

# Looking Ahead to 2020

## Occupational projections and training needs

**Alaska College Access and Success Team**

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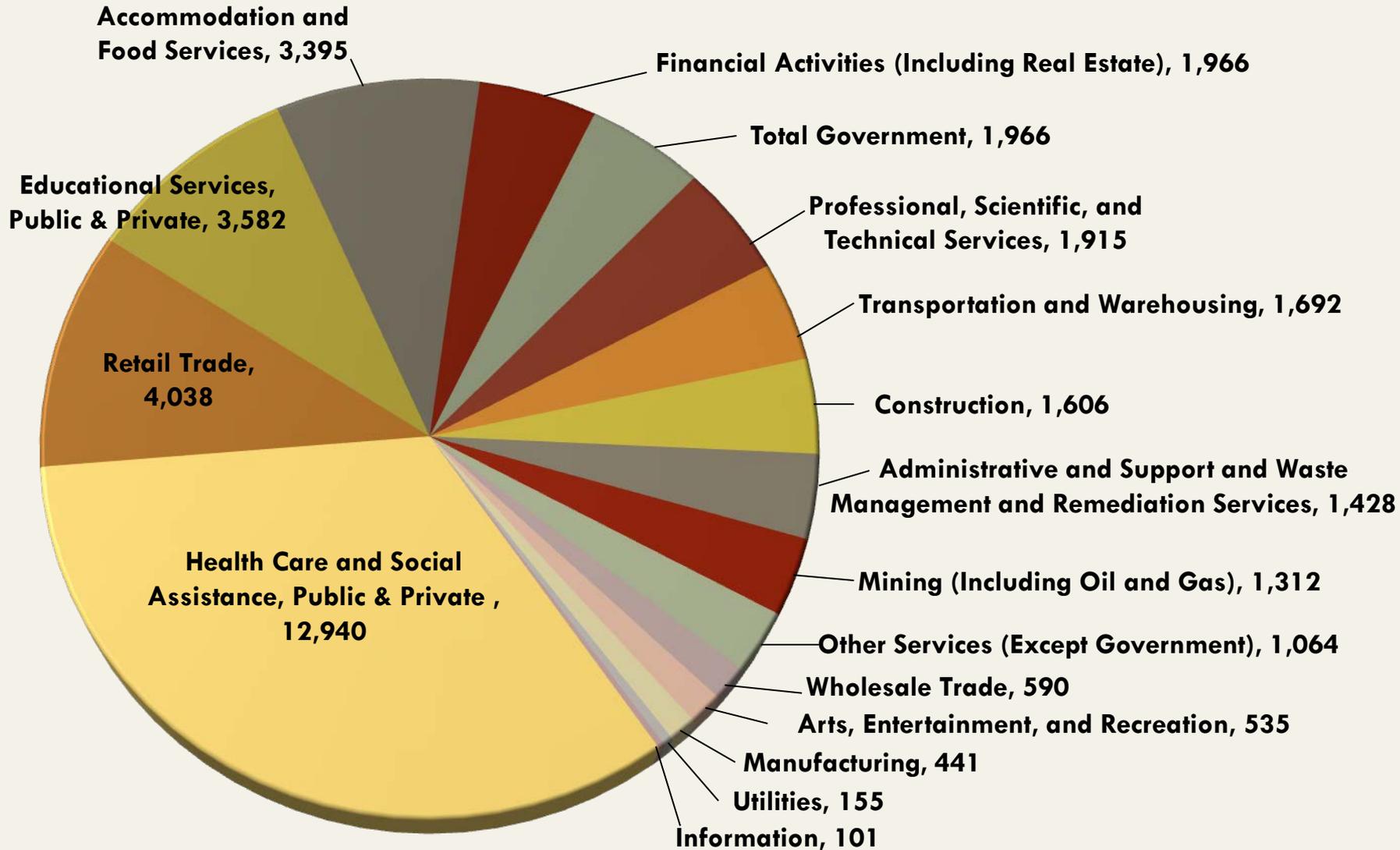


