

Invanti Project Fall 2018

Workforce Development

December 3, 2018



INVANTI

Introducing the Team



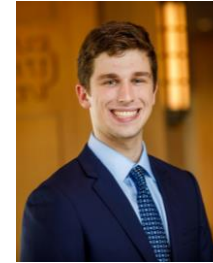
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Categorization



Identifying Key
Conclusions/Areas



Synthesizing

What is Workforce Development?

- Workforce development is the coordination of public and private-sector policies and programs that provides individuals training and education for current and future jobs
- Create, sustain, and retain a qualified workforce
- Extremely relevant to today: 6 million job vacancies

Individuals

- Educational institutions/ social service focus on economic security of individuals
- Annie E. Casey Foundation Jobs Initiative

Community/ Region

- Initiatives are driven by the economic development plan for region or state
- Indiana's Next Level Jobs Program

Organizational

- Employers focus on what skills their businesses need to remain competitive
- The Cook Group GED plan

How will AI affect future jobs?

- McAfee has a positive outlook on the relationship between the rise of technology and the availability of jobs because he believes technology will allow workers to use their time for innovation instead of basic, menial tasks
- With this said, he concedes that the rise of technology in the past has and will continue to be the major driver behind economic inequality
- Tale of Two Workers: In 1960, they had similar lives, but Charles Murray noticed when we automated the economy the fortunes of Bill and Ted diverged.
 - Ted (white-collar, upper class doctor): Unaffected by AI
 - Bill (blue-collar, lower class worker): Wages, happiness, voting rates decreases & unemployment and divorce rate increases



How to implement AI without increasing inequality & unemployment?

Economic Playbook

1. Encourage Entrepreneurship
2. Double Down on Infrastructure
3. Turning out people from our educational system with appropriate skills

Social Playbook

1. Engage students in school with technology
2. Leaders are encouraging change
3. Data driven efforts to fix troubled communities

Effects of AI

- Freeing up time, enhancing quality, and enhancing personalization
- Increasing ability to get value from data
- Impacting employers before impacting employment
- Digitalizing the economy

Industries Largely Affected:

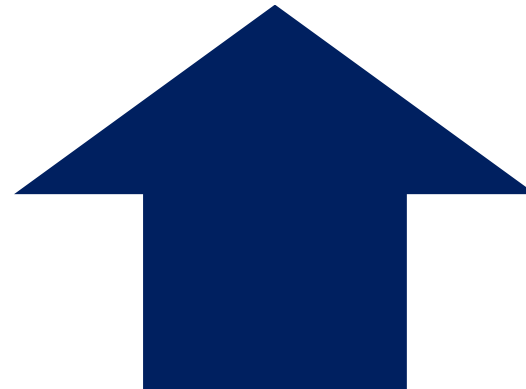
- Healthcare (Medicine)
- Automotive
- Financial Services
- Cybersecurity
- Energy
- Precision Farming



- By 2025 **more than half** of all current workplace tasks will be performed by machines compared to 29% today
- **47% of jobs are at-risk** for automation or other technology-based elimination

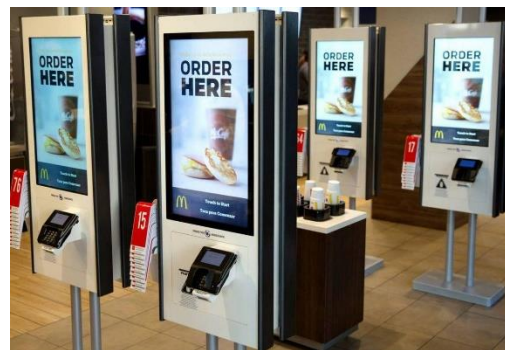
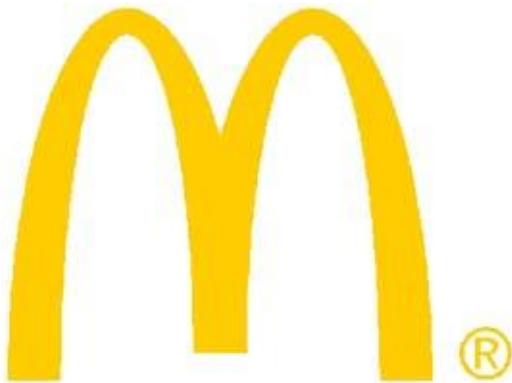


- Between now and 2022 its predicted that 75 million jobs could be displaced globally by technology, but an additional 133 million roles could be created, leaving **58 million net new jobs**



Investment is needed from businesses and government to train people new skills to take advantage of these jobs. Organizations need to change how they work to stay successful.

