

# Education and Knowledge Creation



11th

Largest **education and knowledge creation** cluster in Florida.



6,131

Employed in the **education and knowledge creation** cluster.



296

Establishments in the **education and knowledge creation** cluster.



0.8%

Average annual employment growth in the **education and knowledge creation** cluster.



187

Job seekers from top 20 occupations in the **education and knowledge creation** cluster.

# Industry Overview

The education and knowledge creation cluster in this section includes private educational institutions and organizations that provide tutoring and training programs. Specifically, these private institutions include business and secretarial schools, professional training programs, junior colleges and four-year universities. It also includes research organizations in biotechnology, physical, engineering and life sciences. This cluster does not include public sector educational institutions, which includes charter schools.

The region has a total of 90 private schools (grades K through 12) across the five counties, serving almost 12,000 students. The average tuition in the region is slightly higher than the national average and as well as for the state.

This sector provides significant employment opportunities, ranking 11th in the state for employment in education and knowledge creation. This cluster includes both traded and local cluster data. Traded industries are those institutions that are concentrated in the region, such as universities and colleges, which provide services that span the country. The data shows that employment has been stable over a long-term period (2009-2015). In contrast, the local industry data represents institutions, such as private schools (grades K through 12), that are dispersed across the region and serve the local market. In this case, the service being provided is education and knowledge creation, both of which contain positive spillovers for both the region and the nation.

## Economic Profile

The education and knowledge creation cluster consists of 20 six-digit North American Industry Classification System (NAICS) codes including business and secretarial schools, professional training programs, junior colleges, and four-year universities. It also includes research organizations in biotechnology, physical, engineering, and life sciences. Average annual employment in this cluster grew 0.8 percent from 2009 to 2015. The location quotients (LQ) for this cluster’s employment relative to the state and the country were less than 1, implying that the concentration of employment in this region relative to the state and the country is lower. However, the Southwest region’s LQ for the local cluster relative to the state was close to 1 (.93).

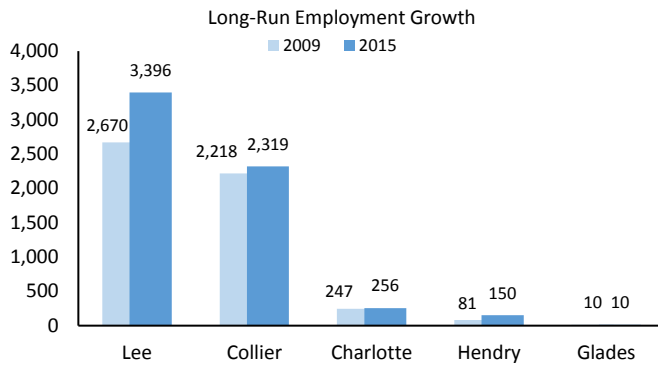
The five-county region ranked 11th out of 24 state workforce regions in employment for the traded cluster and ninth for the local cluster, with a total employment level of 6,131 in 2015. The region had 296 total establishments for the education and knowledge creation cluster in 2015. Southwest Florida saw a 1.9 percent decrease in the traded component of the employment in this cluster, and a 2.9 percent increase in the local component of education and knowledge creation employment over the past year. This compared to increases in both components at the state level, with the state gain equaling 7.1 percent. The five-county region had a 17.3 percent increase in employment from 2009 to 2015. The employment gains during this time period were below the gains by the state of Florida, which had 18.4 percent growth over the six-year period.

Education and Knowledge Creation						
Economic Profile						
	Southwest Florida			Florida		
	Traded	Local	Total	Traded	Local	Total
Employment, 2015	2,622	3,509	6,131	110,444	79,655	190,099
Number of Establishments, 2015	170	126	296	4,146	2,873	7,019
Short-run employment growth, 2014 to 2015	-1.9%	2.9%	0.8%	11.3%	1.8%	7.1%
Long-run employment growth, 2009 to 2015	0.4%	34.2%	17.3%	19.7%	16.5%	18.4%
Average annual employment growth, 2009 to 2015	0.1%	5.0%	0.8%	3.7%	3.1%	3.4%
Workforce Region Employment Ranking, 2015	11th	9th	11th	--	--	--
Location Quotient, Relative to Florida, 2015	0.50	0.93	--	--	--	--
Location Quotient, Relative to United States, 2015	0.28	0.78	--	0.56	0.84	--