**ALASKA DEPARTMENT OF LABOR  
& WORKFORCE DEVELOPMENT**

**First some numbers ...**

**(Minus the self-employed  
and military)**

# Projected growth, 2010-2020

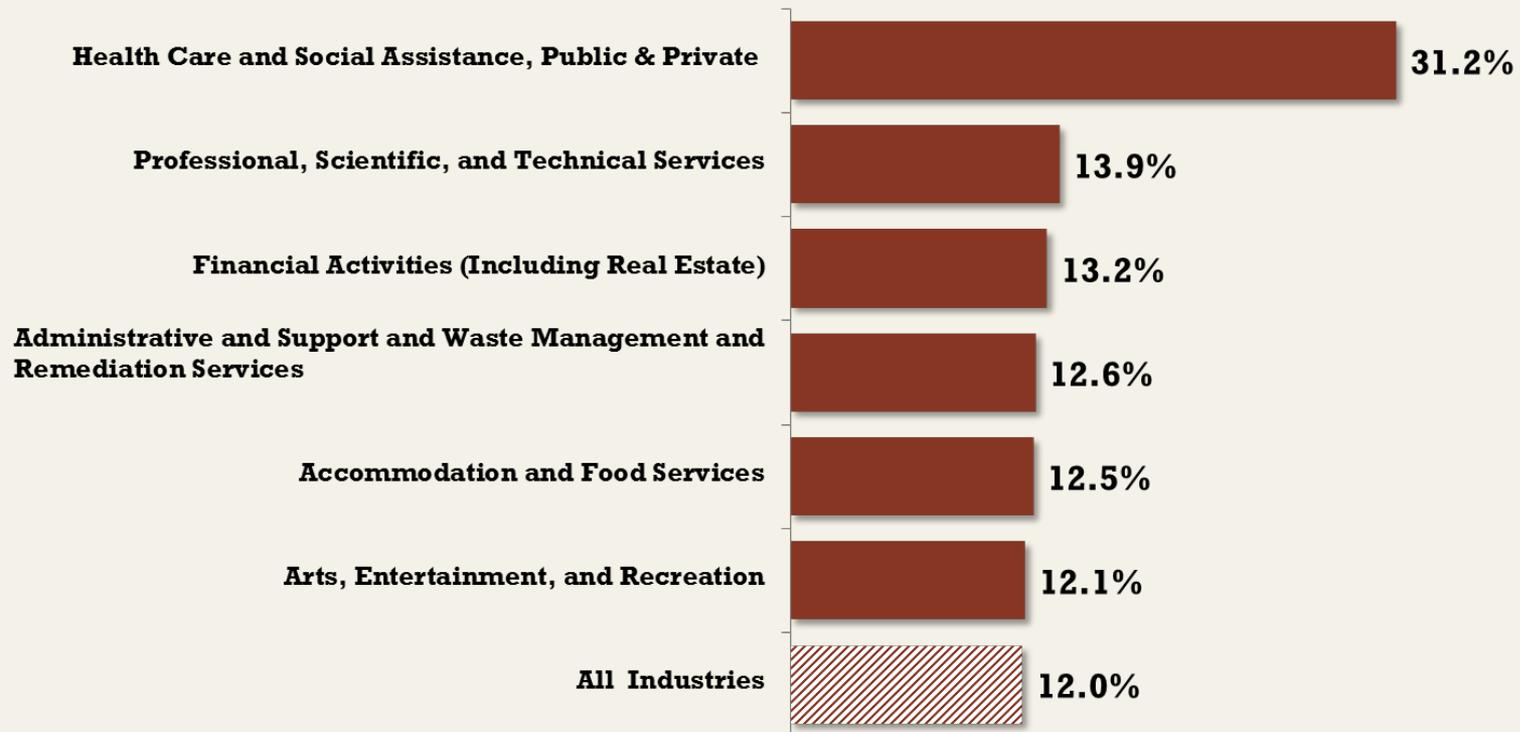


