2018-2019

SEPTEMBER 10, 2018

Yavapai COLLEGE

ENVIRONMENTAL SCAN

2018-2019

PRESENTED BY: INSTITUTIONAL EFFECTIVENESS AND RESEARCH

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INTRODUCTION AND HIGHLIGHTED FINDINGS

INTRODUCTION

An environmental scan is a vital component of informed strategic planning and decision-making. The environmental scan pulls information from national, state, county, and local community levels to examine trends in the areas of competition, demographics, economics, labor force, education, and technology. The report is organized as follows:

Section I: Social and Political—this section presents current social and political trends affecting colleges and universities today.

Section II: Competition—this section addresses and summarizes Yavapai College's higher education and community education competitors.

Section III: Demographics—this section presents key demographics at the national and state level, and provides a detailed look at Yavapai County.

Section IV: Economics—this section presents economic trends impacting U.S. colleges and universities.

Section V: Labor Force—this section addresses labor force trends in Yavapai County and alignment of Yavapai College programs with workforce demands.

Section VI: Education—this section addresses education trends impacting colleges and universities. In addition to national and state trends, specific information for Yavapai County is included.

Section VII: Technology—this section addresses technology trends that higher education institutions must balance to ensure the security of information while meeting the evolving changes demanded by students.

Section VIII: Internal Scan—this section highlights Yavapai College areas related to demographics, enrollment, retention, student success and areas for improvement.

The following two pages present the key trends identified during this environmental scanning process.

HIGHLIGHTED FINDINGS

SOCIAL AND POLITICAL

- **Perceptions of Higher Education.** A 2018 New America survey found strong support for American's local colleges and universities. More than 8 in 10 respondents said community colleges are worth the cost. Similarly, 65% of people said public universities are worth the price. Asked about private and for-profit colleges and universities, people do not share the same level of support with 44% and 40% respectively saying these types of institutions are worth the cost.

- **Reauthorization of the Higher Education Act.** Last reauthorized in 2008, Congress is making progress and may reauthorize Higher Education Act by 2019. Congress will likely focus on student aid and better alignment with adult and online learners who are becoming the new "traditional student." Other areas of focus likely to be examined and debated will be regional accreditation, access, costs, for-profit regulation, internships/apprenticeships, and workforce training.

COMPETITION

- **Online competition continues to expand**. Beginning fall 2017, Arizona State University launched ASU Digital Prep that offers high schools and students dual enrollment courses. ASU digital prep offers part-time and full-time programs, hosts student events and programs on its physical campuses, and promises streamlined, VIP admissions among other touted benefits.

- **Arizona public universities ubiquitous marketing to high school seniors statewide**. State universities are using generous scholarship awards, athletic teams, and recreational facilities to attract students. Academic scholarships are available to students with a core high school GPA as low as 3.00, and many students receive a full tuition scholarship with a core GPA above 3.50.

- **Private, technical and allied health colleges compete for career students**. Despite much higher tuition, private colleges like Universal Technical Institute and Carrington College recruit traditional age students (18-24) with compelling television and online marketing and the promise of fast-track programs leading to employment.

DEMOGRAPHICS

- **Graying and growing.** Yavapai County continues to grow; however, more slowly than in past decades. Another shift is where growth is occurring—over the next five years, the age group 55 and older are forecasted to increase by almost 10,000 people. In contrast, the population 35 to 54 is projected to decline by nearly 3,000.

- **Education and poverty**. There is a direct association between educational attainment and a region's poverty rate. Poverty rates are significantly lower for County residents with a postsecondary credential. Less than high school (20.4%), high school degree/GED (16.0%), some college or associate's degree (11.5%), and bachelor's degree or higher (6.4%)

ECONOMIC

- **Unemployment and community college enrollment.** For the seventh consecutive year, Yavapai County's unemployment rate has declined. The current unemployment rate is 4.0%. Community college enrollment is negatively affected by low unemployment rates. Research has shown that for every one point change in unemployment community colleges will experience about a 2.0% change in enrollment.

- **More than 1 million Arizona workers aged 25-64 have good paying jobs that do not require a bachelor's degree**. These good paying jobs have median annual earnings of $55,000. While traditional manufacturing jobs have declined the number of good jobs in skilled-service areas such as computer technology and health care are increasing.

