway but are not sure of which area or sector
- Adult learners who want to enter a post-secondary training program



What did we intend to accomplish in this course

- To provide an opportunity for students to participate in a work-based learning experience that incorporates the realities of working in manufacturing
- To provide an online component to the course to expand the students' use of technology
- To encourage our students to transition to post-secondary education and complete a credential that leads to sustainable employment in manufacturing



How did we provide virtual/ non-traditional workplace learning experiences

- The Practera Virtual Web-Based-Learning Platform is a customizable, technology-enabled program that supports structured virtual and hybrid work-based learning experiences for students
- We partnered with Dan Portz, Engineer at Timken-Drives. Dan helped to develop the online learning experiences in Practera. He also served as a mentor to our students throughout the course.
- We welcomed several area manufacturing partners to meet with students on a weekly basis to provide a realistic perspective about working in manufacturing.



The virtual/ non-traditional workplace learning experiences included:

1. Employability skills lessons that allowed learners to participate in structured content and simulated tasks to experience common manufacturing jobs
2. Career discovery activities which helped learners explore what it would be like to work in a manufacturing role
3. The Manufacturing Employability Project



Manufacturing Employability Project

Project Scenario:

You are a new welder at Timken, a global company that produces engineered bearings and industrial motion products. These products include drives, automatic lubrication systems, linear motion products, chain, belts, couplings, and industrial clutches and brakes.

You arrive at your station to start a project for a new customer. You are working on pintle chain. Timken has recently started purchasing materials from some new suppliers to save on expenses.

As you begin gathering your materials, you notice that some of your materials are damaged, and overall, they seem to be of a lesser quality than what you have typically used. The lugs needed to weld onto the base chain are rusty, and there are gouges around the holes, which will make the lugs weak. The previous shift's work didn't have these problems and there were no notes passed on. You notice that there is already a tight timeline on completing this pintle chain before it needs to be packaged and shipped to the customer. This chain is 10 feet long, and typically two chains are connected, creating 20 feet total. It is typically welded at every foot. The customer has ordered 15 of these, but there is the opportunity for them to order multiple times as the year progresses.

You also know that it will cost the company five dollars per link (twice the manufacturing cost) to rework the part. Given that this is a new customer and knowing that the company is trying to reduce expenses, you are conflicted about how to proceed.



What did we learned from this pilot experience

- Students enjoyed learning from the guest speakers
- Students appreciated the multi-disciplinary approach to the course
- Students may benefit from even more hands-on experiences



What is the professional's perspective on this experience

- Does this course provide students with a realistic perspective of the manufacturing pathway?
- How does this course/experience prepare students to enter the manufacturing pathway?
- How does the virtual work-based learning experience benefit the students?
- How does a student's exposure to manufacturing benefit the workforce?



Questions?

Thank you for your time and attention.
Please contact us with any further questions –

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