**Very rough interpretation:**

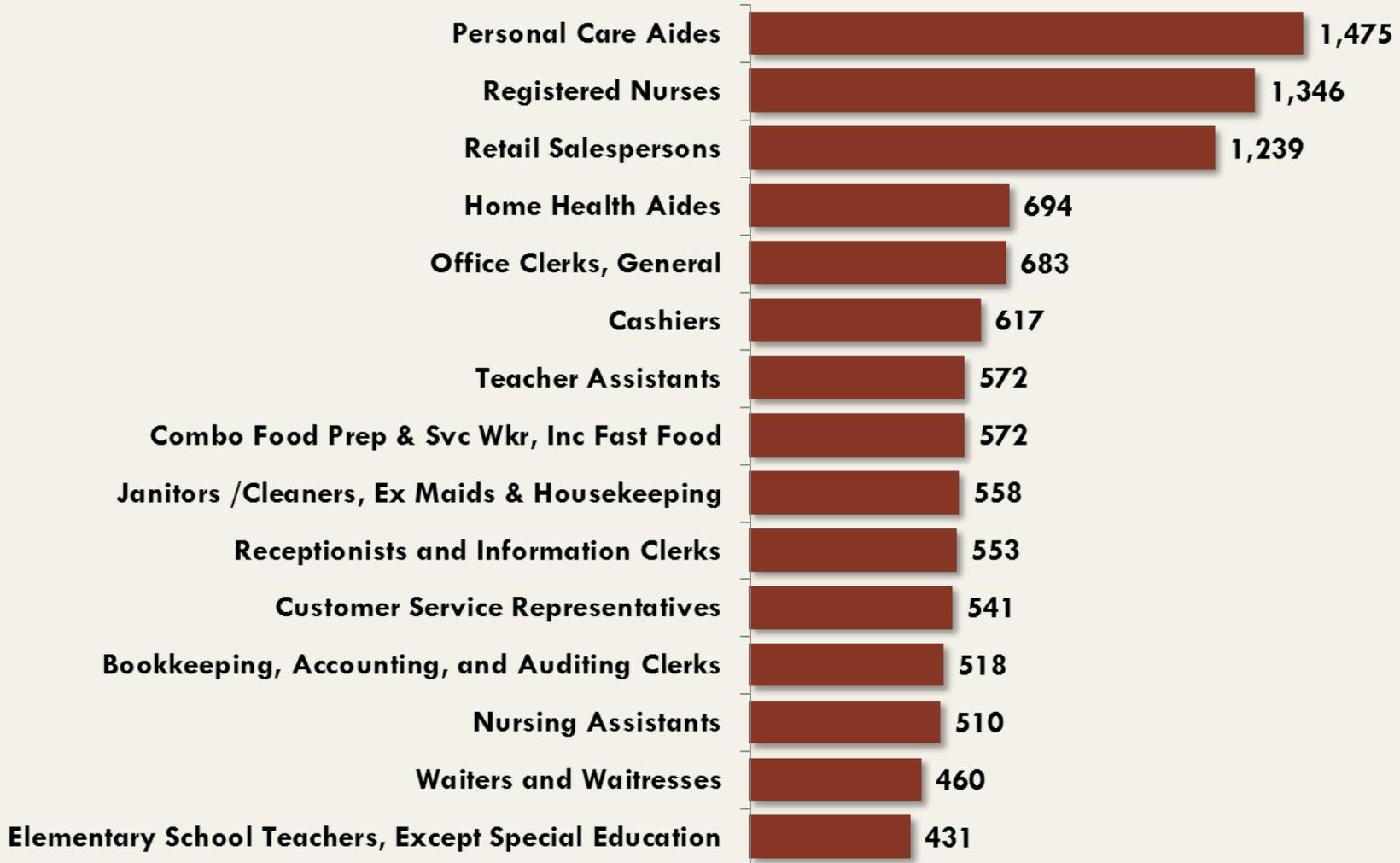
**What we have now we'll generally  
have more of in 2020**

# A slightly less rough interpretation ...

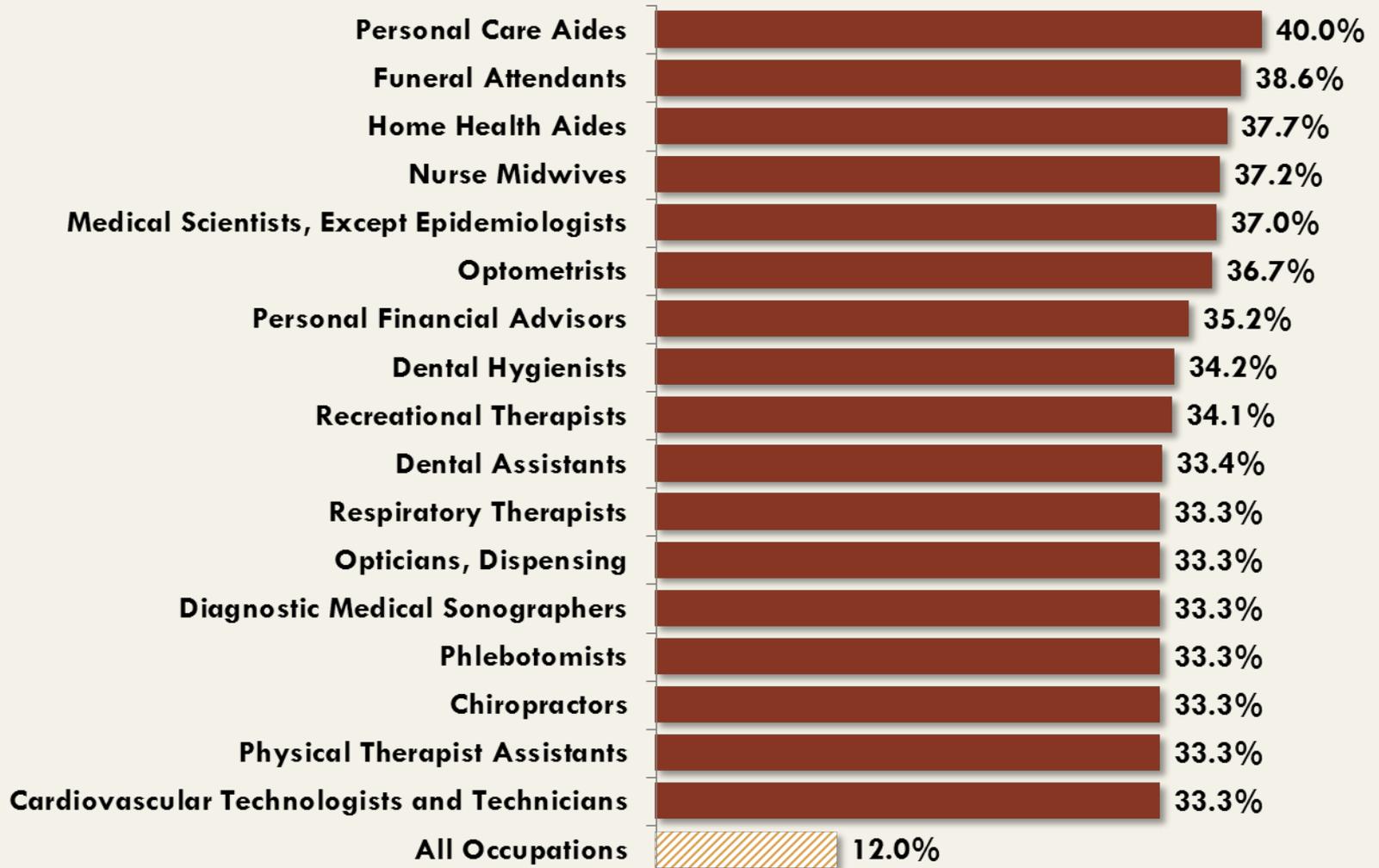
## Industries with above-average growth, 2010-2020



