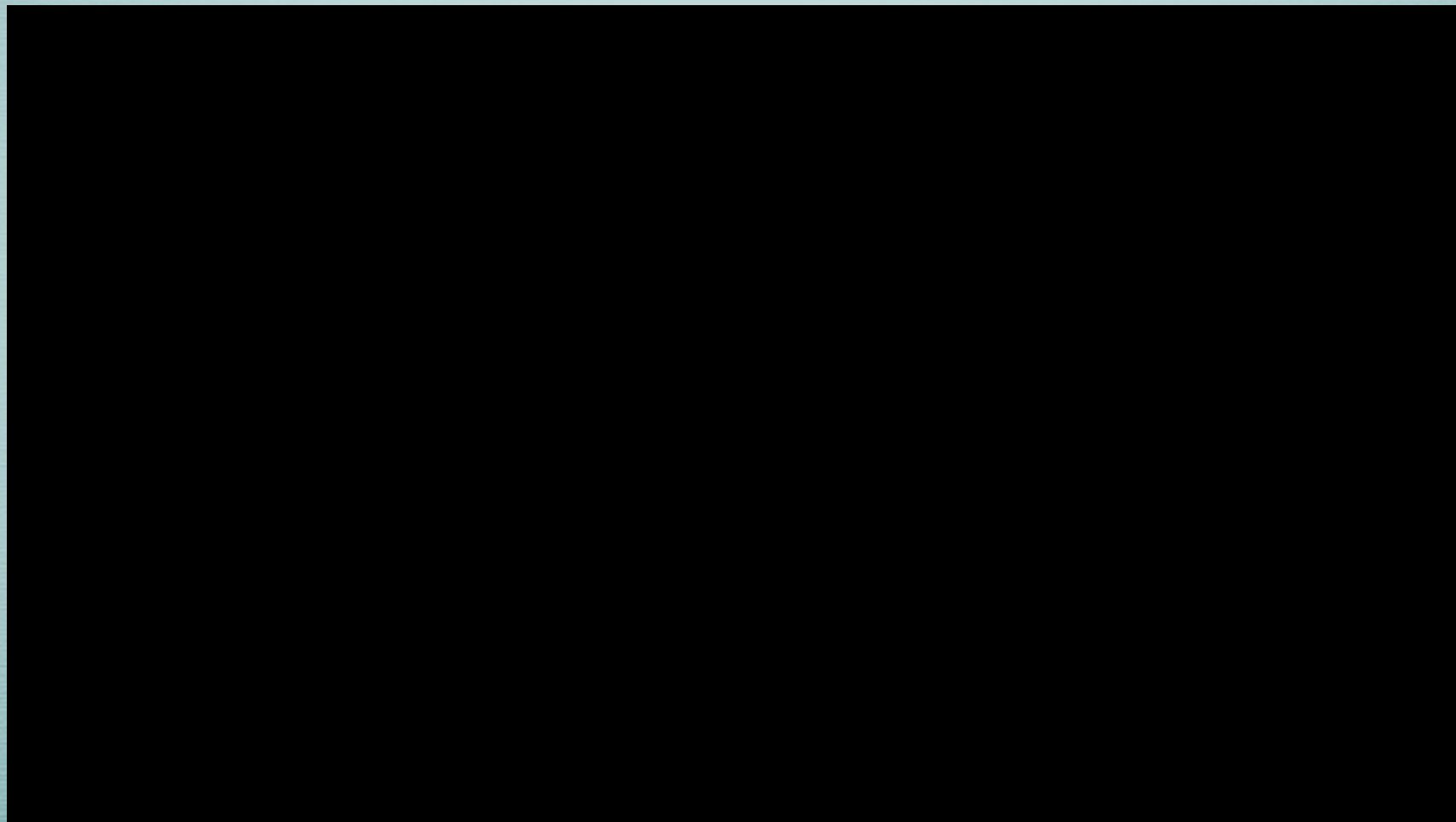


# EDUCATION FOR EMPLOYMENT IN THE NEW ECONOMY



Brian Gordon & Neal Kauffman



# About Us...

- *Combined 40+ years of experience in business and industry*
- *Trainer and HR manager for Exelon, a fortune 200 company*
- *Small Business Owners*
- *Work with health care consulting firm - Securities Licenses held - quoted and/or referenced in the Wall Street Journal, New England Journal of Medicine - Published In Diagnostic Imaging, MR, and the MR Focus*
- *Adjunct Community College Faculty*
- *Adjunct Graduate School Faculty*
- *Combined 40+ years in K-12 education*





# Some Important Disclaimers

- \* We are not “Anti-College or Anti-Certificate”. In fact, we have presented on teaching your students to market themselves based on their certifications.
- \* We are “Pro-Employment” via whatever pathway makes the most sense.
- \* We are unapologetic believers in the importance of Career and Technical Education.
- \* We **MUST** create an understanding and expectation in our students that they will be “lifelong learners” if they are to be successful and productive.