- **Education pays**. Over a career, a high school diploma is worth $1.3 million; a bachelor's degree is worth $2.3 million; a Ph.D. earns $3.3 million and a professional degree $3.7 million.

LABOR FORCE

- **Healthcare and Social Assistance is fastest growing industry.** The mid to high wage industry of healthcare and social assistance is the fastest growing industry in Yavapai County.

- **Yavapai College academic programs align well with industry job growth.** Cross-referencing industry sector growth with occupational growth for the next five years indicates high demand for academic programs in healthcare, culinary, hospitality, management, business and public administration, and informational technologies.

EDUCATION

- **Yavapai County high school graduates decline slightly**. Declining birth rates and the aging shift in net migration indicate the number of high school graduates will likely decline slightly over the next five years.

- **High school student performance**. More than 4 in 10 recent high school graduates attending Yavapai College enroll in a developmental course. Arizona fourth grade scores in mathematics, reading, and science are significantly lower than the national public average as measured by the National Assessment of Educational Progress (NAPE) scores. The same holds true for Arizona eighth graders in reading and science.

- **Yavapai County high school enrollments continue to decline.** The net decline between 2013 and 2018 was 779 students. The decline represents a compound average annual enrollment drop of nearly 2 percent.

TECHNOLOGY

- **Cybersecurity.** Cybersecurity remains a top concern for colleges and universities. Higher education's collaborative nature in addition to housing personal identifiable information on students related to federal financial aid continues to make colleges high-value targets for cybercriminals. In response to data breaches, federal and state governments compliance mandates are increasing and requiring college IT staffs to spend more resources (human and financial) toward data security.

- **Artificial Intelligence.** Is touch-enabled technology outdated? According to John Rome at Arizona State University, voice command technology like Amazon Echo, Google Home, or Microsoft Invoke represent the next generation of how students and colleges will access and interact with information. In fall 2017, Amazon provided 1,600 of Echo Dots to Arizona State University engineering students to develop new "skills" or voice applications. Issues to ponder range from how institutions might use voice technology to disseminate information to what are the implications for student privacy?

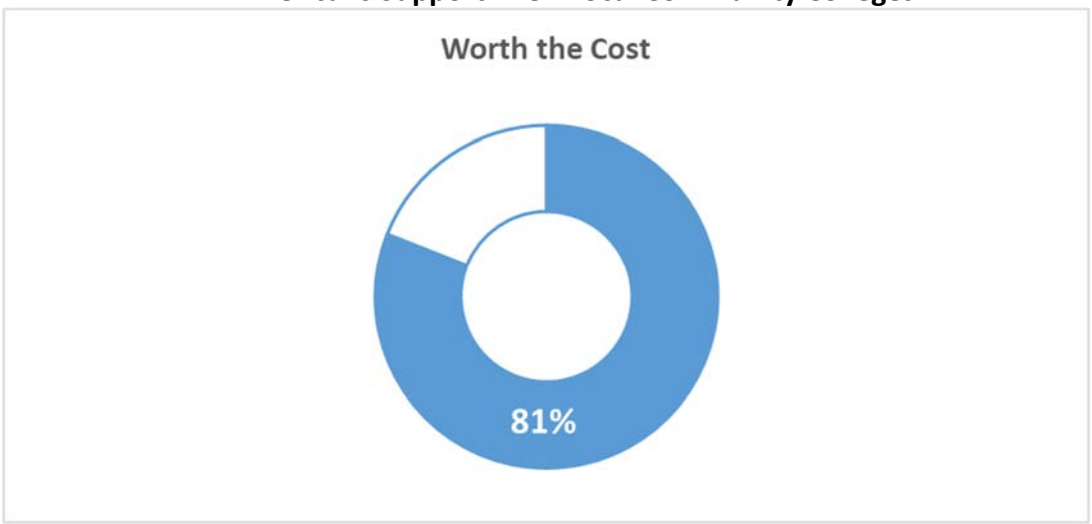
SOCIAL AND POLITICAL

This section explores current social and political trends affecting community colleges today. What are Americans' perceptions of college costs? Loan debt and the value of college a degree? Innovation and higher education's role? State investment in community colleges? Reauthorization of the Higher Education Act? Following is a summarization of these critical social and political challenges colleges are facing.

