OHFA and OERC Data Visualizations/Analysis By Elizabeth Yirava

The Ohio State University

OHIO EDUCATION RESEARCH CENTER
Making Research Work For Education

OHIO HOUSING FINANCE AGENCY

- Attended team meetings

- Learned about current projects

- Introduced to Tableau + GIS

QAP Education Maps

- Qualified Action Plan (QAP) used to determine criteria for selecting housing tax credit awards

- Maps based on ODE report card data

- Show attributes of different school districts

- Info could be used to design school criteria for QAP

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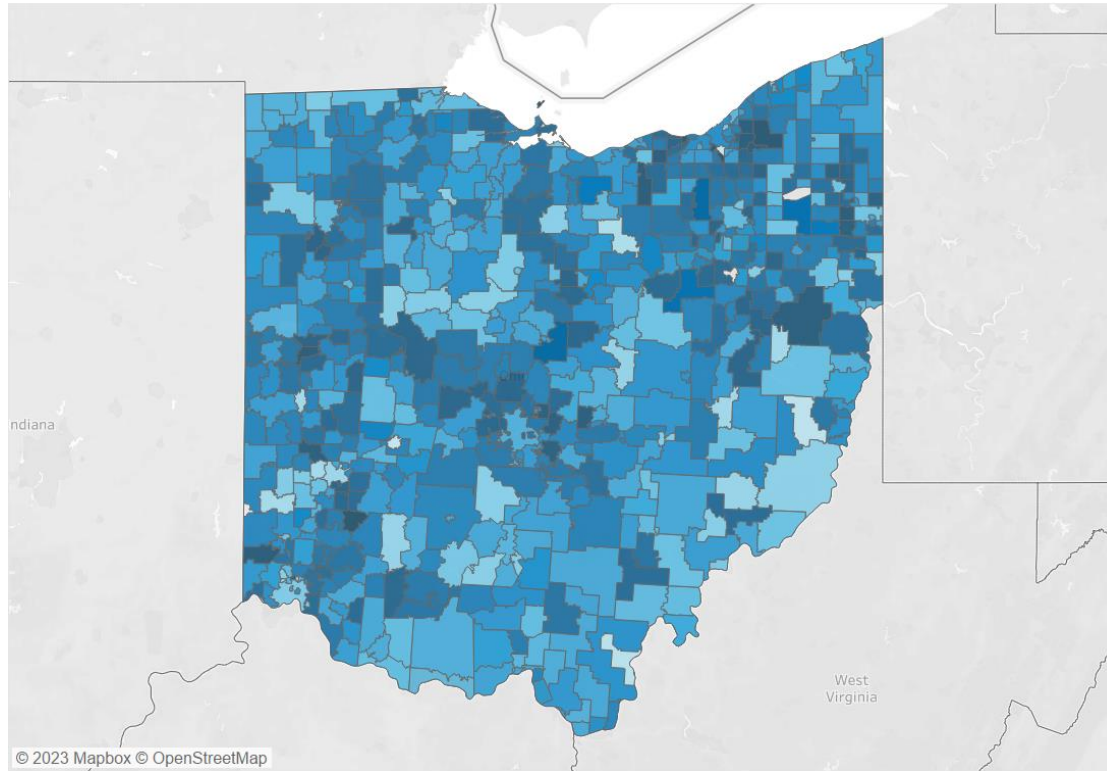OHIO HOUSING FINANCE AGENCY

Data Source

- Process: obtained file for district boundaries through National Center of Educational Statistics (NCES)
  - Cleaned in tableau prep- removed unnecessary values, manually changed some district boundaries
- ODE data: corrected names of school districts (spelling errors, variations in hyphens, prefixes)
- Connected NCES by district name to ODE, ODE to rest of data by district IRN

Student Performance Comparison

Gap Closing Percent

Map based on Longitude (generated) and Latitude (generated). Color shows details about Gap Closing Percent. Details are shown for UNSDLEA and District Name. The data is filtered on Disaggregation, which keeps All Students.

Gap Closing Pe..