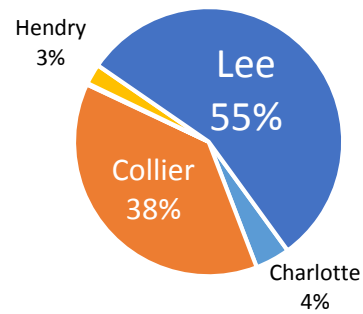
Source: County Business Patterns: 2015

# Employment by County

Education and Knowledge Creation



Education and Knowledge Creation Employment



Southwest Florida’s employment in both traded and local clusters for education and knowledge creation totaled 6,131 employees in 2015. Lee County was the largest contributor to the cluster with 3,396 employees, or 55.4 percent of the total employment among the five counties. This was followed by Collier County, with a total of 2,319 employees, or nearly 38 percent of total employment in the education and knowledge creation cluster. Employment in the remaining three counties was significantly smaller. Adding up the employees from Charlotte, Hendry and Glades amounted to just under 7 percent of the total.

## Education and Knowledge Creation Employment By County

County	Traded	Local	Total	Percent of Total Employment
Charlotte	110	146	256	4.2%
Collier	1,226	1,093	2,319	37.8%
Glades	0	10	10	0.2%
Hendry	80	70	150	2.4%
Lee	1,206	2,190	3,396	55.4%
<b>Southwest Florida</b>	<b>2,622</b>	<b>3,509</b>	<b>6,131</b>	<b>100.0%</b>

Source: County Business Patterns: 2015

The number of employees by establishment in the education and knowledge creation cluster congregated primarily in establishments that had fewer than 50 employees. Combining Collier and Lee County, just two establishments employed between 250 and 999 workers. About half of the establishments in Southwest Florida employed less than five workers, while 90 percent employed up to 49 workers. Both Hendry and Glades counties had a total of seven establishments, largely employing less than five workers.

## Education and Knowledge Creation Establishments By County

County	Number of Employees in Establishment									Total
	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1000+	
Charlotte	16	7	1	5	0	0	0	0	0	29
Collier	43	17	13	15	5	4	0	1	0	98
Glades	2	0	0	0	0	0	0	0	0	2
Hendry	3	0	0	2	0	0	0	0	0	5
Lee	82	25	13	22	10	9	1	0	0	162
<b>Southwest Florida</b>	<b>146</b>	<b>49</b>	<b>27</b>	<b>44</b>	<b>15</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>296</b>

Source: County Business Patterns: 2015

Southwest Florida's education and knowledge creation cluster was a source of major employment growth for Southwest Florida from 2009 to 2015, with a 17.3 percent increase in employment. The fastest growth was in the local cluster component, which grew 34.2 percent over the six-year period, while the traded cluster grew only 0.4 percent over the same time span. Growth rates ranged widely among the five counties. Hendry County had the largest overall growth in the education and knowledge created cluster, growing 85.2 percent overall. Most of the growth came from the traded cluster (300 percent increase from 2009 to 2015), as well as some growth from the local cluster (14.8 percent increase). Lee County had the second-largest growth in the region, growing 27.2 percent over six years. Local cluster growth was substantially higher than growth from the traded cluster (37.8 percent versus 11.6 percent). Collier County had a 4.6 percent increase in the education and knowledge creation cluster. Despite the fact that the county had a decrease from the traded portion of the cluster (12.5 percent decrease), the county had a 33.8 percent increase from the local portion. Finally, Charlotte County had a 3.6 percent increase in this cluster, with all the growth coming from the local portion of the subcluster. Glades County had no change over the six-year span.

## Education and Knowledge Creation Five Year Employment Growth By County

County	Traded			Local			Total		
	2009	2015	Percent Change	2009	2015	Percent Change	2009	2015	Percent Change
Charlotte	110	110	0.0%	137	146	6.6%	247	256	3.6%
Collier	1,401	1,226	-12.5%	817	1,093	33.8%	2,218	2,319	4.6%
Glades	0	0	N/A	10	10	0.0%	10	10	0.0%
Hendry	20	80	300.0%	61	70	14.8%	81	150	85.2%
Lee	1,081	1,206	11.6%	1,589	2,190	37.8%	2,670	3,396	27.2%
<b>Southwest Florida</b>	<b>2,612</b>	<b>2,622</b>	<b>0.4%</b>	<b>2,614</b>	<b>3,509</b>	<b>34.2%</b>	<b>5,226</b>	<b>6,131</b>	<b>17.3%</b>

