

NAPE 2015

Minorities in Manufacturing

Meet Mallory



- Statewide Project Director of IHUM Department of Labor Grant
- Graduate of Wartburg College – Communication Arts / Emphasis Public Relations
- Job Profiler through ACT and DACUUM Certified through The Ohio State University
- Past Experience: Iowa Advanced Manufacturing Coordinator and VGM Healthcare Coordinator and Training Supervisor

Meet Keanna



- Iowa Advanced Manufacturing and IHUM Grant Coordinator
- Graduate of California Berkley – Interdisciplinary Studies / Emphasis on Health and Illness in Industrialized Societies
- Working on Master's Degree at Iowa State University in Community College Leadership
- Past Experience: Admissions Representative of Under-Represented Populations

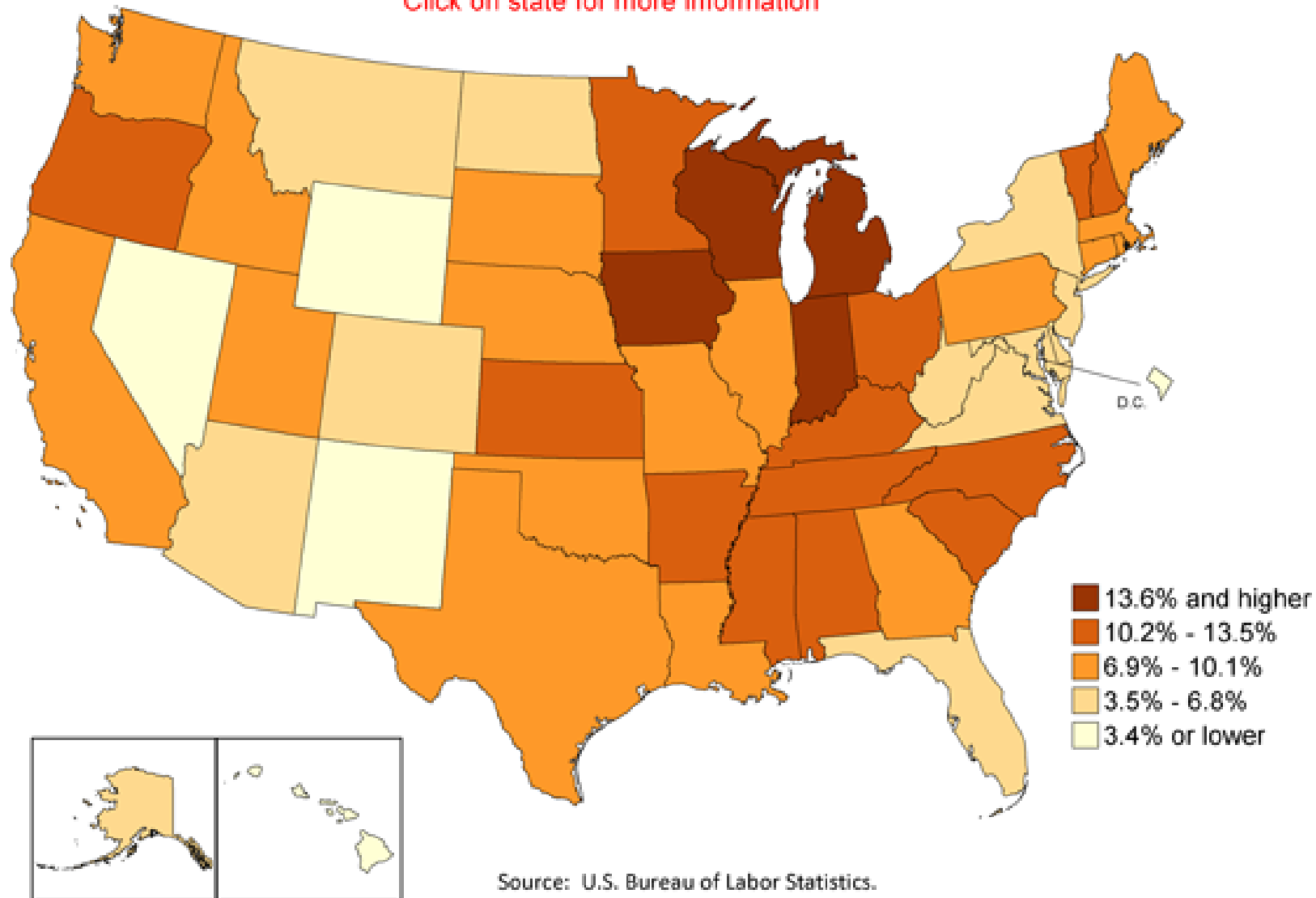
State of Iowa Data

- Iowa is home to approximately 5960 manufacturing firms
- Iowa exported \$12.52 billion worth of manufactured goods to other countries in 2013
- The Average manufacturing job in Iowa paid \$52,100 in wages and salaries in 2012
- The manufacturing sectors 217,066 jobs accounted for 10.9 percent of Iowa's total employment in 2012.
- With Iowa job growth expected to be 23% by 2020, professionals trained in CNC operations are in high-demand.

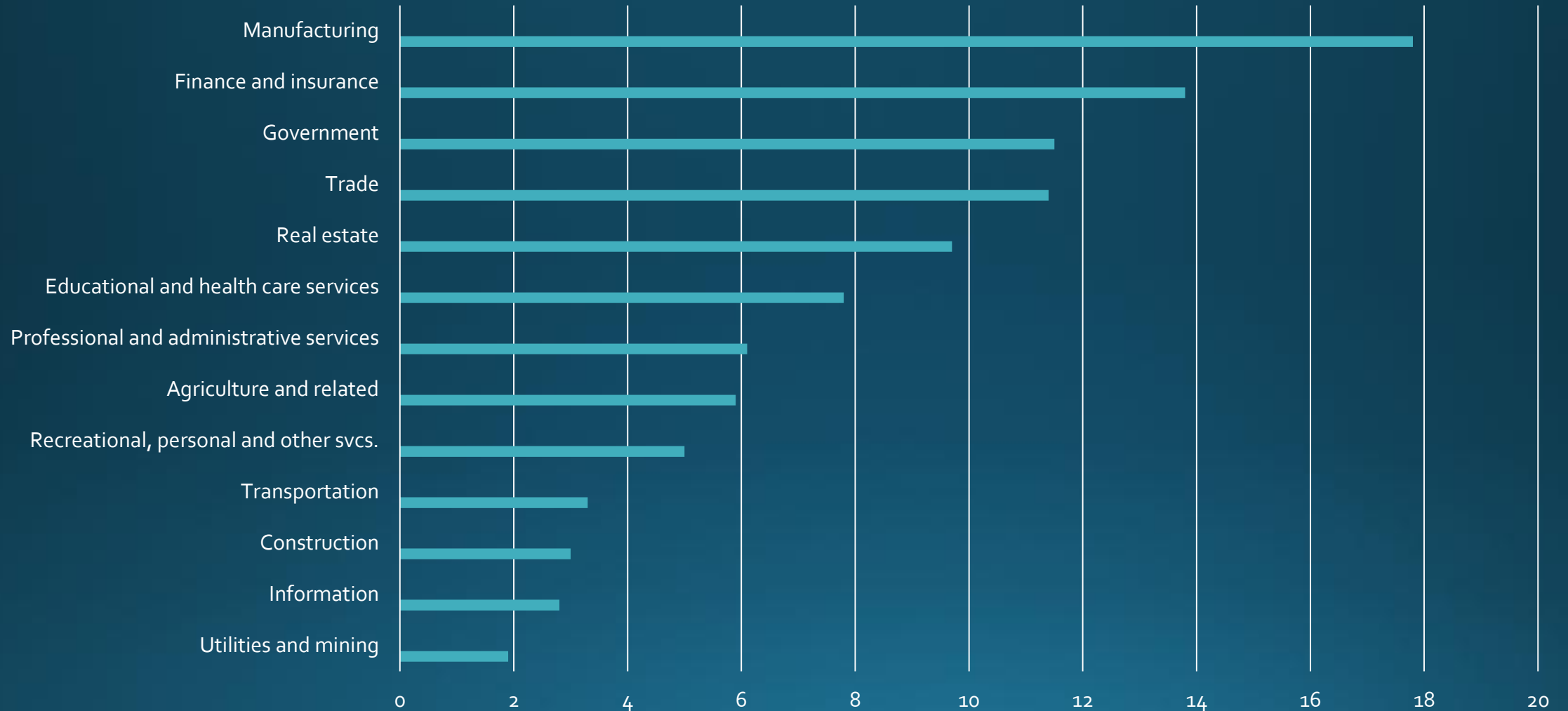
Source: U.S. Bureau of Economic Development