SOCIAL AND POLITICAL TRENDS

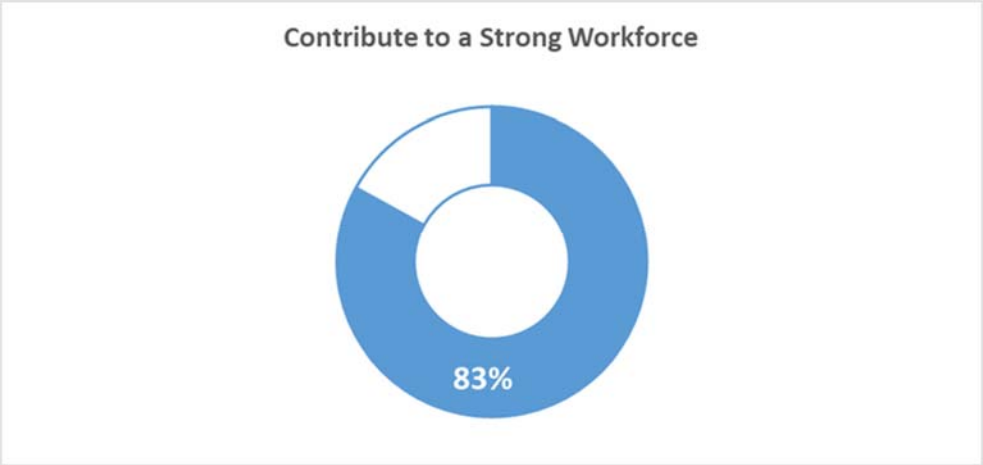
Perceptions of Higher Education. A 2018 New America survey found strong support for American's local colleges and universities. More than 8 in 10 respondents said community colleges are worth the cost. Similarly, 65% of people said public universities are worth the price. Asked about private and for-profit colleges and universities, people do not share the same level of support with 44% and 40% respectively saying these types of institutions are worth the cost.[1]