8.80   100.00

Achievement Percent
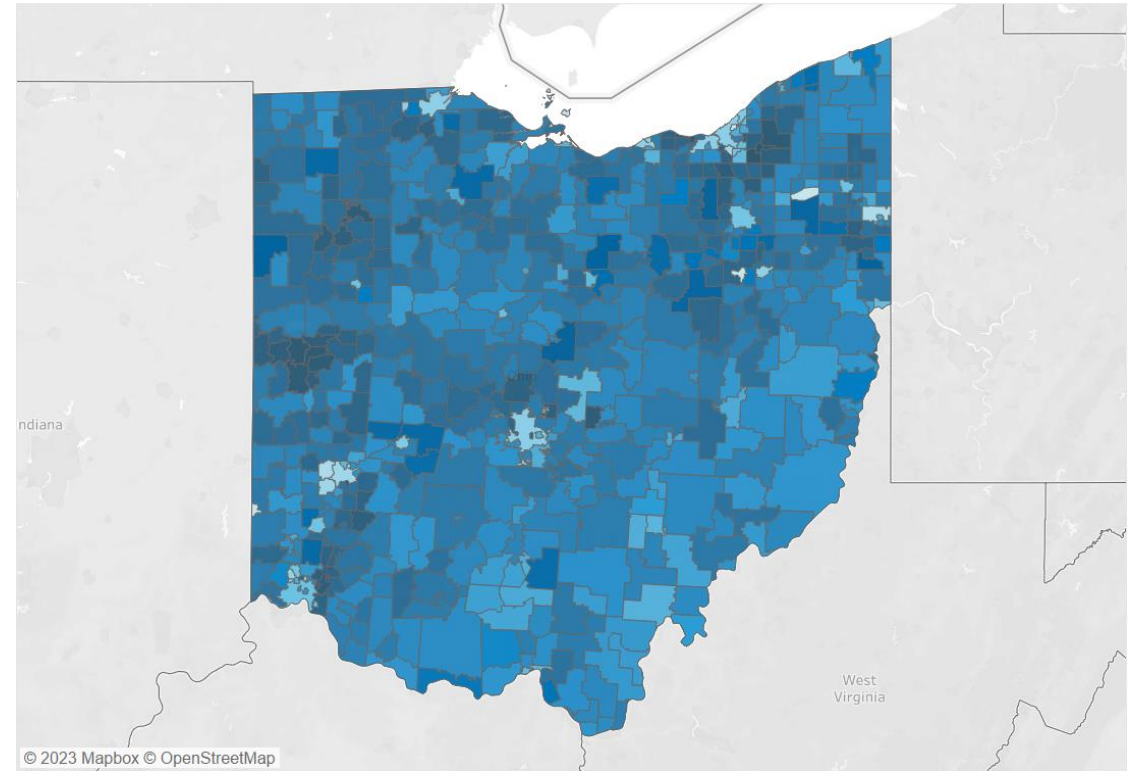
Map based on Longitude (generated) and Latitude (generated). Color shows details about Performance Index Percent 2021-2022. Details are shown for UNSDLEA and District Name.

Performance In..