Employment in manufacturing as a percentage of statewide total nonfarm employment, not seasonally adjusted, April 2014

[Click on state for more information](#)



PERCENTAGE OF IOWA GDP



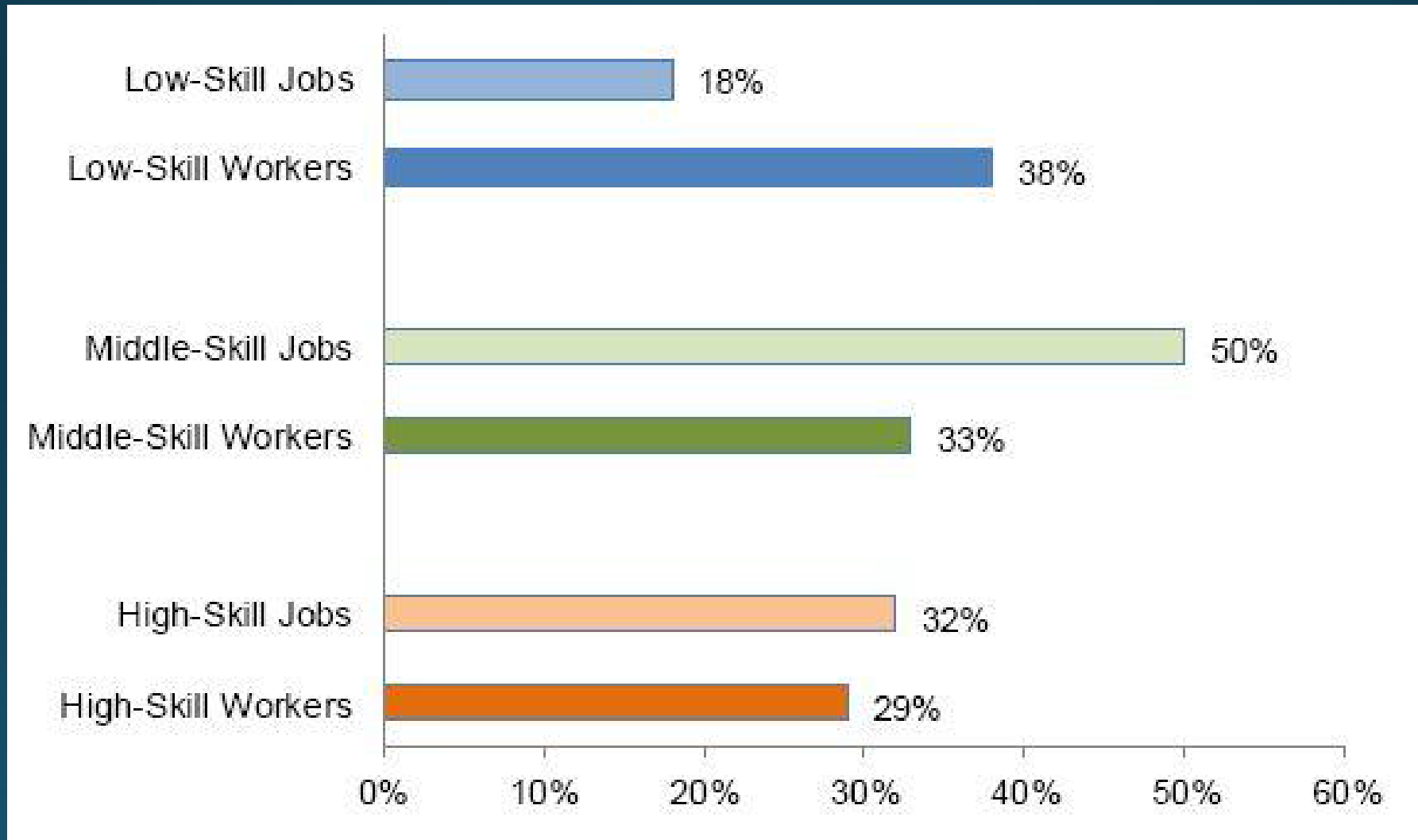
Gross Domestic Product

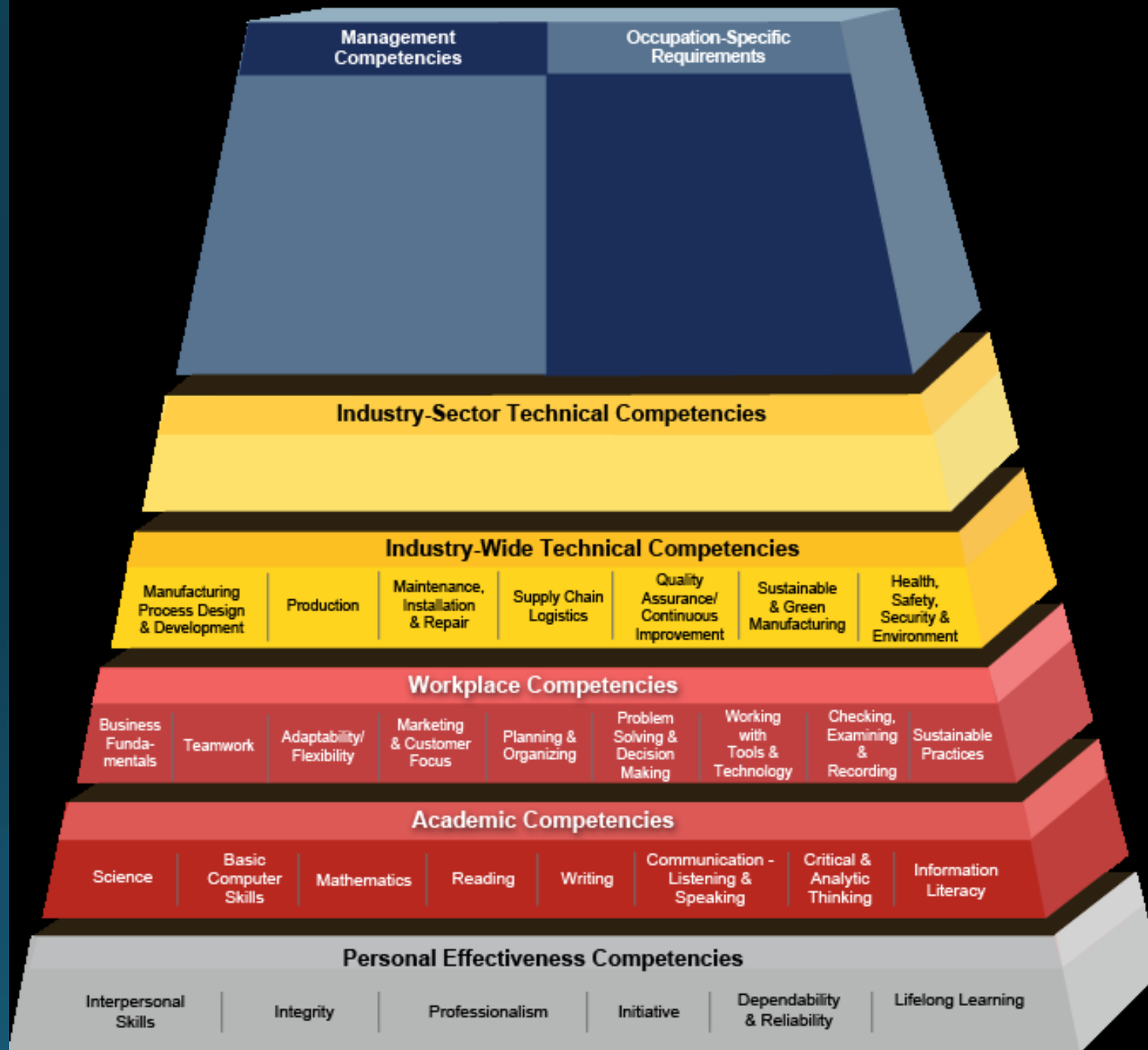
1. Indiana 28.2%
2. Oregon 27.8%
3. Louisiana 22.6%
4. North Carolina 19.4%
5. Wisconsin 19.1%
6. Kentucky 17.1%
7. Ohio 17.1%
- 8. Iowa 16.7%**
9. Michigan 16.5%
10. Alabama 16.3%

Source: U.S. Bureau of Economic Development

Iowa's Jobs and Workers by Skill Level – 2010

(Labor Force and Occupational Analysis Bureau, Iowa Workforce Development)





I-AM Grant

- In October of 2012, in response to a documented shortage of skilled workers in Iowa's advanced manufacturing sector, the 15 Iowa community colleges have formed the Iowa-Advanced Manufacturing (I-AM) Consortium, to collaboratively build the training capacity necessary to meet industry demand and arm Iowans with the skills they need to engage in Iowa's workforce.