- In particular, the food industry is being dramatically changed by the rise of AI
- Large Fast Food chains are encouraged to implement technology because it is a cheaper and more efficient substitute
- Due to the possibility of minimum wage hikes, companies feel the need to begin to immediately implement AI into their companies
- How will companies utilize their workers as AI begins to do their jobs?
- If fast food restaurants do not retain workers, the country faces a major unemployment problem because the workers who would be laid off are typically unskilled



McDonald's is a specific example of the rise of AI in the fast food industry. As the company implements more AI programs, the company is faced with a cross road: retain or fire workers

The time at which half of what you learned relating to a skill becomes irrelevant

- Disconnect of increasingly long careers while the half-life of skills is decreasing
- Half-life of skills has declined all the way to approximately 4.5 years
- Software engineers are having to redevelop skills every 12-18 months
- Companies are having to rethink the way that they are managing the careers of their employees
- Increasing need for continuous or “lifelong learning”

- Need to increase comfort with constant adaptation
 - Agility
 - Intellectual Flexibility
 - Professional Adaptability
- Creating resiliency to handle declining industries
- Drawbacks
 - Costly
 - Mental struggle of having to restart from the beginning
- Currently placing a lot of responsibility on the worker

Changing population

- Immigrants, Hispanics, Increasing Age

Rapid pace of job turnover

- 65% of children entering primary school will end up in jobs that do not yet exist

Transition away from blue-collar jobs

- Extremely inefficient especially for millennials

Higher standards for requirements

- High school diploma and college degree have lost value

- STEM jobs make up just 5.9% of the labor force
- Too high a focus on STEM for such a small portion of the job market
- Value of liberal arts education and critical thinking
 - Students from Asian countries perform better than US students on STEM tests but struggle with thinking, problem solving, and creativity

- Baby Boomers are becoming older leading to an extremely high demand for health care jobs
- Approximately 35,000 jobs are opened each month in this sector
- These jobs have have a wide range of requirements, schedules, and salaries
- Communication skills are essential for all jobs in this sector and technical skills depend on the job

Employees are dissatisfied with the level of OTJ training they receive, per the APA.

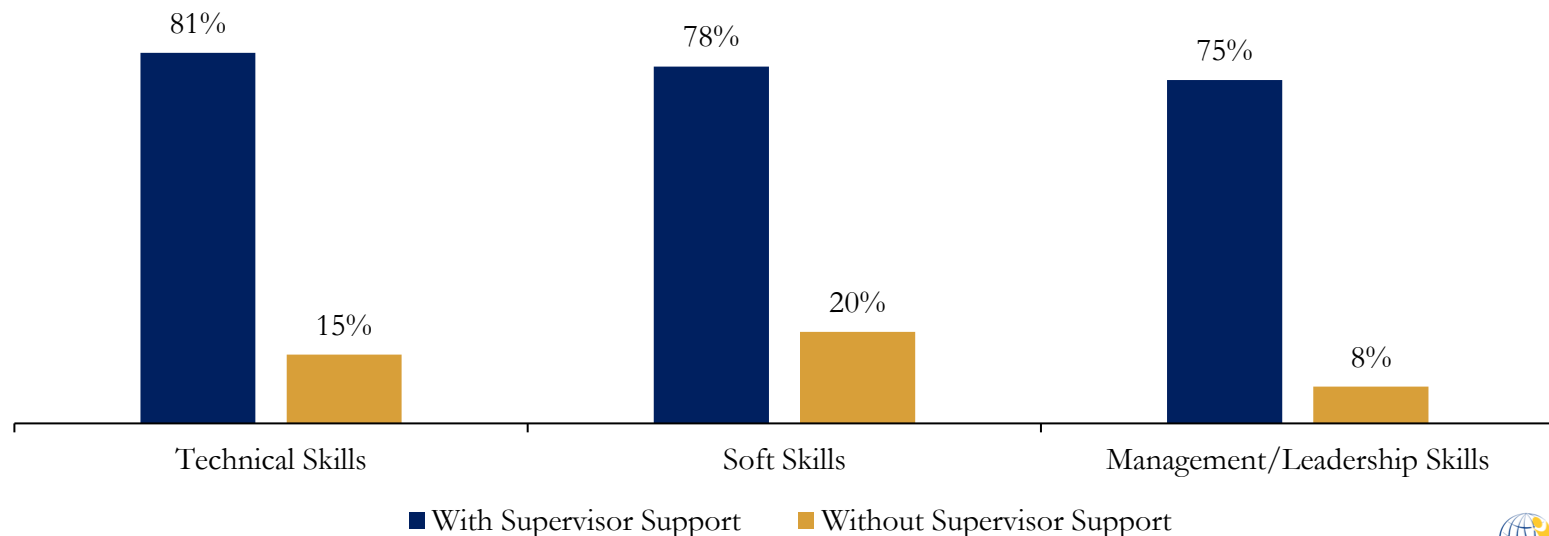
Percent of employees who are satisfied with their job: 76%