Americans Support Their Local Community Colleges



Source: New America's Annual Survey on Higher Education, 2018

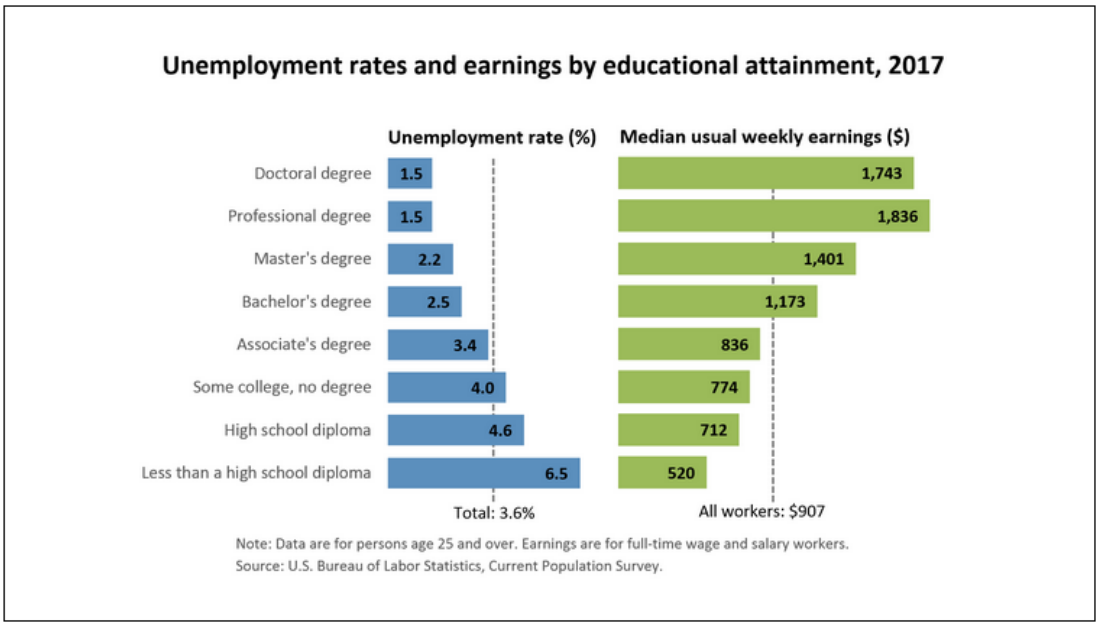
Community Colleges



Source: New America's Annual Survey on Higher Education, 2018

Other findings from the New America survey include support that Americans believe higher education is a public benefit and should be supported by government tax support (60%). Americans also want change with only 25% of respondents saying that higher education if fine the way it is.

Education and Debt. Despite some 40 million Americans having college loans, the majority (70%) of borrowers owe less than $25,000, and only 8% owe more than $75,000.[2] The key to student loans being a sound investment lie in the people completing their degree. For those finishing their degree the investment is great as evidenced by unemployment rates and median wages by educational attainment. This is further evidence that higher education is a vital component of fulfilling the American dream.



Innovation. "As an industry, higher education has been better known for inertia than for innovation." [3] Higher education institutions are uniquely positioned to take a leadership role in sponsoring innovation to address problems facing society and support a knowledge economy that is rapidly evolving. An illustrative example is Southern New Hampshire University's Sandbox Collaborative an innovative in-house consultancy and academic research and development center focused on partnerships and addressing emerging trends in education and the marketplace.

POWERED BY SNHU
sandbox
COLLABORATIVE

Companies like WeWork have innovated and reshaped the workforce environment through collaborative workspaces that connect community and workspaces. From a freelancer needing a desk to a small startup needing specialized office space, to large corporations such as General Motors and Microsoft have decided to share space to reduce costs and provide workers with a vibrant work environment.

Whether you need a desk, office suite, or entire HQ, we create environments that increase productivity, innovation, and collaboration.

Welcome to WeWork

Make a life, not just a living.

Yavapai College's partnership with RESA to establish the Additive Manufacturing Technician program is an excellent example of an innovative collaboration supporting students and industry. Innovative partnerships are crucial for education, businesses, and communities to thrive.

State Disinvestment. Arizona's investment in Yavapai College has been on a downward trend since 2012 and now represents less than 2% of the operating budget. The prospect of state funding for community colleges returning to pre-recession levels remains unlikely. For the fourth consecutive year, Pima and Maricopa, Arizona's largest community college districts, continue to receive no state support.

Reauthorization of the Higher Education Act. Last reauthorized in 2008, Congress is making progress and may reauthorize Higher Education Act by 2019. Congress will likely focus on student aid and better alignment with adult and online learners who are becoming the new "traditional student." Other areas of focus likely to be examined and debated will be regional accreditation, access, costs, for-profit regulation, internships/apprenticeships, and workforce training. [4]

COMPETITION

Today, there are more than 1,100 two-year institutions and 4,000 colleges and universities in the United States. Competition for community colleges has never been greater. These postsecondary institutions range from microcredentials and badges to trade/technical schools to community colleges to elite research-based universities. This section focuses on competition within the higher education market.