The Name Game - AKA

# “Fixing Things In Education”

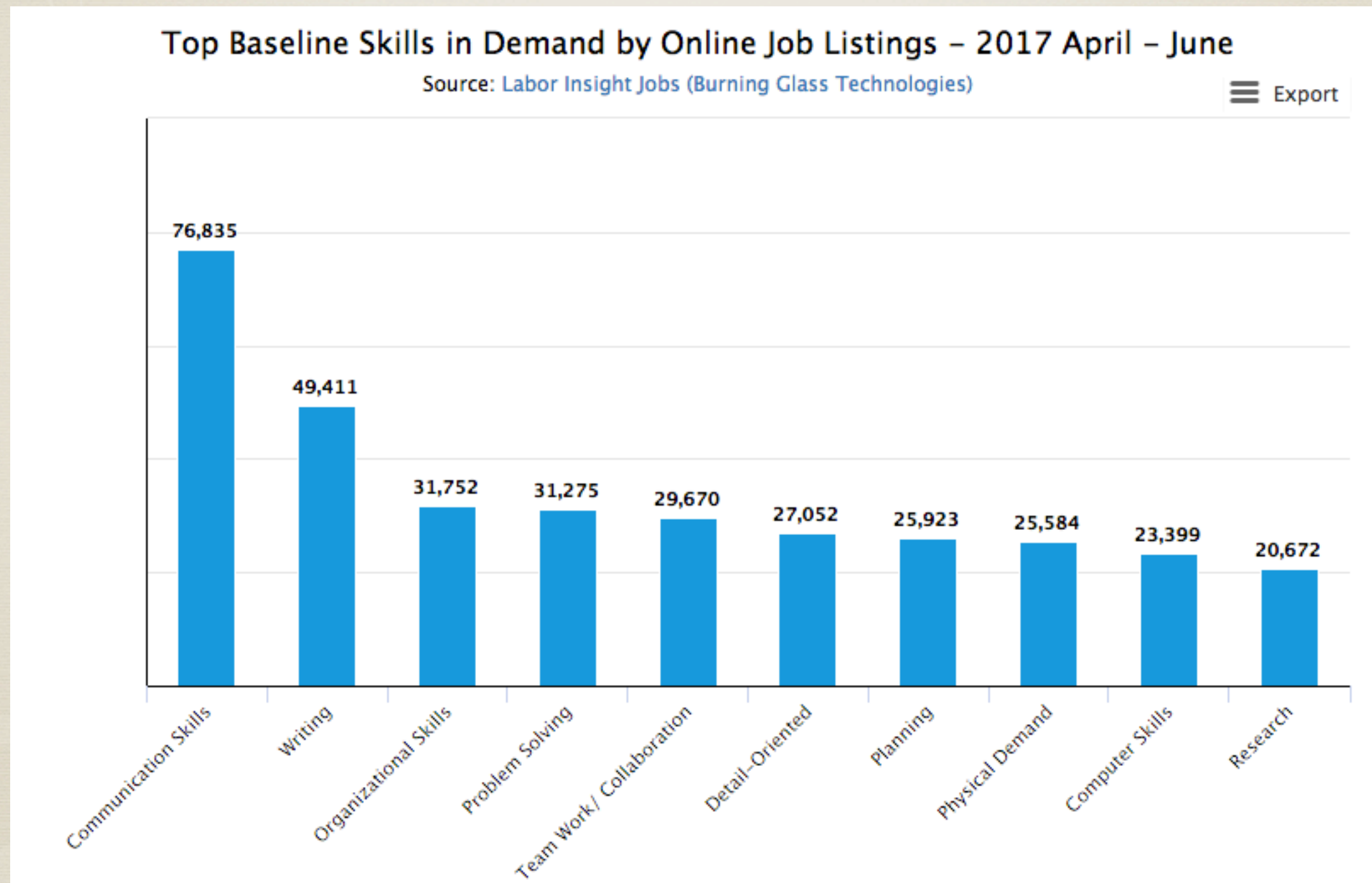
- \* Workplace Skills
- \* 21st Century Skills
- \* Soft Skills
- \* Essential Employability Skills
- \* Some of us old enough might just call these responsibility and common sense
- \* Important..... You bet they are...



It is with some irony and sadness I share this slide with you....  
because the source removed it