# Occupations with the largest increase, 2010-2020

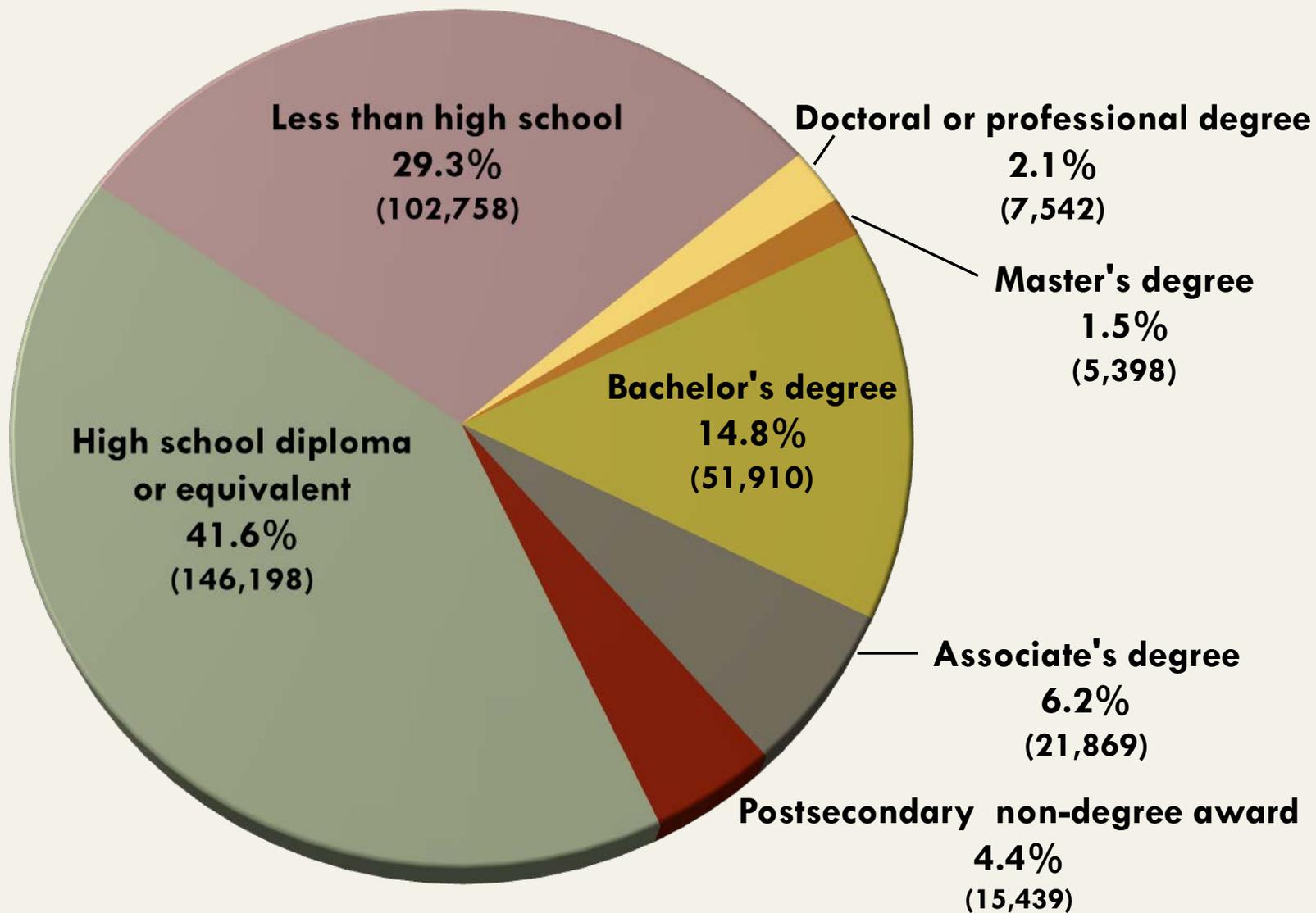


# Fastest Growing Occupations, 2010 - 2020

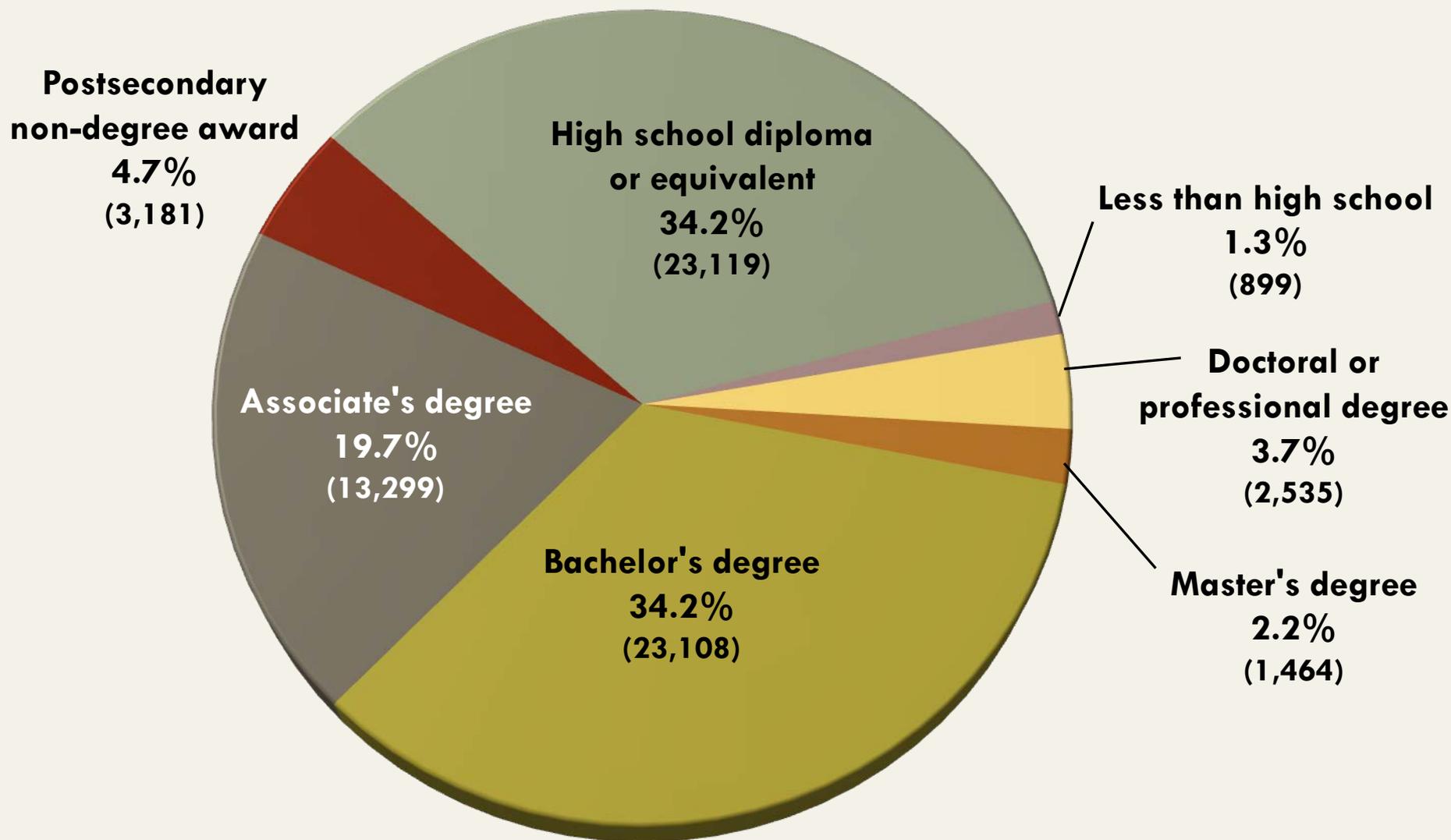


**What kind of training will the  
2020 workers need to have?**