40.30   102.70

State Literacy Data

Total Early Lite.
46.10 — 96.50

Early Literacy Component Star Rating
- Null
- 1
- 2
- 3
- 4
- 5
- NR
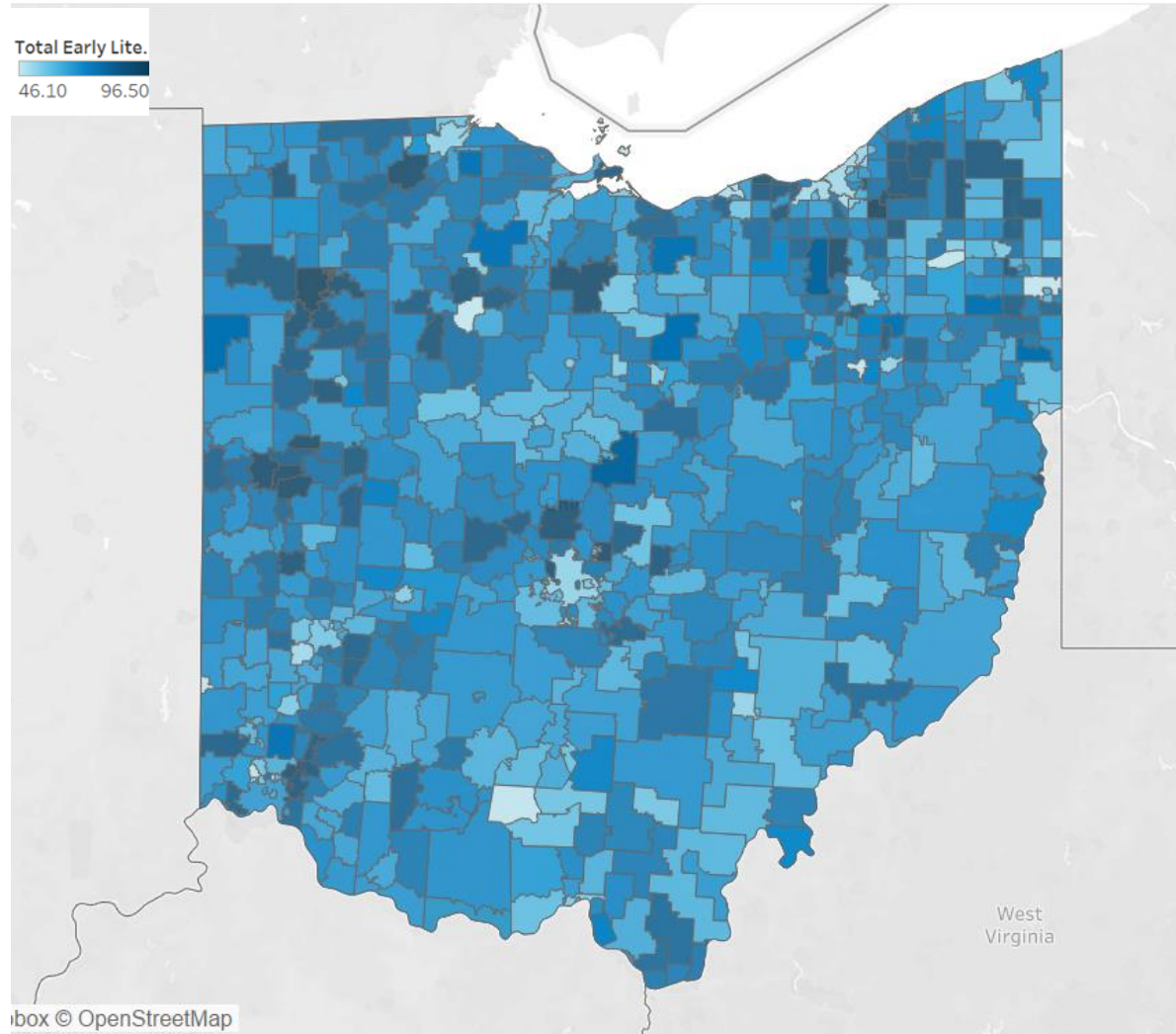
on Longitude (generated) and Latitude (generated). Color shows details about Total Early Literacy W
Percent. Details are shown for District Name and UNSDLEA.
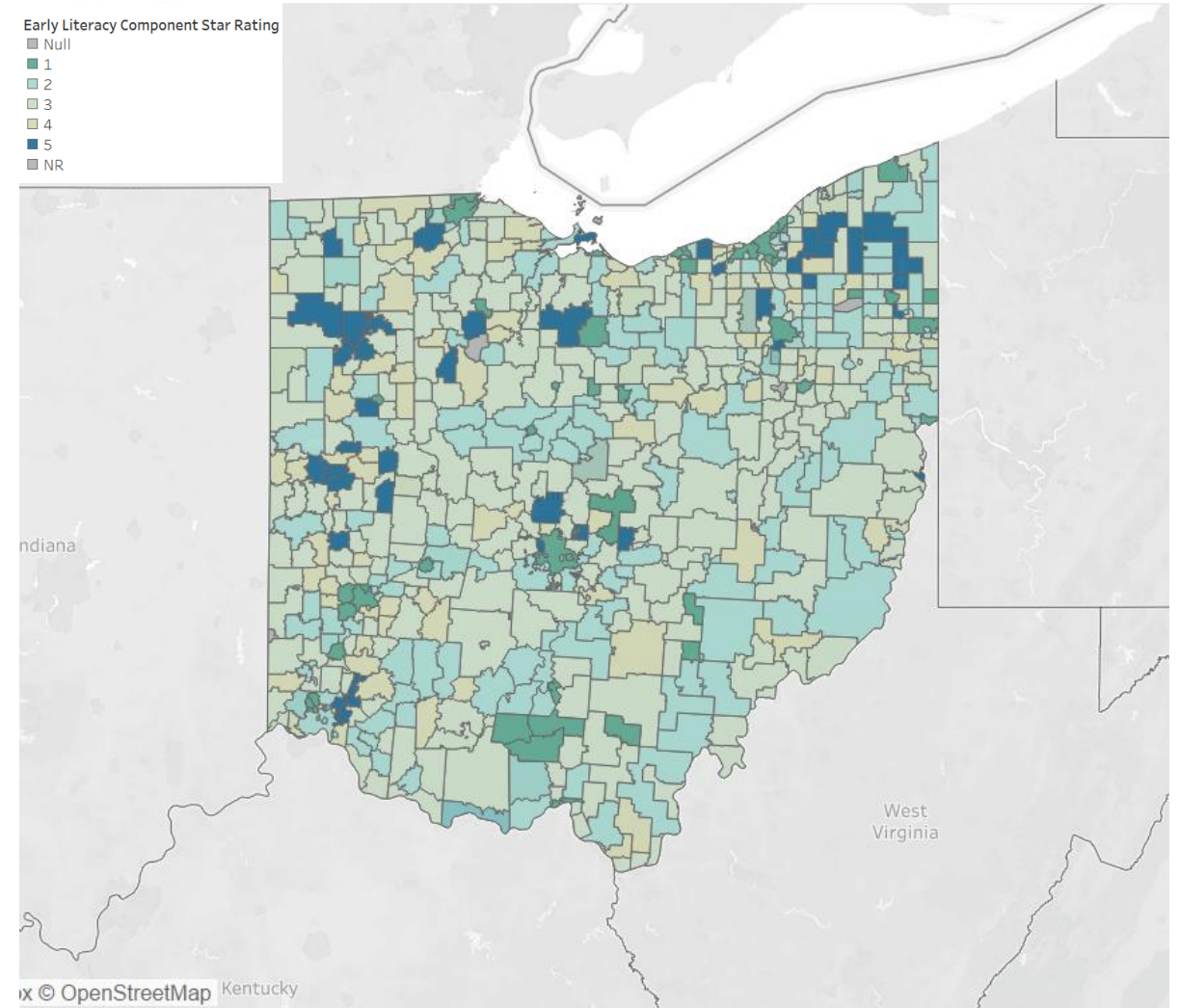
on Longitude (generated) and Latitude (generated). Color shows details about Early Literacy Componer
nown for UNSDLEA and District Name.