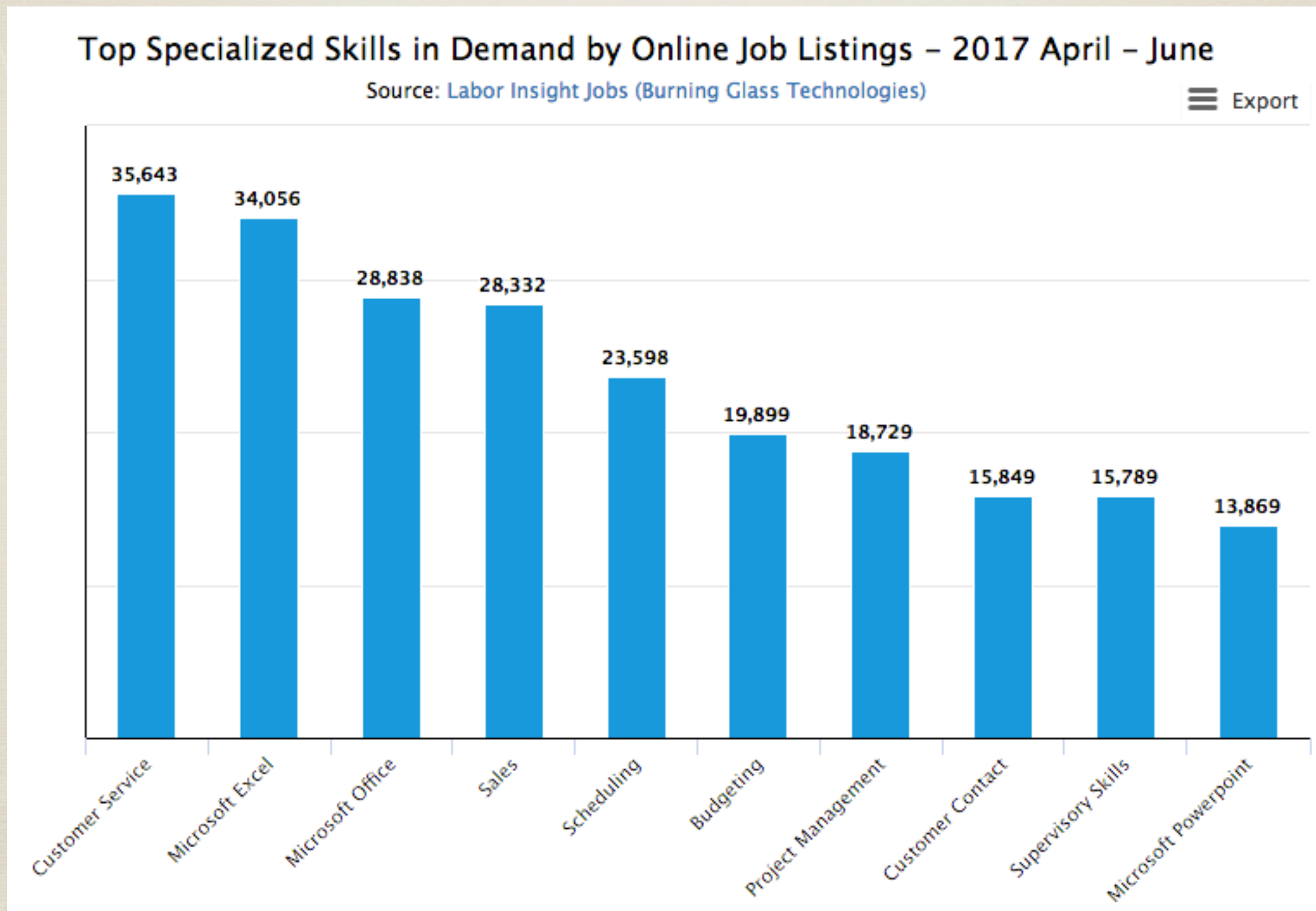
## “Illinois Burning Glass Data On Baseline Skills”

One used to be able to find this and the following page of data on the Illinois 60x25 web site