Grant Award: **\$12,951,165.00**

Funding provided by the Trade Adjustment Assistance Community College and Career Training (TAACCT) Grant Program through the U.S. Department of Labor

Grant Priorities

- **Priority 1:** Build stacked and latticed curriculum and career pathways in signature programs
- **Priority 2:** Build a steady pipeline of skilled workers for Iowa's in-demand, advanced manufacturing occupations
- **Priority 3:** Improve collaboration and alignment between the community college programs, the workforce system and targeted industry employers to keep and create High quality jobs in Iowa

Focus Population of I-AM

-  Trade Adjustment Act Workers
-  Minorities
-  Women
-  Dislocated Workers
-  Veterans
-  Adult Learners

Multicultural Visit Day

- Promoted to high school students across the state of Iowa
- A chance for students to learn about college life
- Paying for college
- Tour the campus
- Meet with faculty in the Health, Manufacturing and Art programs
- Meet with current Hawkeye students



Welcome to Multicultural Visit Day

Agenda



- 8:30 - 9:00 Registration
- 9:00 - 9:15 Welcome
- 9:15 - 9:30 Quentin Hart, Associate Director of Multicultural Affairs
"Expanding Boundaries"
- 9:30 - 9:50 Admissions
 - Overview of Majors
 - Application Process
 - Financial Aid and Scholarships
- 9:50 - 10:00 Break
- 10:00 - 11:05 Tracie Spencer, Guest Speaker
"Make the Difference"
- 11:05 - Noon Academic Breakout Sessions
- Noon - 12:45 Lunch and Prize Drawing
- 12:45 - 1:30 Student Panel



Keynote Speakers

JJ Moses



Tracie Spencer



Sherman Wise



Brothers of Knowledge Field Trip

- In April 24th, 2013, Hawkeye's Admissions Team scheduled an event with a unique opportunity in Waterloo, Iowa called the **Harbaugh-Williams Education Promise Fund**
- The Minorities in Manufacturing Committee was able to attend the event to speak to the students about education and career opportunities in manufacturing

The Harbaugh-Williams Education Fund


- **The CHALLENGE!:** The Achievement or Opportunity Gap
- **The PROMISE!:** in January of 2006 Dennis Harbaugh and Juanita Williams established the Harbaugh-Williams Education Promise Fund. The Promise Fund will provide incentives to increase the academic performance of African-American students and will provide college scholarship assistance so more minority students will receive higher education degrees and qualify for better paying jobs and meaningful careers
- **The PLAN!:** Parent Involvement, Individual Mentoring, Group Mentoring, Sweat Equity, Community Outreach
- **The NEED!** Cost of tuition is rising. Community Assistance in funding the project.