Other Maps

% Students Homeless
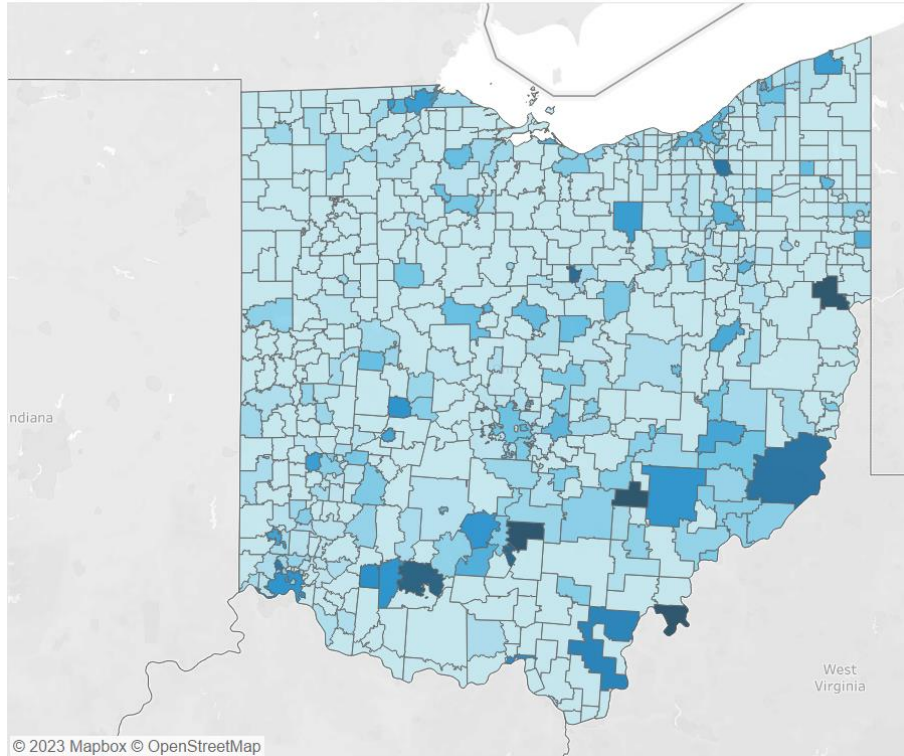
- Achievement Rating
- Achievement Percent
- Chronic Absenteeism
- Gap Closing Percent
- Literacy Weighted Percent
- Percent of Third Graders Promoted
- Kindergarteners Not on Track
- Total Students Off Track
- Graduation Rate
- Graduation Star Rating
- Students Experiencing Homelessness

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OERC Higher Education Employment Data

General Demographic Findings[1]

- Similar to existing dashboards
- Common industries associated with each award
- Number of awards in each category earned
- Changes in distribution of awards over time
- Highest earning industries

Industry by Award Group
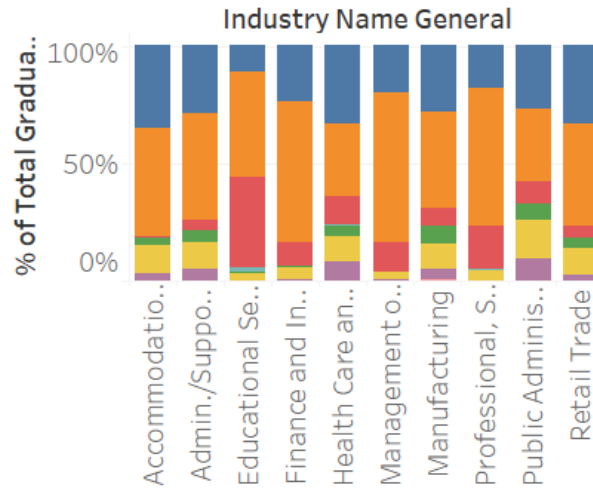
Graduates per Program

Graduates by Year

Earnings by Industry
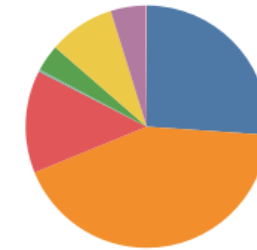
Award Group
- Associate's d..
- Bachelor's de..
- Graduate deg..
- Graduate-lev..
- Industry Cre..
- Less than fou..
- State License
- Technical Ass..