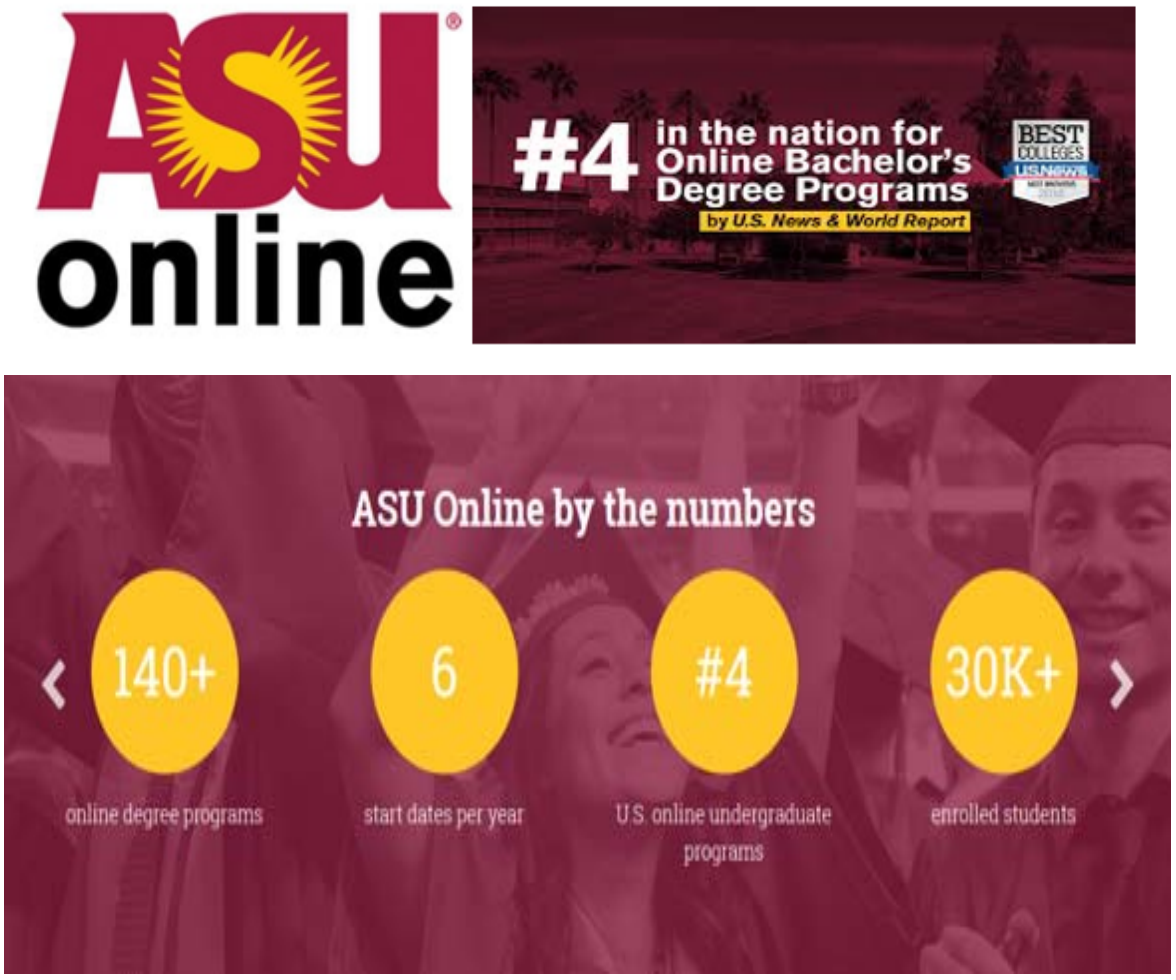
ONLINE EDUCATION

Online Education. Colleges and universities continue to invest in and expand their online programs. Nationwide, colleges continue to grow their online programs and offerings. Backed by large marketing budgets, Arizona public universities have expanded their online presence, and their efforts often reach Yavapai County residents through direct mail, radio, television, and social media channels. Most online programs offer multiple program/course start dates per semester. While online programs do not have geographic boundaries, YC's chief competitors are online programs where the offering institution also maintains a physical presence in Arizona.

Rio Salado, a Maricopa Community College, offers more than 60 online degree and certificate programs and more than 500 online classes. Rio's 2017-18 tuition rate is $85 per credit hour for out-of-district students. Many of the Rio Salado online programs are in direct competition with YC programs. Most of Rio Salado's courses offer start dates on Monday of each week. Rio is now also offering students a free demo to see what it is like to take online classes at the college.

Rio Salado College
A Maricopa Community College

Arizona State University (ASU) offers more than 140 online programs. ASU offers exclusive tuition rates ($520 to $728 per credit hour) for students enrolled in fully online programs with no additional program fees. The University of Arizona, Northern Arizona University, and private Grand Canyon University also offer online programs and coursework.