Brothers of Knowledge Pictures

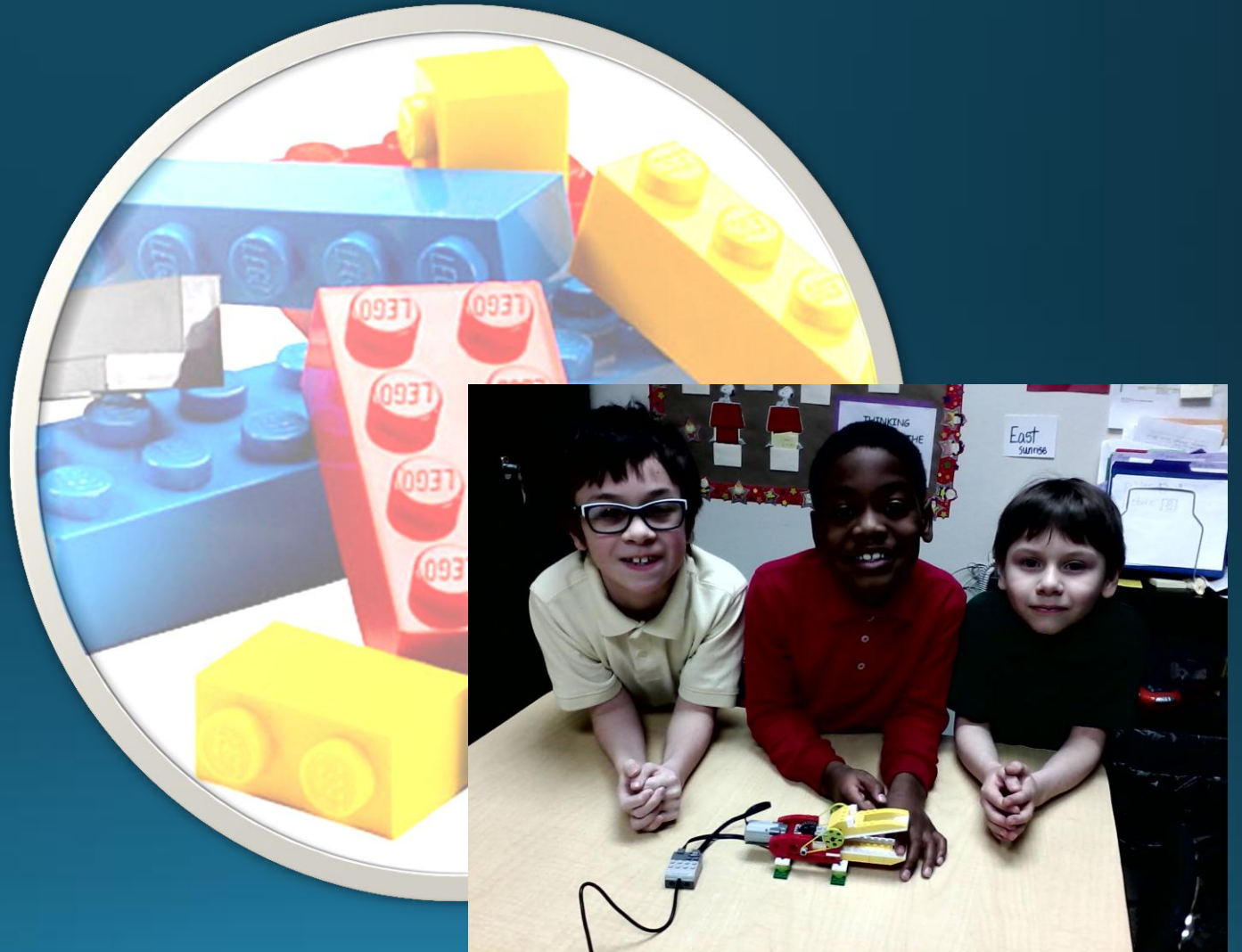




First Lego League

 First Lego League introduces young people, ages 9 to 14, to the fun and excitement of science and technology

 Cunningham Elementary School in Waterloo, Iowa, implemented First Lego League during the 2014 – 2015 school year





- 🧱 Choose a topic that you are passionate about or always wanted to learn.
- 🧱 Create an innovative solution that improves the learning experience.
- 🧱 Share your solution with others.

History of Minorities in Manufacturing

- Initial Group was titled Minority Manufacturing Mentorship Seminars (3M Seminars)
- The group started in 2009 and finished in 2011
- Partnerships included Hawkeye Community College, John Deere, and Cedar Valley Manufacturing Association (CVMA)

History Continued...

- The purpose of the group was to provide educational and career exploration to minorities and young women in nontraditional fields of manufacturing
- Enhance career field awareness and accessibility in today's workforce to recognize advance workforce development as a means to jumpstart career pathways and achieving economic/social mobility
- Positively impact the lives of minorities and young women by providing positive role models who give guidance, instill social skills, provide support, and exposure to manufacturing

History...

- 3M Seminars was geared to equip students with skills and motivation including:
 - Soft skills and foundational skill sets
 - Teamwork
 - Awareness
 - Role-models of success
 - Hands on experience
 - Exploration of schools and work opportunities

The Future of Minorities in Manufacturing

- With the dream of keeping Minorities in Manufacturing alive, in 2013 Hawkeye Community College partnered the I-AM grant with the Minorities and Manufacturing Committee
- Multiple committee meetings took place to address the work of the 3M Seminars model, and form a group to meet the priorities of the Department of Labor I-AM Grant
- In the initial planning stages of the new Minorities in Manufacturing group, many activities started to form, and the committee was able to partner to start making a difference

Application & Interview Process

- Visited the Evelyn Davis Center in Des Moines, Iowa to develop a application process
- Hawkeye Community College adopted the Evelyn Davis Application
- After submitting and application, students went through an interview process to be selected for the class

