

2021

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Industry Panel

What Skills Make Up The Future of Industry





Agenda

Welcome and Introductions

Industry Perceptions / The State of the State

CLAAS - Skills needed in Manufacturing Assembly

John Day - Skills needed in MRO supply (supporting mfg.)

Fanuc - Growing interest and need in Automation

MPI - general laser, cut, form and weld skills



The State of the State

“One of the top challenges manufacturers face today remains the skills gap in US manufacturing.

In 2018, our headline was “The jobs are here, where are the people?” That was in the context of historically low unemployment rates.

Fast forward three years and, amid a global pandemic and the first US recession in more than a decade, it would appear the same headline stands.”

NEBRASKA MANUFACTURING FACTS

1,990

Nebraska Manufacturing Facilities

~100,000 workers

10% of the non-farm workforce

\$62,500

\$15,000 more than average

NEBRASKA SKILLS GAP IN MANUFACTURING

**WE'RE
HIRING!**

3,000 – 5,000

MANUFACTURING CAREERS TO FILL RIGHT NOW!

2.9%

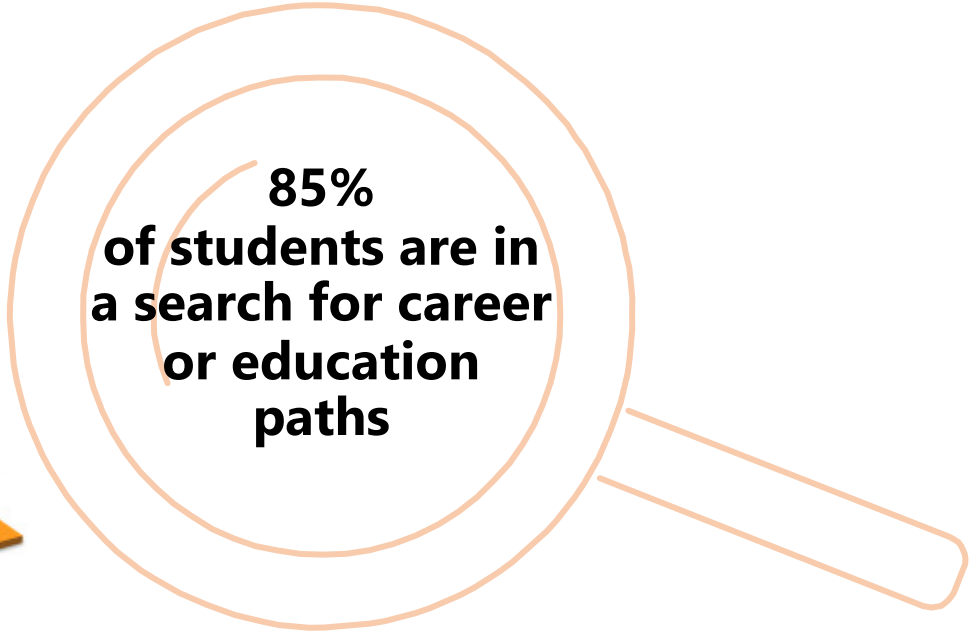

**UNEMPLOYMENT RATE
(29,000 POTENTIAL WORKERS)**



TOP CAUSES SKILLS SHORTAGE IN MANUFACTURING

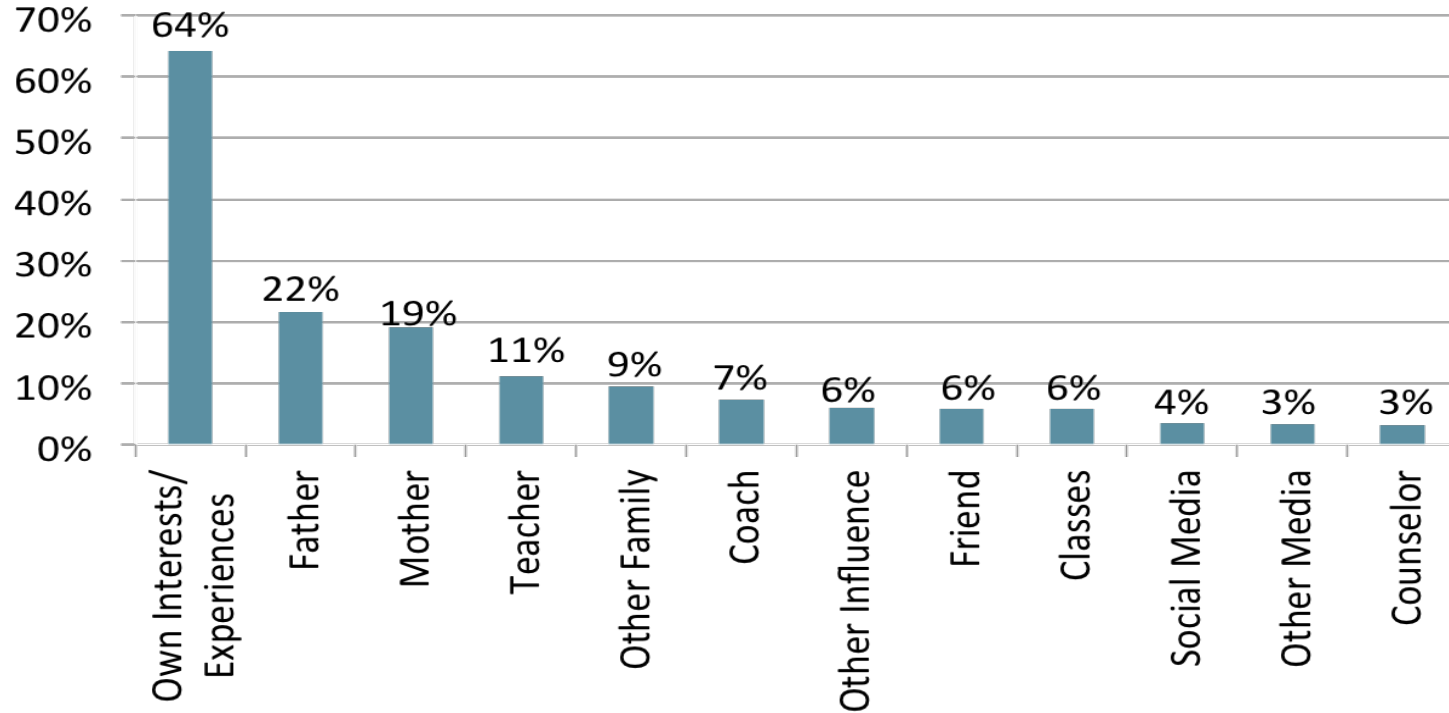
- Retirements
- New Entrants have Different Expectations for Jobs and Careers
- Lack of Attraction or Interest in Industry by Students or Parents
- Lack of Understanding of the Career Advancement Opportunities
- Lack of Effective Training in STEM Talent

OPPORTUNITIE S



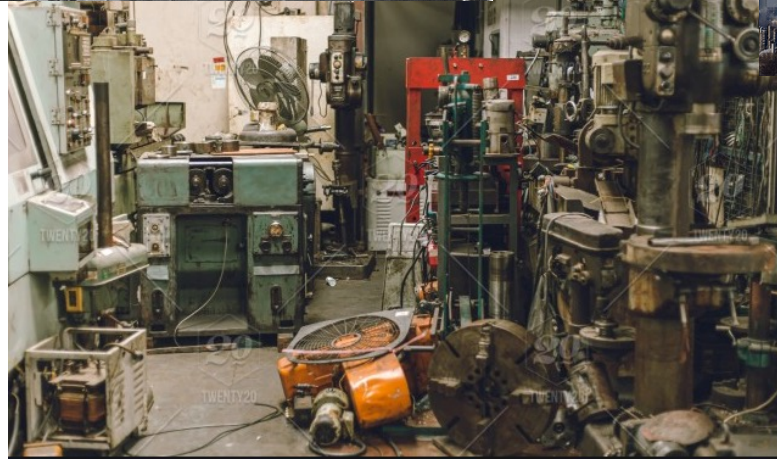
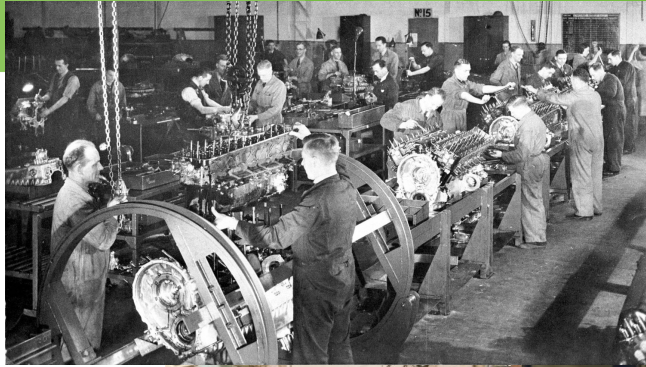
**85%
of students are in
a search for career
or education
paths**

WHAT INFLUENCES CAREER OR EDUCATION PATHS



Industry Perception

How Parents (or Teachers, or Students) see it



How We See It



We've got a problem

US manufacturing faces a two-million-worker shortage over the next decade, Deloitte and the Manufacturing Institute studies indicate **Nine in 10** Americans surveyed **believe manufacturing essential** to US economy, while only **one in three parents** would **encourage their children** to pursue a career in manufacturing.