# Specialized Skills - MetaData Analysis of On-line job postings in Illinois





# Let's Focus On All Jobs and All Pathways

## U.S. Bureau of Labor Stats Data

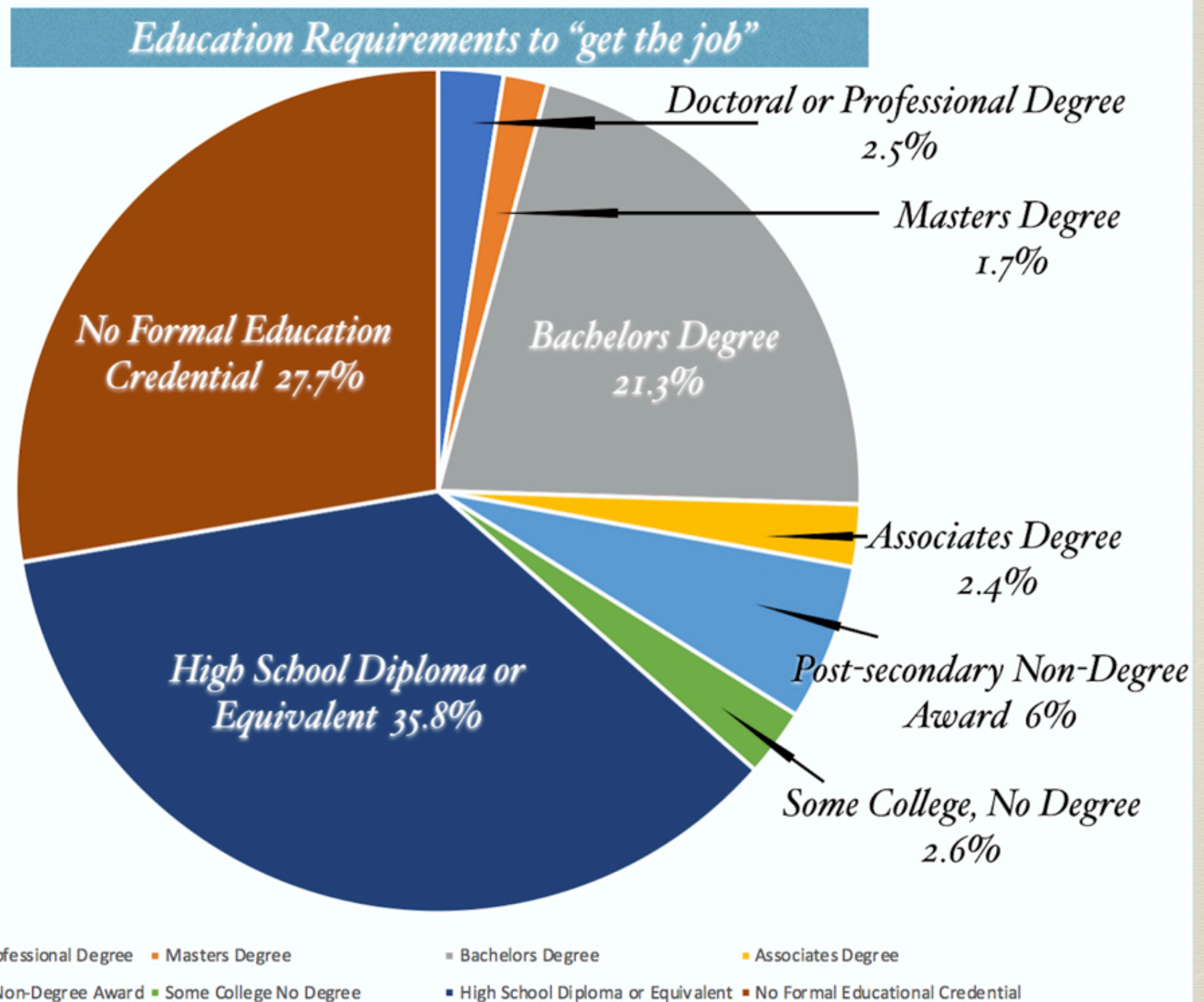


Chart Created from U.S. Bureau of Labor Statistics Article Published in 2017  
<https://www.bls.gov/opub/mlr/2017/article/employment-trends-by-typical-entry-level-education-requirement.htm>



# Thoughts on the Previous Slide?

- \* I am deeply concerned we, as a society, have been pulling a Matthew Emmons for far too long.



# Shot at wrong target costs rifleman gold

By Erik Kirschbaum | Monday 23 August 2004 00:00 |



Matthew Emmons is a trained accountant but he got his numbers terribly wrong yesterday. The American sharpshooter was just one shot away from a second Olympic gold medal when he fired at the wrong target in the final round. Gone was the chance of gold - or even silver or bronze.

Matthew Emmons is a trained accountant but he got his numbers terribly wrong yesterday. The American sharpshooter was just one shot away from a second Olympic gold medal when he fired at the wrong target in the final round. Gone was the chance of gold - or even silver or bronze.

Emmons, who had dominated the 50-metre rifle three-position target event and is considered the best in the world in his discipline, got a big zero and plunged to eighth. "Crap happens," said the 23-year-old. "I'll live to shoot another day."

The native of New Jersey, who has a degree in accounting from the University of Alaska and will start graduate school in Colorado next week, said he had never had a "cross-target" violation in at least six years of international shooting.

\* <https://www.independent.co.uk/sport/olympics/shot-at-wrong-target-costs-rifleman-gold-587595.html>



# Mark Perna makes the point....

## Let's Make Students Career Ready—Period



**Mark C. Perna** Contributor ⓘ

Careers

*I explore Millennials and Gen-Z in careers, education, and the workforce.*

*For the sake of younger generations, we must ditch the college-then-career narrative.*



Every high school in America has a simple goal for their students: to be college and career ready. Too bad, then, that most people interpret that goal as “to be college *then* career ready.” In other words, they view it as a linear progression. College comes first and then—and only then—comes career.

But semantics are significant here, and to be college *and* career ready characterizes a critical distinction. Why? Because it connotes that high schoolers have *choices*. Regardless of societal pressures or (now-outdated) norms, it doesn't have to be a college-then-career progression. Entering or training for a viable, living-wage profession immediately after high school is also a legitimate choice—and one that should be on the table. College may play into a kid's plan later, but it doesn't have to. It's all about where they want to go in their life and how they can most effectively get there.

Georgetown University reports that **65% of all jobs** today require some form of postsecondary education. But that's not just college; it's lots of different things, including apprenticeships and industry training programs.

\*

<https://www.forbes.com/sites/markcperna/2020/01/28/lets-make-students-career-readyperiod/#2193bbbbbdeof>



Let's talk to our students  
about all pathways to  
careers... and let's stop  
pretending Career  
Readiness and College  
Readiness are the same.



# A study in contrast.... This...

Use the Part List below to answer questions 6 – 8.

Paper Prices					
Group I	Type				
Weight	A	B	C	D	E
#20	0.11	0.12	0.13	0.14	0.15
#24	0.13	0.14	0.15	0.16	0.17
#28	0.15	0.17	0.19	0.21	0.22
#32	0.18	0.20	0.22	0.24	0.26
#38	0.21	0.23	0.25	0.27	0.29
Group II	Type				
Weight	A	B	C	D	E
#20	0.15	0.17	0.19	0.21	0.22
#24	0.18	0.20	0.22	0.24	0.26
#28	0.21	0.23	0.25	0.27	0.29
#32	0.24	0.26	0.28	0.30	0.32
#38	0.28	0.30	0.32	0.34	0.36

Color Selection	
Group I	Group II
blue	cactus
buff	crimson
canary	diamond
goldenrod	eggplant
green	emerald
grey	gold
ivory	lemon
orchid	lime
pink	peach
salmon	plum
tan	pumice
turquoise	ruby
white	sandstone

Grade Category	
Grade	Code
Writing	A
Offset	B
Opaque	C
Index/Tag	D
Cover	E



VS.

ALEKS

Or this...

6. According to these reference tables, what is the price of # 32, opaque grade, crimson paper?

- A. 0.26
- B. 0.27
- C. 0.28
- D. 0.29

Solve each inequality and graph its solution.

1.  $3x - 4 \leq 5$  or  $2x - 6 > 6$



For each problem, find the derivative of the function at the given value.