Cohort Year
2009 to 2019 and Null values
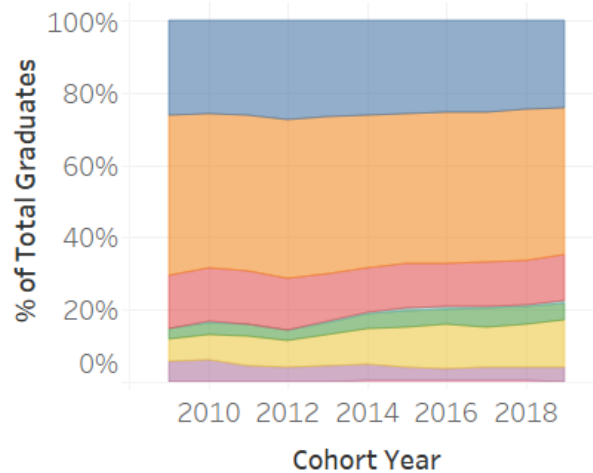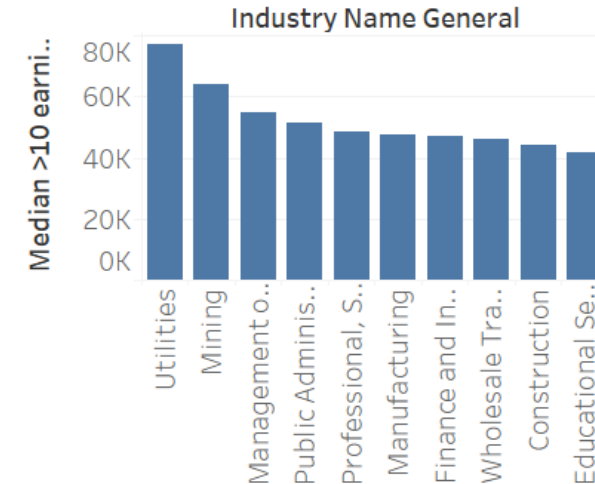
Are Top Industries Also The Most Lucrative?

Average Earnings

Year	Management of Companies	Mining	Utilities
2009	$62,042	$70,824	$82,943
2010	$63,325	$66,833	$85,987
2011	$60,655	$62,464	$80,364
2012	$59,591	$73,933	$79,920
2013	$57,060	$47,400	$74,806
2014	$58,585	$61,675	$77,966
2015	$57,397	$54,000	$70,028
2016	$55,049	$48,600	$70,639
2017	$53,400		$81,696
2018	$50,809	$65,250	$79,013
2019	$50,466		$77,483
Grand Total	**$58,976**	**$65,145**	**$79,208**

Number Found Working

Year	Management of Companies	Mining	Utilities
2009	2.72%	0.05%	0.41%
2010	2.83%	0.04%	0.48%
2011	3.06%	0.03%	0.34%
2012	2.82%	0.01%	0.28%
2013	2.76%	0.01%	0.13%
2014	2.79%	0.01%	0.15%
2015	2.76%	0.01%	0.23%
2016	2.65%	0.01%	0.12%
2017	2.69%	0.00%	0.28%
2018	2.49%	0.02%	0.29%
2019	2.34%	0.00%	0.18%
Grand Total	**2.79%**	**0.02%**	**0.28%**

	Column 1	Column 2
Column 1	1	
Column 2	-0.14281	1

- Very weak negative relationship (correlation) between industry distribution and earnings