Source: County Business Patterns: 2015

## Employment by Subcluster

The table below shows the types of education and knowledge creation programs and schools that comprise the traded and local education cluster. The highest employment occurs in the colleges, universities and professional schools under the traded education cluster, representing about 40.7 percent of the traded portion of the cluster and 21 percent of the total cluster. In the local education cluster alone, elementary and secondary schools account for the largest proportion of employment, for both the local cluster alone as well as for the combination of the two education clusters (nearly 47 percent).

## Education and Knowledge Creation Employment By Subcluster

Subcluster	Employment	Percent of Total Employment
<i>Traded Education</i>		
Colleges, Universities, and Professional Schools	1,068	17.4%
Training Programs	796	13.0%
Research Organizations	649	10.6%
Professional Organizations	61	1.0%
Educational Support Services	48	0.8%
<i>Local Education</i>		
Elementary and Secondary Schools	2,902	47.3%
Job Training Services	474	7.7%
Recreational and Other Services	133	2.2%
<b>Total</b>	<b>6,131</b>	<b>100.0%</b>

Source: County Business Patterns: 2015

The table below depicts disaggregated data by number of employees. From a total of 296 establishments for both traded and local education, it can be seen that most of the establishments employ 50 or less. Furthermore, about half of the 296 establishments employ less than five workers. As expected, the types of establishments with more than 50 employees are colleges, universities, professional schools, along with the elementary and secondary schools.

Education and Knowledge Creation Establishments										
By Subcluster										
Subcluster	Number of Employees in Establishment									Total
	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1000+	
<i>Traded Education</i>										
Training Programs	45	16	12	6	0	1	0	0	0	80
Research Organizations	27	5	5	4	0	2	0	0	0	43
Educational Support Services	17	3	0	1	0	0	0	0	0	21
Professional Organizations	13	1	0	1	0	0	0	0	0	15
Colleges, Universities, and Professional Schools	1	0	0	2	4	3	0	1	0	11
<i>Local Education</i>										
Elementary and Secondary Schools	6	10	8	25	8	7	1	0	0	65
Recreational and Other Services	23	7	2	0	0	0	0	0	0	32
Job Training Services	14	7	0	5	3	0	0	0	0	29
<b>Total</b>	<b>146</b>	<b>49</b>	<b>27</b>	<b>44</b>	<b>15</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>296</b>

Source: County Business Patterns: 2015

The table below shows the pattern over the six-year period of 2009-2015 in traded and local education clusters. Largest increases occurred in research organizations (239.8 percent increase), job training services (183.8 percent increase), and universities and colleges (62.1 percent increase). Major declines occurred in training programs (51.1 percent decrease), educational support services (34.2 percent decrease), and recreational and other services (17.9 percent decrease).

Education and Knowledge Creation Long-Run Employment Growth				
By Subcluster				
Subcluster	Employment		Percent Change	Average Annual Percent Change
	2009	2015		
<i>Traded Education</i>				
Research Organizations	191	649	239.8%	22.6%
Colleges, Universities, and Professional Schools	659	1,068	62.1%	8.4%
Professional Organizations	62	61	-1.6%	-0.3%
Educational Support Services	73	48	-34.2%	-6.7%
Training Programs	1,627	796	-51.1%	-11.2%
<i>Local Education</i>				
Job Training Services	167	474	183.8%	19.0%
Elementary and Secondary Schools	2,285	2,902	27.0%	4.1%
Recreational and Other Services	162	133	-17.9%	-3.2%
<b>Total</b>	<b>5,226</b>	<b>6,131</b>	<b>17.3%</b>	<b>2.7%</b>

Source: County Business Patterns: 2015

# Workforce Ranking

The five counties representing the Southwest Florida region ranked 11th among all other regions in the state for employment in the education and knowledge creation cluster. This represents a little over 6 percent of the state's total employment of 95,129 in 2015 for this cluster.