1)  $y = x^2 + 4x$  at  $x = -5$

2)  $y = -x^3 + 4x^2 - 4$  at  $x = 4$



# Hey... look at this....

Jan 6, 2020

## The Apprenticeship Alternative

*Enrollment, Completion Rates, and Earnings in  
Registered Apprenticeship Programs in Illinois*



**Frank Manzo IV, MPP**  
Policy Director  
Illinois Economic Policy Institute

**Robert Bruno, PhD**  
Director and Professor  
Project for Middle Class Renewal  
University of Illinois at Urbana-Champaign

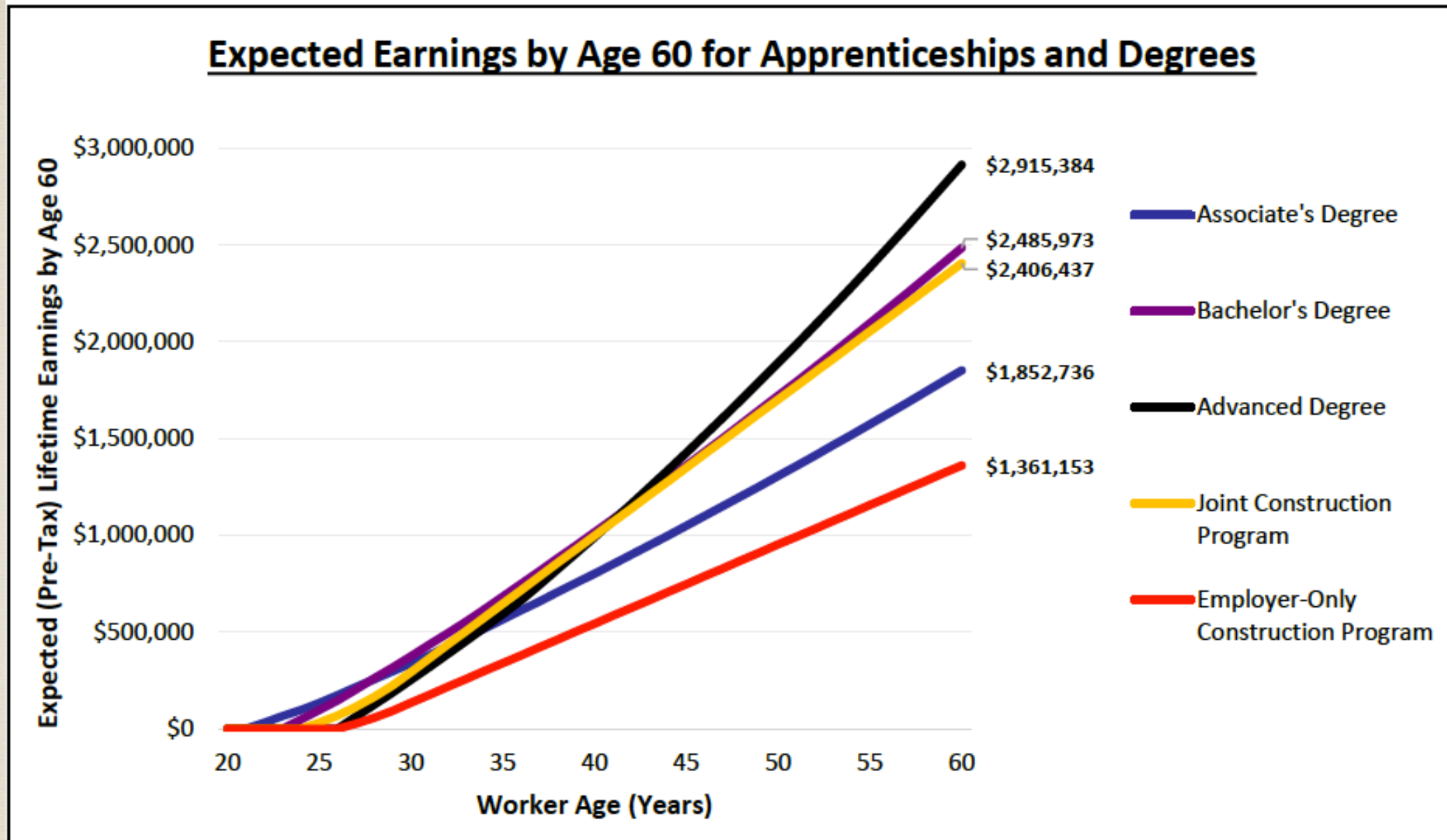


**I ILLINOIS** LABOR & EMPLOYMENT  
RELATIONS  
PROJECT FOR MIDDLE CLASS RENEWAL



# From The Study....

FIGURE 15: EXPECTED PRE-TAX LIFETIME EARNINGS BY APPRENTICESHIP PROGRAM OR EDUCATIONAL ATTAINMENT IN ILLINOIS



Source(s): Stylized projections based on reported apprentice wages and journeyworker wages adjusted for inflation to 2018 dollars, average hourly incomes for workers grouped educational attainment, historical estimates for annual hours of employment, historical estimates for unemployment rates, and average debt at graduation for students attending colleges. 2016 RAPIDS data by the Office of Apprenticeship; Consumer Price Index calculator by the Bureau of Labor Statistics (BLS, 2019a); 2012 *Economic Census of Construction* data from the U.S. Census Bureau (Census, 2019); 2011-2018 *Current Population Survey Outgoing Rotation Groups* (CPS ORG) data by the Bureau of Labor Statistics (CEPR, 2019); and data on average debt at graduation (Kantrowitz, 2019a; Kantrowitz, 2019b).

Assumes payback of average student loan debt of roughly 29,000  
Does not consider pensions... Who is more likely to get those?