# Alaska's jobs by level of education, projected 2010-2020 (351,114)

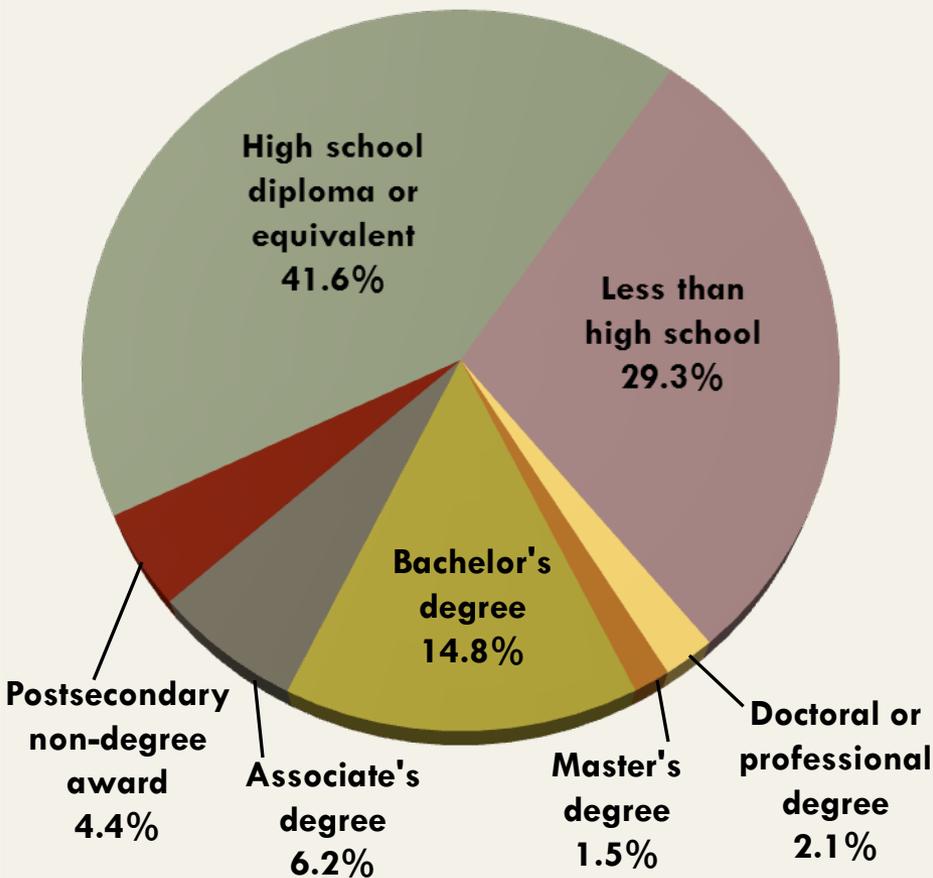


# Alaska's top jobs by level of education, projected 2010-2020 (67,605)