Education and Knowledge Creation Workforce Rankings		
Rank	Workforce Region	Employment Level
1	South Florida	35,262
2	Broward	24,116
3	Central Florida	23,442
4	Tampa Bay	15,322
5	Palm Beach County	12,926
6	Northeast Florida	12,586
7	Pinellas	8,566
8	Brevard	7,694
9	Flagler Volusia	7,639
10	Escarosa	6,632
<b>11</b>	<b>Southwest Florida</b>	<b>6,131</b>
12	Polk	4,563
13	Pasco Hernando	4,071
14	Suncoast	3,668
15	Research Coast	3,031
16	Capital Region	2,497
17	North Central Florida	2,405
18	Citrus Levy Marion	1,867
19	Okaloosa Walton	985
20	Gulf Coast	940
21	Florida Crown	613
22	Heartland	475
23	Chipola	305
24	North Florida	256

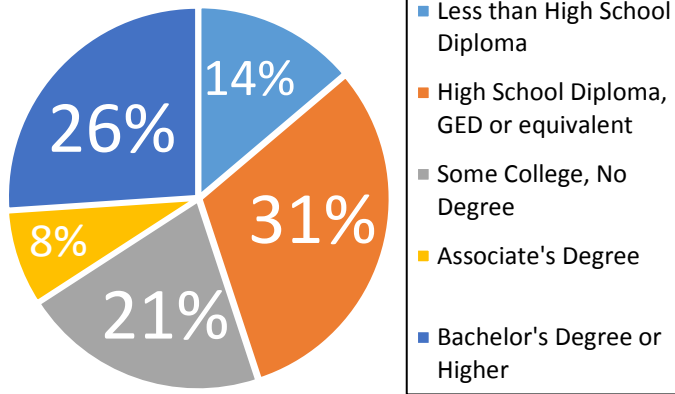
Source: County Business Patterns: 2015

## Workforce Profile

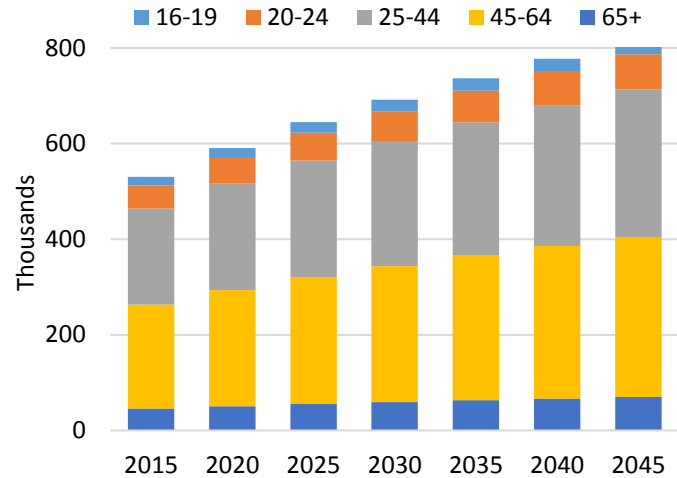
Many companies choose to operate in Southwest Florida due to its workforce. Of the region's adult population, 26 percent have a Bachelor's Degree or higher, while 86 percent have at least a high school diploma. Florida Gulf Coast University conferred 2,331 Bachelor's Degrees to students during the 2015-2016 academic year, while Florida Southwestern State College, with its four campuses throughout the region, conferred 1,942 Associate's Degrees and 341 Bachelor's Degrees during the 2014-2015 academic year. Other educational institutions serving the area include Hodges University in Naples and Kaiser University in Fort Myers. Meanwhile, regional training programs, such as CareerSource Florida, provide training programs and certificates in numerous areas. Furthermore, the composition of the workforce is expected to change as the population grows over the next 25 years. Southwest Florida's population is expected to grow 50 percent by 2045, expanding the region's customer base while increasing its labor force by 54 percent.