Percent of employees who are satisfied with the growth and development opportunities their employer offers: 60%

This gap in satisfaction indicates that training and development programs tend to fall short.

The most important aspect of OTJ training is supervisor support and encouragement for career development. Employees who have supervisor support report having significantly more training and development opportunities than those who don't.

Employee Perception of Opportunities



Inadequate Levels of Training: Education

Employers look for students who have skills that cut across all majors and focus on applied learning.

Schools continue to specialize in administering skills to students.

The diagram consists of two large blue arrows pointing in opposite directions. The left arrow points left and contains the text: 'Employers look for students who have skills that cut across all majors and focus on applied learning.' The right arrow points right and contains the text: 'Schools continue to specialize in administering skills to students.' The two arrows are connected at their inner ends by a white, ribbon-like shape that curves between them, highlighting the disconnect between the two statements.

Other Information:

Less than half of America's college students ever graduate. The numbers are worse at community colleges, which are the primary providers of education and training for the 29 million middle-skill jobs that pay middle-class wages.

Many community college students enter remedial classes to catch up in school where 70% of people in these classes do not graduate.

2/3rds of students at community colleges need to support themselves financially. Students struggle to possess the organization to control both the financial and academic challenges.

“School to Work” failed because the idea does not fit well in American culture.

“The Workforce Innovation and Opportunities Act” has seen many different forms since 1973. It is relatively small compared to education in the United States. Data supports this policy as overall beneficial to America in training adults for employment



Skills move too fast to stay relevant.

Many programs are designed to be applied today, but by the time of implementation, they expire in usefulness.

Technical training, though in the most demand, constantly has highest risk for going obsolete.

“High School to Harvard” philosophy by Americans makes it difficult to effectively allocate resources.

Educational Initiatives

- Apprenticeship-degree programs
 - On-job experience and degree simultaneously
 - Federal grant programs help schools start these programs
- Connect current apprentice programs to universities
 - Gaining experience without achieving degree
- As AI gains prominence in the work force, students must learn more how to cooperate and work in teams
 - Jobs are more focused around problem-solving and creativity
 - Stressed across school levels
- Incorporate coding and programming in education more
 - Increasing in popularity
 - Opportunity for not-yet-existing jobs

Private Sector Initiatives

- Google created a free online program for students, workers, and entrepreneurs
 - Students and teachers use a program centered around using the G-Suite and AI related systems
 - Small business owners and entrepreneurs can use a program centered focused on market understanding
- Apple has a similar initiative, “LearnQuest”
 - Developing apps
 - Certificate from Apple
- Potential for executives and board members of progressive companies to serve on state and federal workforce development boards
 - Provide insight as to where help is most needed within the workforce

- Workforce Innovation and Opportunity Act (WIOA)
 - State WIOA funding allotments (\$10.5 billion) are grants based on a formula and are also available through competitive grants
 - Requires states to coordinate six core programs
- Carl D. Perkins Vocational and Technical Education Act
 - U.S. Department of Education responsible for administering over \$100 million to develop vocational and technical skills of students
- Community Reinvestment Act
 - Federal Reserve Banks recently published a framework describing how workforce development initiatives can fit within a bank's CRA strategy
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- Indiana
 - Statewide grant from the Lilly Endowment in 2016 to provide resources and technical assistance in clarifying workforce needs
 - Statewide initiative for two new grants, the Workforce Ready Grant to skill-up adults to fill jobs in high-demand industries, and Employer Training Grant to help offset costs employers assume when training new employees
 - Chamber of Commerce announced plan in 2018 to form the Institute for Workforce Excellence, a major resource for businesses struggling to attract and retain skilled workers
- Midwest Urban Strategies Consortium
 - 12 Midwest cities to maximize state and federal funds and provide collective resources to revitalize the Midwest economy

Thank You!