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Evolution of Different Career Paths[2]
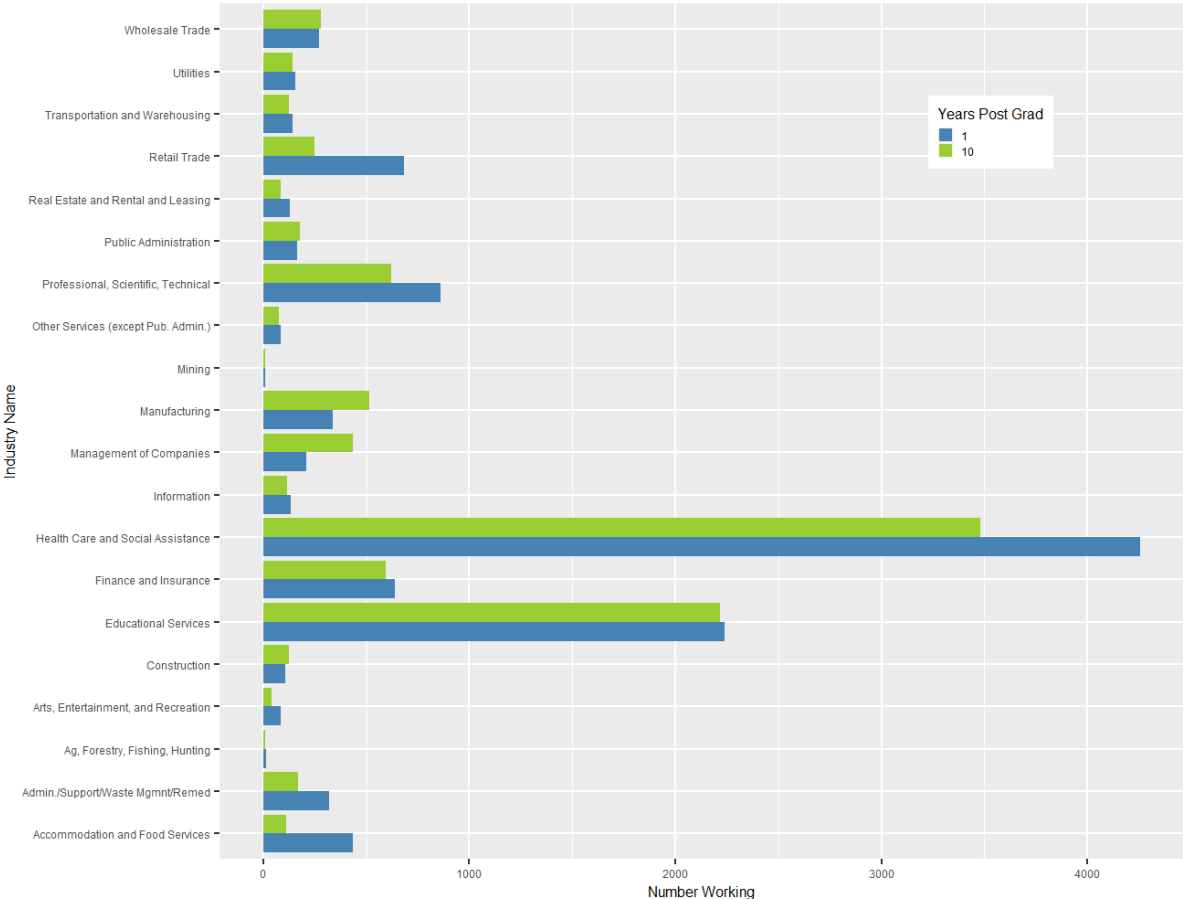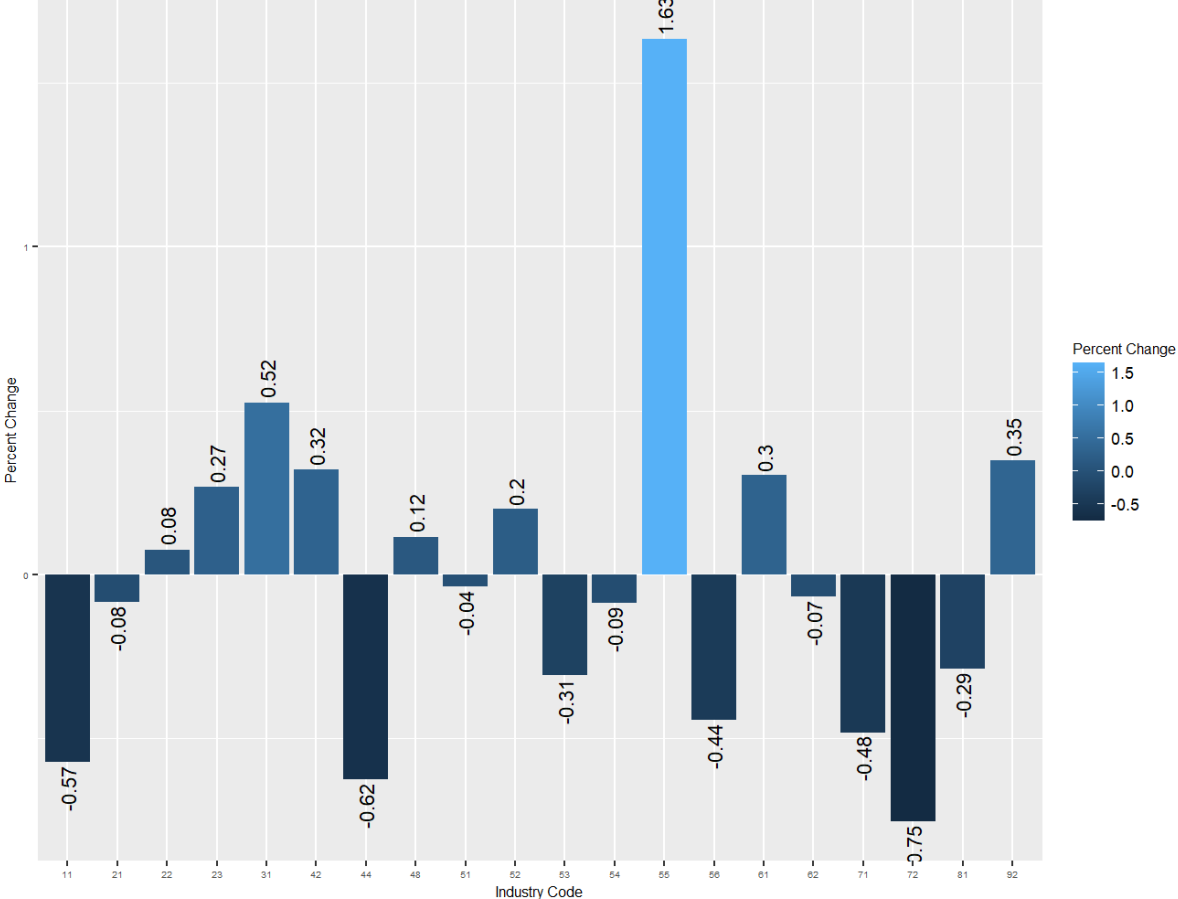
Relationship Between Degree Subject and Industry