# Transferable Skills/Middle Skills... from the report - Illinois Specific Data

The State of Illinois should also promote the new apprenticeship education expense tax credit ([Blaze et al., 2019](#)). In August 2019, Illinois Governor J.B. Pritzker signed Senate Bill 1591, incentivizing employers to assist apprentices with tuition through a tax break. The law provides a nonrefundable tax credit up to \$3,500 for tuition, books, and fees per apprentice per year that can reduce a business' income tax liability. The credit may be increased to \$5,000 if either the business address or the apprentice's home address is located in an underserved area. This credit, which will be available between 2020 and 2024, can be claimed by all employers participating in USDOL-approved apprenticeship programs. Importantly, the tax credit is not limited to the construction industry. Research suggests that 50 percent of the job openings created in Illinois by the end of 2024 will be in "middle-skill" positions— which require education beyond high school but not a four-year degree— but only 42 percent of Illinois' labor force is trained to the middle-skill level ([NSC, 2017](#)). The apprenticeship expense tax credit can help employers find and train workers to fill these jobs.

Creating a CTE program of high value requires being in tune with what skills our employers are seeking.



# The Study Concludes

## Conclusion

Joint labor-management apprenticeship programs account for the vast majority of registered apprentices in Illinois' construction industry. These programs are significantly more rigorous than employer-only construction programs and require more hours of on-the-job and classroom training than a typical bachelor's. However, despite requiring more hours of training to graduate, joint construction programs have a completion rate that rivals four-year universities and is 22 percentage points higher, on average, than employer-only programs.

Registered apprenticeship programs produce good middle-class careers and should be encouraged as a viable alternative to college. Journeyworkers graduating from joint labor-management construction programs earn about \$40 per hour, resulting in lifetime incomes that parallel the average for workers with bachelor's degrees. To expand registered apprenticeships, Illinois should include pre-apprenticeship programs at public high school and community colleges, develop initiatives that improve the completion rate of apprentices, expand access to child care to increase female participation, promote the new apprenticeship education expense tax credit, and support joint labor-management programs by challenging any federal action that could undermine them.

For many young people, the path to the middle class is through an "earn while you learn" registered apprenticeship program. In particular, the unionized construction trades have rigorous programs with training hours, graduation rates, and competitive pay that rival four-year universities in Illinois. Education pays, but so too does a registered apprenticeship program.



# Our Views are shaped by our surroundings...

- \* The TREES region is filled with high paying “Gold Collar” jobs both Union and Non-Union.
- \* Make sure your students are aware of opportunities both locally, regionally, and beyond.



# Conveying the importance of responsibility to our students



The “Mr. Wilkinson” Story



Who can tell us what this is?



Industry Stories  
Add Relevance

Bring Them In

Go To Them

Relate your own  
experiences ... Successes  
& Failures

Our job is to help our students to connect the dots....  
One example....



# Old Boss.... New Boss

Dear Bob –

I am writing to seek your advice in dealing with a new boss that just took over our office. Our old boss was warm and collegial and encouraged a great deal of camaraderie around the office. We enjoyed the atmosphere and it made us feel like a family. We celebrated birthdays and special occasions and enjoyed catching up around the water cooler.

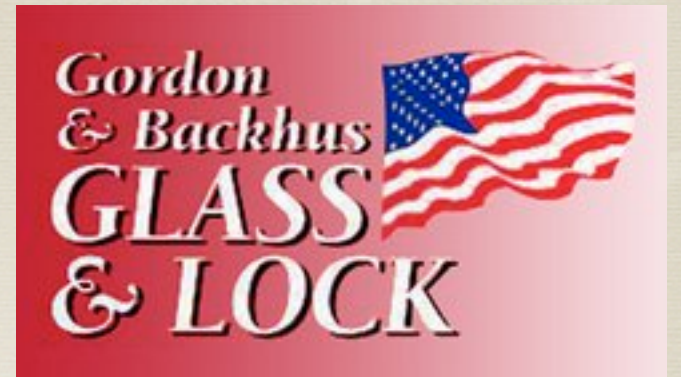
The new boss has stifled this feeling and the atmosphere around here has been far more stressful. Rather than the lighthearted and collegial like our previous boss, the new boss is gruff and does not seem interested in us as individuals. What advice might you offer in dealing with this situation?

Thanks –

A Concerned Worker



# Discuss....



Let's make it a math problem....

Let's Drive Home the Reality of Business....  
Profit Motive Is Foreign to Many Educators



I then explained the.....

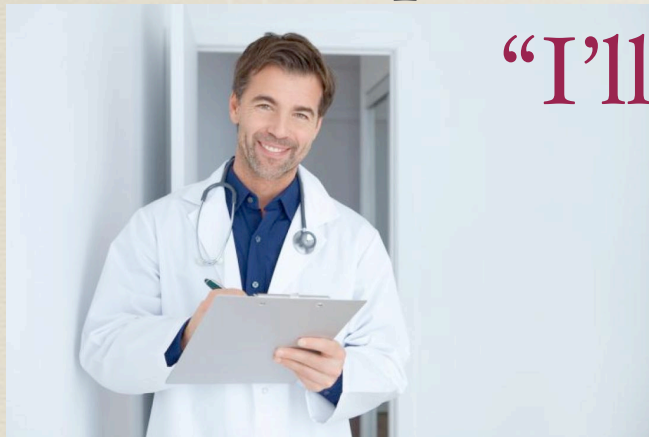
# The Golden Rule in Business

- \* “I don’t hire you because I am a nice guy and I want to give you my money. I hire you because I expect you to make me money. If you don’t, one of two things is going to happen...”