Summer 2013 – 8 point curriculum

- Basic Math and Geometry
- Introduction to Hand Tools
- Basic Safety
- Blue Print Reading Basics
- Introduction to Measuring Tools
- Basic Communication Skills
- Basic Employability skills
- CNC Machining / Welding Skills

Summer 2014 Mission Statement

- TO PROVIDE STUDENTS WITH THE BASIC KNOWLEDGE, TOOLS, AND EXPERTISE NECESSARY FOR LIFE-TIME EMPLOYMENT IN THE INDUSTRIAL MANUFACTURING ARENA.
- PROVIDE THE MANUFACTURE'S WITH A WORKFORCE THAT HAS THE NECESSARY SKILLS TO MEET THEIR NEEDS.



Training Expectations

- ATTENDANCE
- PUNCTUALITY
- PARTICIPATION (some means of)
- BEING ATTENTIVE
- ASKING QUESTIONS (all questions should be asked)
- RESPECTING OF EACH OTHERS TIME AND EFFORT
- SCORING AND GRADING
- DRESS = ATTITUDE
- CLASS FLOW (teaching dynamics)

Program Outcomes

- Industrial terminology and CNC dynamics (students will have a working knowledge)
- Basic shop math
- Measurements and Tolerances
- Gaging
- Safety Practices
- Part Prints and Blueprint Reading
- Fixtures and Clamping
- Write CNC programs for both lathes and mills
- Program and operate CNC Machines
- Employment Opportunities



Remodel of the Metro CNC Center



Graduation of Metro



I-BEST Model Current Class 2015



Manufacturer's in the Cedar Valley

VIKING PUMP

Whirlpool
CORPORATION

GMM
Geater Machining & Manufacturing, Co.

 **JOHN DEERE**

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Building quality molds
at competitive prices
with on time deliveries!
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TDS
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BHE | **BLACKHAWK**
ENGINEERING INC.
PRECISION CNC MACHINING

Unverferth[®]

KRYTON
ENGINEERED METALS INC.
The Relentless Pursuit of Excellence

IOWA
LASER
O'NEAL MANUFACTURING SERVICES DIVISION

SCHOITZ
Engineering Inc.

 **HyPro Incorporated**
Precision Machined Components From Concept to Completion

Instructors



- Name: Robert Mosley
- Education: High School Diploma, Tool-Maker Apprentice (2yrs), 8000 hours electrical apprentice graduate
- Career: 30yr John Deere retired electrician

Instructors



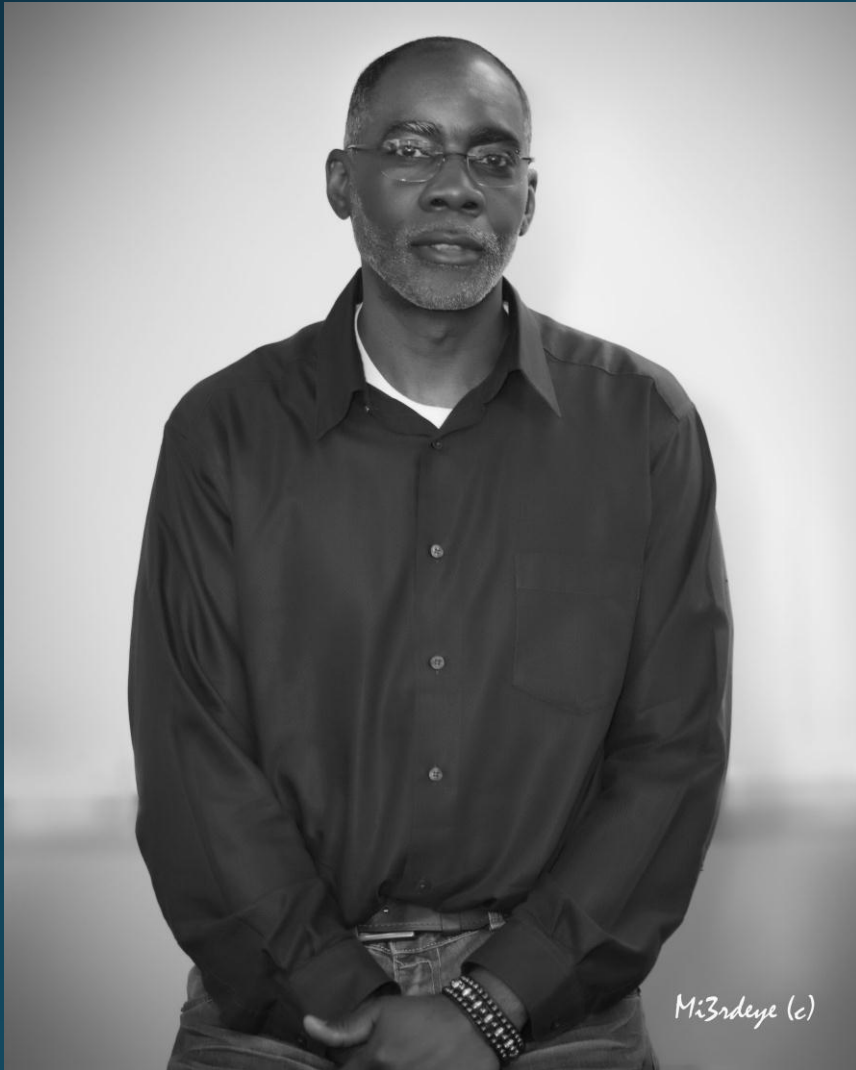
- Name: Jerome Amos Jr.
- Education: High School Diploma/1yr College
- Career: Retired Machinist/Hawkeye Community College Metro Center CNC Instructor
- Years in manufacturing / engineering field: 33yrs in manufacturing, 1 1/2 years as an adjunct instructor