-Source Deloitte & Manufacturing Institute 2015

How to Bridge the Perception Gap

**Aligning students, industry, and education
and incorporating STEM Awareness Activities
into Education**

**Develop Middle/High School Manufacturing
Lesson Plans For All Schools**

How to Bridge the Perception Gap

Aligning teachers, students, and employers by educating instructors about modern work through differentiated instruction and employer trade journals

Virtual company tours highlighting manufacturing careers for students, instructors, and parents

How to Bridge the Perception Gap

Nebraska Manufacturing Month

Held annually on the first Friday in October with events that continue throughout the month, MFG Day—Manufacturing Day—helps show the reality of modern manufacturing careers by encouraging thousands of companies and educational institutions around the nation to open their doors to students, parents, teachers and community leaders. As manufacturers seek to fill 4.6 million high-skill, high-tech and high-paying jobs over the next decade.

- Get involved!
- Creators wanted! <https://creatorswanted.org/mfgday/>
- Ask for support from business if budgets are a constraint
- Expose students to opportunities that will have an impact on their future



CLAAS

Opportunities for students:

Apprenticeship Programs

– full tuition, books and time paid!

\$\$

Internships, Graduate programs

\$\$

Assembly Technicians

\$\$\$

Retail (Ag Dealership)

\$\$\$\$

Service Technicians

\$\$\$\$\$

Plus...

Engineers

Human Resources

Finance

Quality

International Experiences

Accounting

IT

Sales

Marketing

Building Maintenance



CLAAS

- What students are a fit for CLAAS
- Why is CLAAS a destination for these students
- Skills needed





John Day

Industry Size and Potential

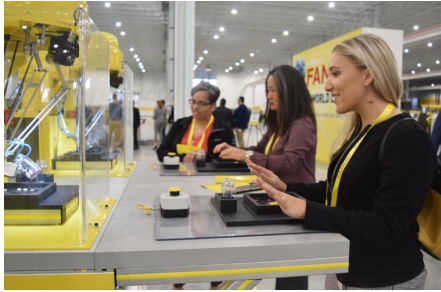
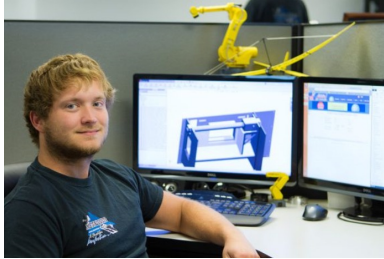
Report Attribute	Details
Market size value in 2021	USD 150.64 billion
Revenue forecast in 2028	USD 178.85 billion
Growth Rate	CAGR of 2.9% from 2021 to 2028

- What students are a fit for John Day Company
- Why is John Day Company a destination for these students
- Skills needed



Fanuc Robotics Automation

Six Essential Robotics Skills



1. Math and Science

1. Applied mathematics, or the use of math to solve problems in science and engineering, will enable you to address challenges such as predicting how a robot will move under certain circumstances.

2. Programming

3. Working on a Team

1. "You want to be someone with valuable skills," such as the ability to write complex AI algorithms, "but you need to be someone who can also work on a team."

4. Solving Complex Problems

1. Designing and building functioning technical systems is obviously a critical robotics skill, but it's just as important to be able to figure out why a system isn't functioning properly.

5. Thinking Creatively

1. A little bit of creativity can go a long way for a robotics professional. It can be beneficial for solving problems, such as using an existing part in a new way or coming up with a brand-new design altogether. Creativity and teamwork go hand in hand,

6. Active Learning

1. A robotics engineer can demonstrate their value by constantly learning about these changes and applying them to new fields of robotics.

Mid-Plains Industries



- What students are a fit for Mid-Plains Industry
- Why is Mid-Plains Industry a destination for these students
- Skills needed to work at Mid-Plains Industry





Summary

“The ongoing challenges most manufacturers face in attracting, retaining, and upskilling their workforce are likely to persist without a concerted, industrywide effort.

The broader reality is that the industry as a whole should continue to come together to help with the perception of work and introduce flexibility in the manufacturing for a new generation of workers, standardize on the most needed credentials, and build additional on-ramps to talent programs that can expand and diversify the pipeline entering the industry.”

Deloitte Report

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