Subject Name General

Industry Name General	Business, Management, Marketing, and Related ..	Computer and Information Sciences an..	Education	Engineering Technologies and Engin..	Health Professions and Related Programs	Homeland Security, Law Enforcement, Firefighti..	Legal Professions and Studies	Parks, Recreation, Leisure, and Fitness Stu..	Social Sciences	Visual and Performing Arts
Arts, Entertainment, and Recreation	12%	8%	10%	8%	15%	14%	7%	10%	7%	10%
Construction	14%	10%	9%	11%	15%	14%	7%	7%	6%	8%
Wholesale Trade	13%	11%	9%	9%	15%	13%	7%	8%	6%	10%
Accommodation and Food Services	13%	9%	9%	8%	14%	13%	8%	8%	8%	10%
Ag, Forestry, Fishing, Hunting	19%	5%	8%	10%	23%	17%	1%	4%	6%	7%
Information	13%	12%	10%	9%	15%	11%	8%	7%	7%	10%
Mining	23%	10%	4%	15%	15%	17%	4%	4%	7%	1%
Other (combined small categories)	28%	6%	8%	5%	23%	4%	3%	8%	9%	6%
Public Administration	11%	8%	9%	8%	15%	14%	10%	8%	9%	8%
Real Estate and Rental and Leasing	13%	9%	8%	10%	16%	12%	8%	8%	7%	9%
Utilities	18%	8%	6%	14%	14%	18%	3%	5%	10%	4%
Admin./Support/Waste Mgmnt/Remed	12%	10%	9%	9%	15%	12%	9%	8%	8%	9%
Educational Services	12%	10%	10%	9%	14%	12%	9%	8%	8%	9%
Finance and Insurance	13%	9%	9%	7%	15%	12%	11%	8%	7%	8%
Health Care and Social Assistance	12%	10%	10%	7%	14%	12%	10%	8%	9%	8%
Management of Companies	12%	10%	9%	9%	15%	12%	10%	7%	7%	9%
Other Services (except Pub. Admin.)	13%	8%	10%	8%	15%	12%	8%	9%	8%	9%
Professional, Scientific, Technical	12%	11%	9%	9%	14%	11%	10%	7%	9%	9%
Retail Trade	12%	10%	9%	8%	14%	12%	9%	8%	8%	9%
Transportation and Warehousing	13%	10%	9%	10%	14%	13%	7%	8%	7%	9%
Manufacturing	13%	10%	8%	11%	13%	12%	8%	7%	7%	9%

Award Group

(All) ▾

Years Post Grad

1   10

Cohort Year

2009   2019

% of Total CNT(Subject...

1%   28%

% of Total Count of Subject Name General broken down by Subject Name General vs. Industry Name General. Color shows % of Total Count of Subject Name General. The marks are labeled by % of Total Count of Subject Name General. The data is filtered on Years Post Grad, Cohort Year and Award Group. The Years Post Grad filter ranges from 1 to 10. The Cohort Year filter ranges from 2009 to 2019 and keeps Null values. The Award Group filter keeps 8 of 8 members. The view is filtered on Subject Name General, which keeps 10 of 41 members. Percents are based on each row of the table.