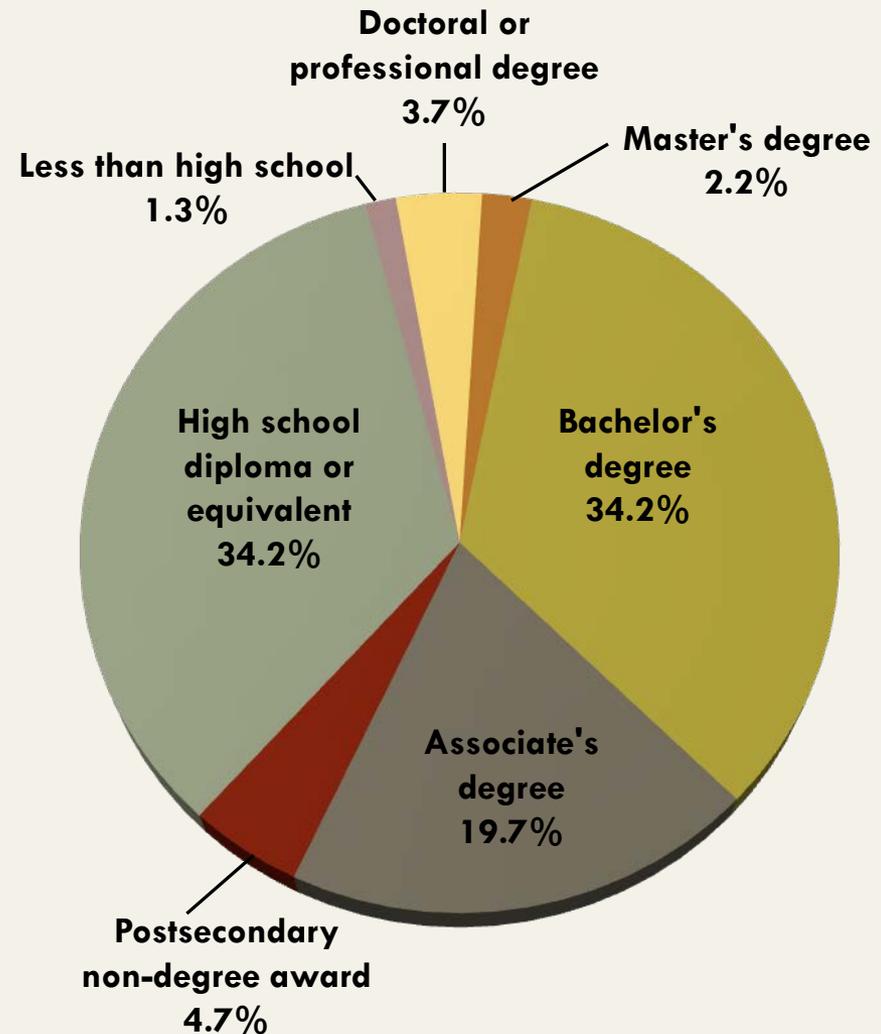


# Alaska's jobs by level of education, projected 2010-2020

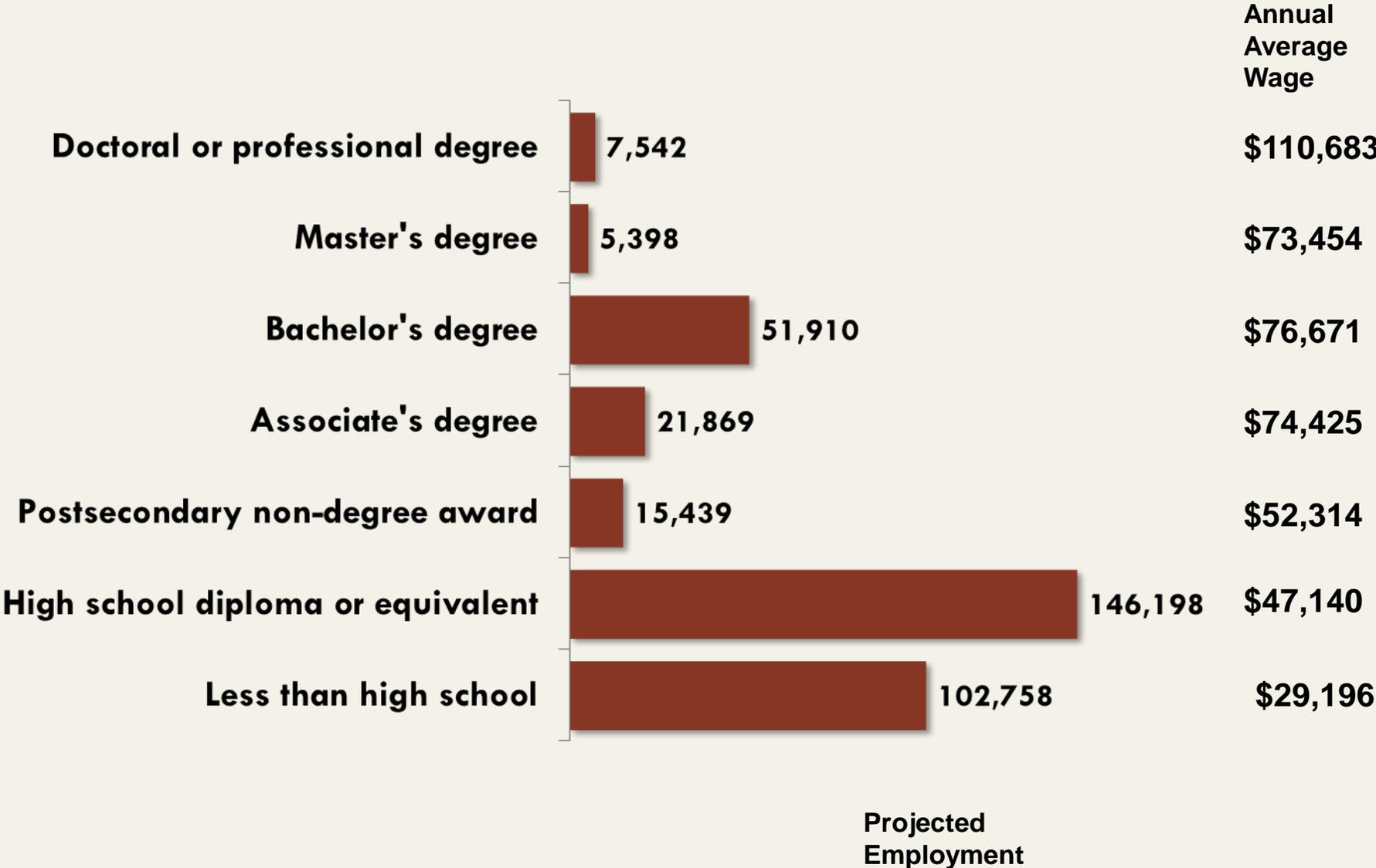
**All Jobs (351,114)**



**Top Jobs (67,605)**



# Wages and projected 2020 employment for Alaska by level of education



**Wait a minute!**

**Georgetown's research found that 66% of Alaska jobs in 2020 will require postsecondary education and the pie chart shows less than 30%.**