## Educational Attainment



## Projected Labor Force



## Education and Knowledge Creation Occupations By Total Employed

Occupation	Total Working Across All Industries	Number of Available Applicants	Number of Graduates	Entry Wage	Median Wage	Experienced Wage	Education Level
Elementary School Teachers, Except Special Education	3,960	7	44	\$25.59	\$29.54	\$33.69	Bachelor's Degree
Childcare Workers	2,641	52	2	\$8.82	\$10.31	\$11.94	PSAV
Teacher Assistants	2,273	23	0	\$12.94	\$16.72	\$18.63	PSAV
Secondary School Teachers, Except Special and Career/Technical Education	2,240	4	7	\$25.56	\$30.86	\$35.06	Bachelor's Degree
Middle School Teachers, Except Special and Career/Technical Education	1,973	4	7	\$25.23	\$29.73	\$33.89	Bachelor's Degree
Teachers and Instructors, All Other	952	18	0	N/R	N/R	N/R	Bachelor's Degree
Preschool Teachers, Except Special Education	943	6	17	\$9.02	\$11.04	\$14.20	Some College
Self-Enrichment Education Teachers	575	3	0	\$9.17	\$13.82	\$19.96	PSAV
Child, Family, and School Social Workers	511	20	0	\$13.93	\$18.29	\$23.01	Master's Degree or Higher
Career/Technical Education Teachers, Secondary School	430	6	0	\$25.68	\$34.20	\$38.75	Bachelor's Degree
Education, Training, and Library Workers, All Other	417	9	0	\$20.48	\$37.48	\$39.84	Bachelor's Degree
Educational, Guidance, School, and Vocational Counselors	392	10	0	\$20.44	\$31.60	\$35.23	Master's Degree or Higher
Librarians	267	3	0	\$21.14	\$28.71	\$33.51	Master's Degree or Higher
Education Administrators, Elementary and Secondary	263	1	0	\$38.38	\$49.83	\$56.66	Bachelor's Degree
Business Teachers, Postsecondary	242	1	0	\$23.96	\$41.23	\$58.28	Bachelor's Degree
Health Educators	163	3	0	\$14.71	\$26.85	\$33.06	Bachelor's Degree
Vocational Education Teachers, Postsecondary	149	1	0	\$12.88	\$19.97	\$28.98	Some College
Computer Science Teachers, Postsecondary	137	0	1	\$17.57	\$31.65	\$44.70	Bachelor's Degree
Mathematical Science Teachers, Postsecondary	136	1	0	\$20.30	\$30.36	\$36.88	Master's Degree or Higher
Education Teachers, Postsecondary	134	15	0	\$24.86	\$35.98	\$42.07	Master's Degree or Higher

Source: Florida Department of Economic Opportunity, Occupational Supply/Demand Report

# Cluster Highlights

## KEY COMPANY ANNOUNCEMENTS

- In 2015, Florida Gulf Coast University broke ground at the university's Emerging Technologies Institute site. The six-acre plot houses the institute, as well as the Innovation Hub Park. Florida's Governor Rick Scott approved a \$7 million grant to complete the project last June, bringing the total cost to about \$12 million.
- In 2016, Hodges University announced the establishment of a new, one-year Licensed Practicing Nurse program. The Florida Center for Nursing in Orlando, a statewide workforce center on the industry, reports that Lee and Collier counties have nine LPN training programs out of 14 educational institutions that offer nursing programs, including four-year degree programs.
- In response to regional industry need, Florida SouthWestern State College's Supervision and Management bachelor degree program adopted four new areas of focus: Accounting, Retail Management and Marketing, Entrepreneurship, and Health Services Administration.
- Florida Southwestern State College now customizes student plans based on career goals that can combine studies in its School of Business and Technology and its School of Health Professions. The four focus areas result from a regional research initiative by Workforce Now to identify current and future talent requirements for the five counties of Southwest Florida and to highlight workforce gaps including skills and characteristics desired by regional employers.
- Collier County boasts 29 private schools serving 5000 students and a teacher ratio of 10:1. Tuition ranges from about \$8,500 for elementary education to \$14,500 for high school. Of the private schools in Collier County, 62 percent are religiously affiliated and accept 83 percent of all applicants.
- Lee County has 46 private schools that serve 6,800 students. Tuition ranges from about \$8,900 for elementary education to about \$13,500 for high school. Of the private schools in Lee County, 76 percent are religiously affiliated with a student teacher ratio of 13:1.
- Charlotte, Glades and Hendry counties have a total of 11 private schools serving about 1,300 students in total.
- Florida's State Board of Education approved a new performance funding model for Florida's 28 public state colleges in 2015. Florida SouthWestern State College (FSW) ranks 7th overall, earning the institution a "Gold Tier" rank, signifying success in a broad range of performance with great emphasis on student outcomes.
- In July 2017, two 16-year old students that participated in the Immokalee Foundation's ENGAGE Summer Academy each won \$500 college scholarships for creating the Energos app. This app informs students and parents about activities in the area that engage students in the summer, such as clubs, sports and volunteer opportunities.