# A humble plea...

- \* Let's Look a College as one of many options but make ROI a part of the conversation.



“I’ll Never Catch Him”

A Proud Dad... But An Object Lesson





# A New Era...

With Recognition.... and More Funding.....  
Comes Responsibility

Validate your Content

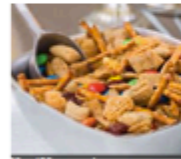
Prove Your Worth

## Marketing and Profitability Activity: 9-12 A CED 3, K-12 MP.1, 3, 4 (among others)

The MIRN (Math I Really Need) Snack Mix Company assigns you to a team whose goal is to oversee the "launch" of the company's newest snack product.

MIRN's new snack product's **proposed** batch ratios are:

- 1 part Pretzels
- 1 part Cheerios
- ½ part Candy Corn
- 1 part Corn Chex cereal
- 1 part Rice Chex cereal
- ½ part M&Ms



If we were to change the proposed batch ratio, any snack mixture we take to market must contain all of these ingredients. Each ingredient would have a minimum of .5 ounces in the 8 ounce bag while no ingredient could be more than 4 ounces.

1. Taste the product.
2. Brainstorm a name for the new product. \_\_\_\_\_

### Packaging and Product Cost Data:

The product would be sold in 8-ounce packages.

#### Ingredient costs:

Pretzels	\$3.99/20 oz.
Cheerios	\$6.49/120 oz.
Candy Corn	\$2.99/20 oz.
Corn Chex Cereal	\$1.99/13 oz.
Rice Chex Cereal	\$1.99/13 oz.
M&Ms	\$8.49/42 oz.

3. Based on the proposed batch ratio, calculate each ingredient's weight in an 8 ounce batch.

Pretzels	_____ oz.
Cheerios	_____ oz.
Candy Corn	_____ oz.
Corn Chex Cereal	_____ oz.
Rice Chex Cereal	_____ oz.
M&Ms	_____ oz.

### Cost Considerations: Cost, Profit Margin, & Selling Price

4. What is the product cost of an 8-ounce package? \_\_\_\_\_
5. What would MIRN charge for an 8-ounce package if they wanted a 20% profit margin (based on product cost)? \_\_\_\_\_
6. What other costs (expenses) are factored into the selling price of this snack product for us to accurately determine our profit margin & or set our price?
7. What is the least expensive mixture we could produce if we were to alter the proposed batch ratio?
8. Food for thought - Would the formula we find in question 7 be the most profitable for us to bring to market? Why or why not?

**This IS higher level math and could go to even more complex levels if we were to incorporate nutrition labels, profit margins, sales data, etc...**

**More importantly: It is Relevant and Engaging for students. This is "Quadrant D" learning. It is CAREER READY MATH.**



# Resource



Illinois Essential Employability Skills  
Framework and Self-Assessment

<https://icsps.illinoisstate.edu/2017/07/illinois-essential-employability-skills-framework/>



## 1. Personal Ethic

### a. Integrity

- i. Treats others with honesty, fairness, and respect
  - 1. Demonstrates respect for company time and property
    - a. Is present and engaged in the workplace
    - b. Demonstrates appropriate use of technology in the workplace
  - 2. Accepts responsibility for one's decisions and actions

### b. Respect

- i. Works effectively with those who have diverse backgrounds, beliefs, and cultures
- ii. Exhibits respect for authority

### c. Perseverance

- i. Stays on task when provided with strategies for overcoming barriers

### d. Positive attitude

- i. Cooperates in a pleasant and polite manner with clients, coworkers, and supervisors
- ii. Exhibits flexibility and adaptability
- iii. Takes direction and correction willingly

## 2. Work Ethic

### a. Dependability

- i. Shows up on time and ready to work
  - 1. Fulfills obligations, completes assignments, and meets deadlines
  - 2. Behaves consistently and predictably
- ii. Regular Attendance
  - 1. Demonstrates minimum absenteeism
  - 2. Communicates absenteeism with direct supervisor
- iii. Commitment
  - 1. Desires to effectively work toward the employer's goals
  - 2. Takes the initiative in seeking new responsibilities, maintaining professional goals, and striving to exceed standards and expectations of their position

### b. Professionalism

- i. Maintains a professional demeanor at work
  - 1. Demonstrates self-control by maintaining composure and keeping emotions in-check, even in difficult situations
  - 2. Exhibits professional appearance by dressing appropriately for the workplace and maintaining personal hygiene
  - 3. Understands employer's objectives



### 3. Communication Skills

#### *a. Active Listening*

- i. Listens to and considers other's viewpoints
- ii. Maintains open and factual lines of communication appropriate to one's position

#### *b. Clear Communication*

- i. Follows directions
- ii. Is open to correction
- iii. Comprehends written material
- iv. Effectively explains a process or problem verbally and/or in writing

### 4. Team Work

#### *a. Critical Thinking*

- i. Demonstrates sound decision making
- ii. Exhibits problem solving skills

#### *b. Effective and Cooperative Work*

- i. Demonstrates an ability to work effectively with others
  - 1. Is willing to ask questions and seek clarification or guidance
- ii. Uses appropriate strategies and solutions in dealing with conflicts/differences to maintain a smooth workflow