Instructors



- Name: Michael S.Cook
- Education: Bachelor of Science Mechanical Engineering Southern University Baton Rouge Louisiana / Masters of arts Industrial Technology University Of Northern Iowa, Cedar Falls Iowa
- Career: 20 years working as a manufacturing engineer, quality engineer, supervisor of wage personnel, A NASA Space grant recipient, Project manager at Deere and Company for Supplier communication, Hold 3 patents for inventing the apparatus and procedure for adjustment of a limited slip differential, retired as the business unit manager for 8000 tractor assembly.
- Years in manufacturing / engineering field: Started in high school (East High as Coop) as a draftsman in 1974 my career ended in 2008.

Instructors:



- Name: Carly Carey
- Career: Retired from John Deere, Waterloo Iowa. Focus: Electrical Maintenance and Manufacturing. Hawkeye Community College Instructor for Industrial Maintenance and Minorities in Manufacturing (AAIM)
- Years of Experience: 32 years in manufacturing

Years of Experience

**131 years of
manufacturing and
engineering
experience!**

Success Stories

- ★ One of the biggest success stories that I have seen. A career house wife of over thirty years, never had a job, never graduated from high school, and deathly afraid of math. To be able to conquer her fears of math, and not only learn how to setup and run mills, lathes, and CNC machines. Also to become one of our best programmers of CNC MACHINES.
ROBERT MOSLEY.
- ★ One success story you've seen from this program: Ka-Te-Dra Purifoy one of the students started working at a factory as a fork truck driver and after her probationary period she was able to use her precision measurement skills to bid on and get a job working with measurement equipment.

Success Stories

- ★ One success story you've seen from this program: People are moving forward with advancing their education and getting hired in CNC and construction type jobs. The class rooms are full of people now with a waiting list. I believe having people of color teach the class is making a difference because we are able to relate to that population. It matters when they see someone that looks like them teaching them the technology.
- ★ We had several student that were as they put it "scared of math." After these students went thru the math in Immersive2 Learn, which has a pre and a post test, they had a lot more confidence in their math skills. The students at the end of the class had to take a test for math. The students that had already taken the test showed an improvement in their math scores without any other form of training.
- ★ 2015 Hawkeye Community College President's Award for Diversity and Inclusion Initiative / Program

Hawkeye Community College President's Award



Brainstorm (20 minutes)



Questions and Answers (10 min)

Links

- http://issuu.com/wcfcourier/docs/business_monthly_april_2015/13?e=1055550/12062114
- http://wcfcourier.com/news/local/program-at-waterloo-college-brings-more-minorities-into-manufacturing/article_198bdda5-07c3-5fef-b745-d48d302a67fb.html
- http://wcfcourier.com/tsr-minorities-manufacturing/image_8a9fcooe-494c-599a-8b11-44ed2d3f10e8.html
- <http://www.elevateiowa.com/>
- <http://www.evelynkdaviscenter.org/Pages/welcome.aspx>
- <http://www.hawkeyecollege.edu/>