**Somebody's got some explaining to do ...**

**Leaving that big, important issue  
aside, let's do some "gap"  
analysis.**

# A slide you may have seen before ...

	Alaska Jobs in 2018*	Current Workers**	Difference
High School Dropouts	25,000	13,708	11,292
High School Graduates	109,000	92,163	16,837
Some college, no degree	100,000	90,910	9,090
Associate's degree	30,000	24,976	5,024
Bachelor's degree	63,000	54,975	8,025
Graduate degree	32,000	36,966	-4,966

\*Source: Georgetown University Center on Education and the Workforce, Projections of Jobs and Education Requirements through 2018; June 2010

\*\*Source: U.S. Census Bureau, 2010 American Community Survey (ACS) Public Use Microdata Sample (PUMS) File.

**Looks like we're headed for a "gap" in high school dropouts and a surplus of workers with graduate degrees.**

Do we need to train up some high school dropouts and invite some of our residents with graduate degrees to seek their fortunes elsewhere?

Of course not.

**But are we headed for a  
shortage of workers with post-  
secondary training?**

But are we headed for a shortage of workers with post-secondary training?

Absolutely, in specific types of training. Unclear overall.

# New York Times, January 3, 2014

DUBLIN — Week after week, newspapers issue a stream of hopeful headlines: Microsoft, PayPal, Fujitsu and scores of other companies are expanding their investments in Ireland, creating thousands of jobs as unemployment hovers near record highs.

There is just one hitch: Not enough people are qualified to fill all the jobs. In some cases, the companies have had to look outside Ireland to recruit candidates with the right skills.

After a five-year economic crisis, the mismatch represents one of the thorniest problems facing Ireland and many other European countries. Hundreds of thousands of people who lost work, and many young people entering the work force, are finding that their skills are ill suited to a huge crop of innovation-based jobs springing up across the Continent.

...

# Themes from the NY Times story:

1. Nonresident hire
2. Still relatively small numbers; not big enough, *by themselves*, to justify an everybody-go-to-college advocacy effort
3. Specific focus: IT, math, engineering

# **What can nonresident worker data tell us?**

# Occupations with most nonresidents

## Top 16

Occupation	Number	Percent
• Seafood processing workers	12,037	77%
• Retail salespersons	2,548	18%
• Maids and housekeeping cleaners	1,808	34%
• Cashiers	1,696	16%
• Waiters and waitresses	1,677	30%
• Food preparation and serving workers	1,443	20%
• Construction laborers	1,407	21%
• Meat, poultry, and fish cutters and trimmers	1,381	68%
• Fishers and related fishing workers	1,294	69%
• Cooks, restaurant	1,145	37%
• Airline pilots, copilots, and flight engineers	1,102	53%
• Food preparation workers	1,048	24%
• Laborers and freight, stock and material movers	964	22%
• Carpenters	909	22%
• Registered nurses	884	18%

# High-paying occupations with large numbers of nonresidents

<u>Occupation</u>	<u>Number</u>	<u>Annual Wages</u>
• Airline pilots, copilots, and flight engineers	1,102	\$128,000
• Carpenters	909	\$50,000
• Registered nurses	884	\$62,800
• Operating engineers and other operators	852	\$73,000
• Heavy and tractor-trailer truck drivers	642	\$60,000
• Electricians	637	\$78,000
• Service unit operations managers	549	\$93,000
• Sailors and marine oilers	523	\$42,000
• Captains, mates, and pilots of water vessels	503	\$74,000
• Plumbers, pipefitters, and steamfitters	447	\$73,000
• Machinists	389	\$46,000
• Roustabouts, oil and gas	382	\$63,000
• Engineers, all other	336	\$122,000
• Inspectors, testers, sorters, samplers	335	\$91,000

# What's not clear from the data:

- That the majority of jobs in 2020 will require post-secondary education (unless you want to go all-in with the Georgetown researchers).
- That unfocused post-secondary education will be the meal ticket it once was.

# What is clear from the data:

- That the highest-paying, fastest-growing jobs will generally require post-secondary education.
- That jobs requiring post-secondary education will be less vulnerable during economic downturns (lower unemployment rates).
- That states with populations that have high rates of post-secondary education tend to perform better economically (be a little careful with this one; Alaska is an outlier in some research)

# Forecasting the weather vs. making it

- We (and BLS) are describing the most likely outcomes, as best we can, based on current trends.
- You, to the extent you seek to guide policy, are trying to make things better for the state by *changing* and *improving* on those trends.

# Anything negative about success?

- Hard to imagine. At worst, we end up with an especially well-educated population (something that's attractive to business; Utah as an example), and some out-migration as Alaskans become more marketable (likely more than offset by a reduced need to import workers).

# *For more information:*

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Sources for all data:

Alaska Department of Labor and Workforce Development unless otherwise noted