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Further Research

- Relationship between award and outcome

- Breakdown of graduate demographics

- How Ohio colleges/programs influence degree and industry outcomes

- Scholar housing and education data

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Appendix & Questions

1. Distribution of Awards

Proportion of Graduates Year											
Award Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Grand Total
Associate's degree	22.26%	21.23%	21.34%	21.93%	22.05%	19.66%	20.45%	20.74%	21.07%	20.64%	21.11%	21.28%
Bachelor's degree	28.18%	27.65%	26.23%	26.69%	25.63%	23.71%	24.63%	24.23%	24.43%	24.07%	24.62%	25.99%
Graduate degree	18.74%	18.12%	18.30%	18.37%	17.88%	17.09%	16.72%	16.66%	16.55%	17.24%	16.73%	17.79%
Graduate-level certificate	4.15%	3.75%	3.51%	3.72%	3.89%	4.10%	4.18%	4.09%	3.94%	3.96%	4.42%	3.90%
Industry Credential	6.38%	6.79%	6.96%	6.70%	6.81%	8.71%	8.61%	7.69%	7.83%	7.72%	7.31%	7.24%
Less than four-year certif	15.73%	18.01%	19.00%	18.53%	18.92%	18.60%	17.91%	18.29%	18.36%	19.09%	19.04%	18.12%
State License	3.00%	3.05%	3.17%	2.84%	3.07%	4.28%	3.89%	3.87%	3.83%	3.41%	3.61%	3.34%
Technical Assessment	1.57%	1.41%	1.50%	1.23%	1.76%	3.84%	3.61%	4.43%	4.00%	3.87%	3.17%	2.32%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

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2. Percent of Total Graduates in Each Industry

Sum of >10 foun Column

w Labels	Accommodation and Food Services	Admin./Support/Waste Mgmnt/Remed	Ag, Forestry, Fishing, Hunting	Arts, Entertainment, and Recreation	Construction	Educational Services	Finance and Insurance	Health Care and Social Assistance	Information	Management of Companies	Manufacturing	Mining	Other Services (except Pub. Admin.)	Professional, Scientific, Technical	Public Administration	Real Estate and Rental and Leasing	Retail Trade	Transportation and Warehousing	Utilities	Wholesale Trade	Grand Total
1	6.89%	5.15%	0.07%	1.60%	1.97%	12.45%	3.74%	31.26%	1.53%	2.09%	6.88%	0.01%	1.79%	7.58%	2.81%	0.69%	9.43%	1.56%	0.19%	2.33%	100.00%
2	5.17%	4.55%	0.06%	1.37%	2.00%	13.47%	4.19%	31.87%	1.60%	2.45%	7.41%	0.02%	1.68%	7.99%	3.20%	0.71%	7.92%	1.60%	0.23%	2.53%	100.00%
3	4.14%	4.27%	0.04%	1.16%	2.01%	14.37%	4.50%	32.28%	1.64%	2.75%	7.85%	0.03%	1.53%	7.91%	3.41%	0.71%	6.89%	1.57%	0.25%	2.70%	100.00%
4	3.45%	4.04%	0.04%	1.05%	2.00%	15.15%	4.72%	32.57%	1.63%	2.92%	8.11%	0.03%	1.45%	7.80%	3.53%	0.71%	6.13%	1.58%	0.27%	2.82%	100.00%
5	2.96%	3.76%	0.03%	0.99%	1.95%	15.83%	4.94%	32.57%	1.63%	3.08%	8.35%	0.02%	1.45%	7.73%	3.62%	0.71%	5.60%	1.57%	0.30%	2.90%	100.00%
6	2.64%	3.50%	0.02%	0.92%	2.00%	16.54%	5.09%	32.29%	1.65%	3.16%	8.54%	0.02%	1.38%	7.76%	3.74%	0.68%	5.23%	1.52%	0.32%	3.01%	100.00%
7	2.32%	3.34%	0.01%	0.87%	2.02%	17.06%	5.33%	32.02%	1.66%	3.26%	8.64%	0.02%	1.33%	7.72%	3.87%	0.66%	4.89%	1.55%	0.37%	3.06%	100.00%
8	2.12%	3.24%	0.02%	0.81%	2.06%	17.52%	5.51%	31.29%	1.67%	3.42%	8.85%	0.02%	1.36%	7.59%	3.97%	0.65%	4.73%	1.56%	0.42%	3.20%	100.00%
9	1.99%	3.06%	0.01%	0.77%	2.08%	18.00%	5.49%	31.03%	1.67%	3.51%	8.95%	0.03%	1.24%	7.57%	4.09%	0.64%	4.59%	1.57%	0.47%	3.24%	100.00%
10	1.87%	2.90%	0.01%	0.72%	2.08%	18.85%	5.57%	30.99%	1.57%	3.49%	8.85%	0.01%	1.32%	7.39%	4.18%	0.55%	4.34%	1.62%	0.52%	3.16%	100.00%
Grand Total	**4.11%**	**4.13%**	**0.04%**	**1.16%**	**2.00%**	**14.91%**	**4.61%**	**31.94%**	**1.61%**	**2.79%**	**7.92%**	**0.02%**	**1.53%**	**7.76%**	**3.44%**	**0.69%**	**6.75%**	**1.57%**	**0.28%**	**2.75%**	**100.00%**