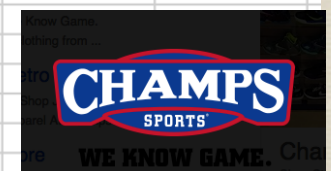
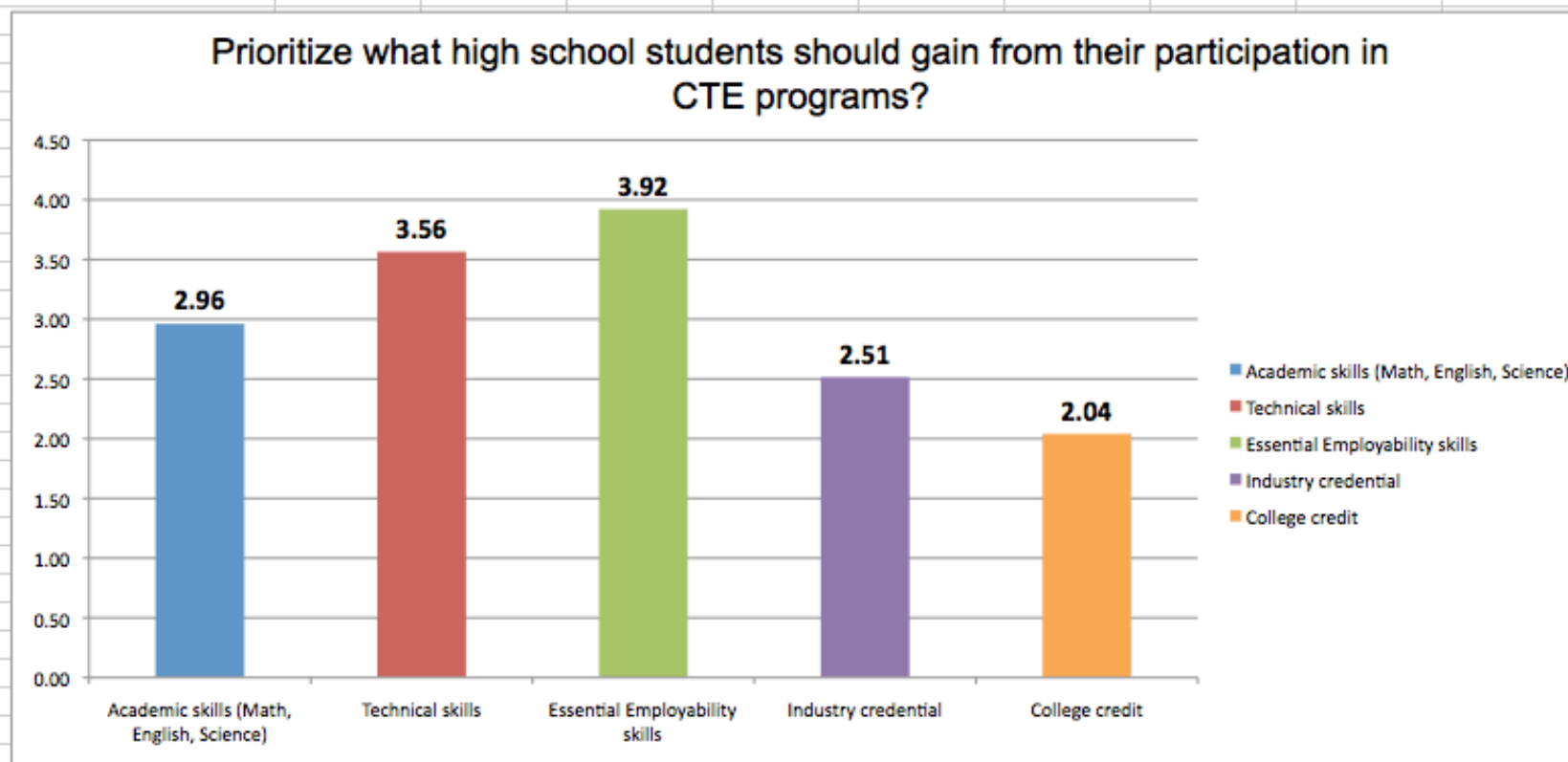
# Everything Old Is New Again

- \* Essential Employability Skills have been essential for a very long time... Whatever we are calling them ten years from now... the list will be quite similar... and they will still be most important.

Strengthening Career and Technical Education for the 21st Century - STAKEHOLDER

Prioritize what high school students should gain from their participation in CTE programs?

	1	2	3	4	5	Total	Score					
Academic skills (Math, English, Science)	15.84%	16	19.80%	20	28.71%	29	15.84%	16	19.80%	20	101	2.96
Technical skills	24.75%	25	31.68%	32	26.73%	27	8.91%	9	7.92%	8	101	3.56
Essential Employability skills	40.59%	41	28.71%	29	16.83%	17	9.90%	10	3.96%	4	101	3.92
Industry credential	5.94%	6	12.87%	13	22.77%	23	43.56%	44	14.85%	15	101	2.51
College credit	12.87%	13	6.93%	7	4.95%	5	21.78%	22	53.47%	54	101	2.04
											Answered	101
											Skipped	0





# The Good News

Quality CTE is heavily embedded with many of these skills and provides great opportunity to teach and reinforce the importance of these skills.



# Questions?

- \* Thank you for your time and attention
- \* Our Contact Info - [brian.gordon@jjc.edu](mailto:brian.gordon@jjc.edu) and [nkauffma@jjc.edu](mailto:nkauffma@jjc.edu)