# Educational Organizations

## SELECTED SCHOOLS AND TRAINING CENTERS

- Bishop Verot High School  
[www.bvhs.org](http://www.bvhs.org)
- Fort Myers Christian School  
[www.fmcs-fl.org](http://www.fmcs-fl.org)
- Naples Christian Academy  
[www.napleschristian.net](http://www.napleschristian.net)
- Agape Christian Academy  
[www.agapechristian.us](http://www.agapechristian.us)
- Florida Gulf Coast University  
[www.fgcu.edu](http://www.fgcu.edu)
- Hodges University  
[www.hodges.edu](http://www.hodges.edu)
- Community School of Naples  
[www.communityschoolnaples.org](http://www.communityschoolnaples.org)
- St. Francis Xavier  
[www.francisfortmyers.org](http://www.francisfortmyers.org)
- Seacrest Country Day School  
[www.seacrest.org](http://www.seacrest.org)
- Ave Maria University  
[www.avemaria.edu](http://www.avemaria.edu)
- Huntington Learning Center  
[huntingtonhelps.com](http://huntingtonhelps.com)
- Lorenzo Walker Technical Center  
[www.lwtc.edu](http://www.lwtc.edu)

## Education & Training

Florida's system of higher and post-secondary education provides hundreds of training programs generating advanced degrees and occupational certificates that prepare students for productive careers in our region. The state university system includes 13 institutions, while community colleges number 28. Furthermore, there are 84 private universities and occupational and technical schools in the state. A list of the top educational institutions producing graduates that work in the education and knowledge creation cluster would include the following:

- Florida Gulf Coast University  
[www.fgcu.edu](http://www.fgcu.edu)
- Hodges University  
[www.hodges.edu](http://www.hodges.edu)
- Rasmussen College  
[www.rasmussen.edu](http://www.rasmussen.edu)
- Broward College  
[www.broward.edu](http://www.broward.edu)
- University of Miami  
[www.miami.edu](http://www.miami.edu)
- Florida State University  
[www.fsu.edu](http://www.fsu.edu)
- University of Central Florida  
[www.ucf.edu](http://www.ucf.edu)
- Florida SouthWestern State College  
[www.fsw.edu](http://www.fsw.edu)
- Keiser University  
[www.keiseruniversity.edu](http://www.keiseruniversity.edu)
- Florida Atlantic University  
[www.fau.edu](http://www.fau.edu)
- Florida International University  
[www.fiu.edu](http://www.fiu.edu)
- Miami-Dade College  
[www.mdc.edu](http://www.mdc.edu)
- University of Florida  
[www.ufl.edu](http://www.ufl.edu)
- University of South Florida  
[www.usf.edu](http://www.usf.edu)

# Cluster Definition

The education and knowledge creation cluster consists of 20 six-digit North American Industry Classification System (NAICS) codes with eight subclusters including professional training programs, junior colleges and four year universities, research organizations, professional organizations and educational support services. This cluster does not include public sector educational institutions.

Education and Knowledge Creation Breakdown of Subclusters	
Subcluster/NAICS Description	6-Digit NAICS Code
<i>Training Programs</i>	
Business and Secretarial Schools	611410
Computer Training	611420
Professional and Management Development Training	611430
Flight Training	611512
Apprenticeship Training	611513
Language Schools	611630
Exam Preparation and Tutoring	611691
All Other Miscellaneous Schools and Instruction	611699
<i>Colleges, Universities, and Professional Schools</i>	
Junior Colleges	611210
Colleges, Universities, and Professional Schools	611310
<i>Educational Support Services</i>	
Educational Support Services	611710
<i>Research Organizations</i>	
Research and Development in Biotechnology	541711
Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	541712
Research and Development in the Social Sciences and Humanities	541720
<i>Professional Organizations</i>	
Professional Organizations	813920
<i>Elementary and Secondary Schools</i>	
Elementary and Secondary Schools	611110
<i>Job Training Services</i>	
Other Technical and Trade Schools	611519
Vocational Rehabilitation Services	624310
<i>Recreational and Other Services</i>	
Fine Arts Schools	611610
Automobile Driving Schools	611692

Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School