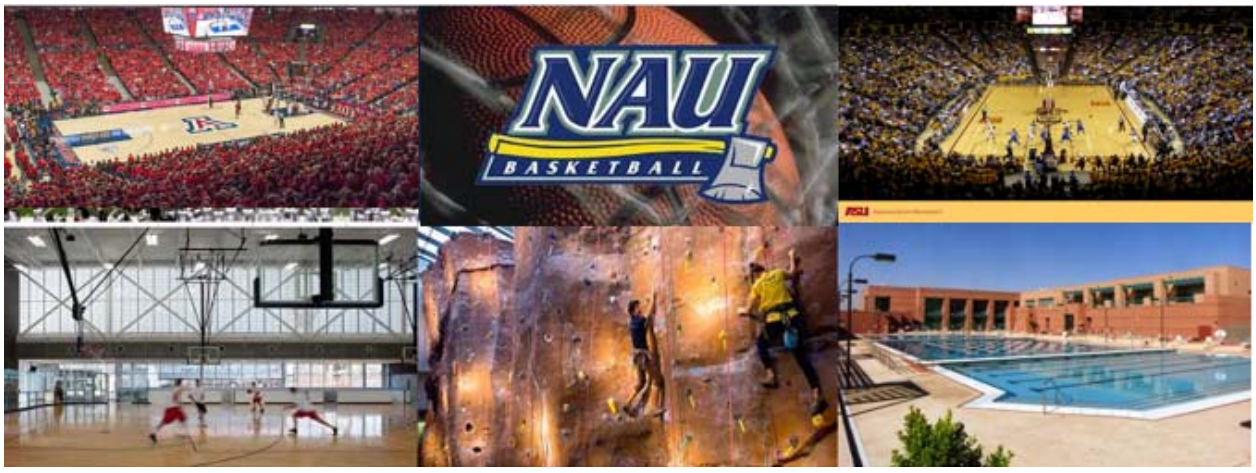


STATE UNIVERSITIES

Arizona public universities ubiquitous marketing to Arizona high school students employs television, radio, direct mail, billboards, internet, and social media outreach.

ASU, U of A, and NAU all offer athletics, state of the art recreation facilities, and generous scholarship awards covering up to 100 percent of tuition for high school students with a 3.50 core high school GPA. Academic scholarships are also available for high schools students with core GPAs as low as 3.00.

Traditional Age Student Marketing Advantages



PRIVATE FOR-PROFIT and NON-PROFIT INSTITUTIONS

Private for-profit institutions in and outside of Arizona are aggressively marketing for undergraduate residential students. While for-profit college enrollments have been decreasing in recent years, this sector may see a revival as the U.S. Department of Education has signaled deregulation in the Higher Education Act reauthorization and ending accountability efforts such as Gainful Employment reporting. For-profit colleges and universities typically target demographics served by community colleges—underserved populations, working adults, and veterans.

Grand Canyon University (GCU) is YC's primary private competitor for recent high school graduates. GCU recently received Higher Learning Commission approval to reclassify from for-profit to non-profit status. Like the State universities, GCU regularly engages local area high schools and provides campus tours including attendance at an athletic event for high school students.

Carrington College, a for-profit college focusing on health care associate and certificate programs has campuses in Phoenix, Glendale, Mesa, and Tucson. In 2017, Carrington's greater Phoenix area campuses had enrollments of 1,351 students. Carrington students are overwhelmingly in-state residents age 24 and under. Carrington also offers online programs. The college is accredited by the Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges.

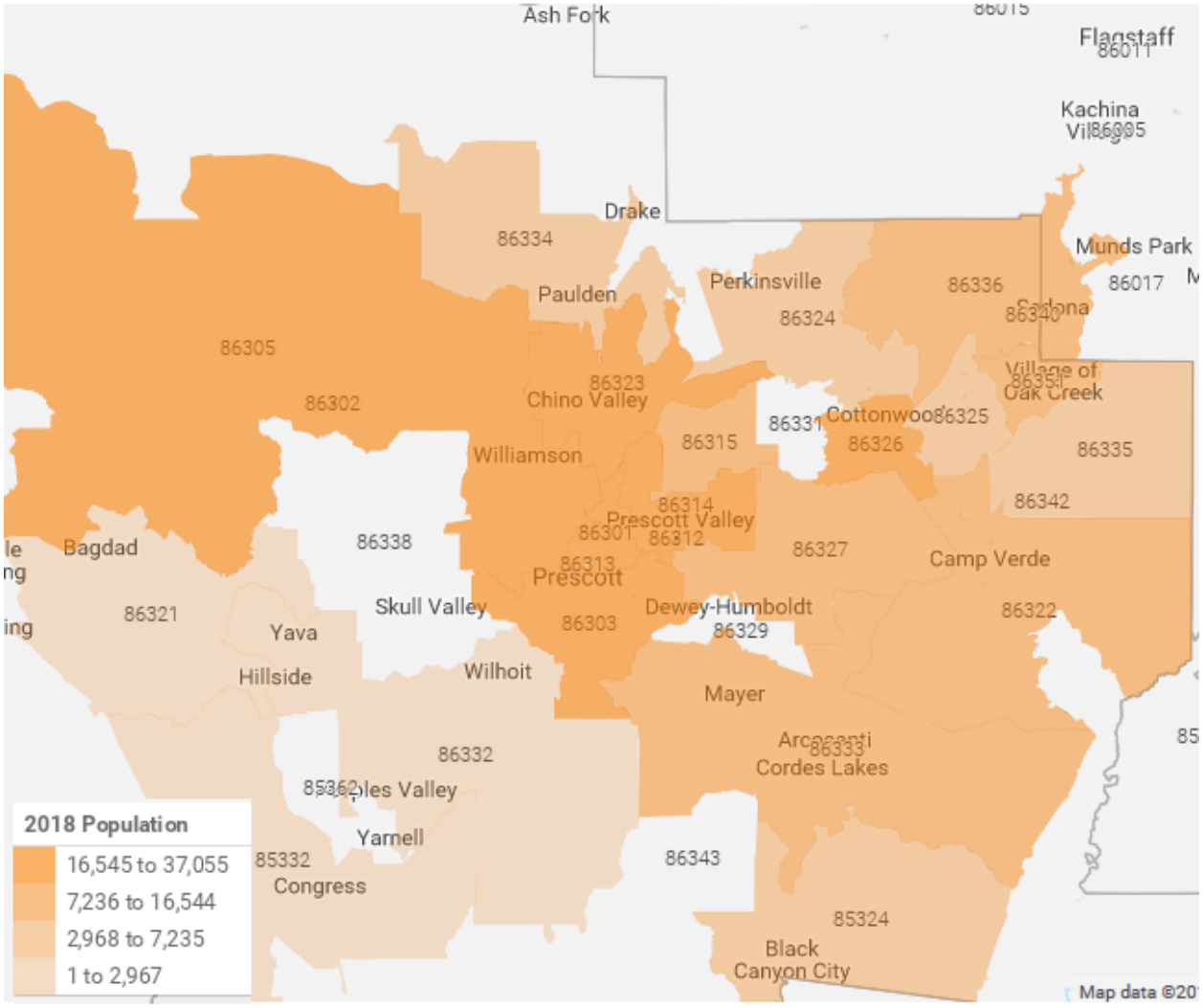
Universal Technical Institute (UTI), with campuses in Arizona and throughout the western United States, heavily markets through television ads for programs offered by YC: Automotive, Collision Repair, Diesel, Motorcycle, Computer Numerical Control, and Welding. Accredited as Title IV eligible by the Accrediting Commission of Career Schools and Colleges, UTI offers federal student aid. Tuition is significantly higher for UTI classes compared to YC; however, they start new courses every three weeks. In 2017, UTI's Avondale campus had 1,860 full-time students of which 72% were out-of-state, and 73% of attendees are age 24 or younger.

UNIVERSAL TECHNICAL INSTITUTE
Chosen by Industry. Ready to Work.

DEMOGRAPHICS

This section addresses national and state level demographic trends, but primarily focuses on Yavapai County. Yavapai County's population is spread out over 8,000 square miles, geographically divided by the Mingus Mountain range. The Prescott area in the west county and Verde Valley in the eastern portion of the county are the two primary population centers. Analyzing these areas is complex due to a lack of data collected at the sub-county level. To obtain as clear a picture as possible, this analysis used zip code level data and were divided into three regions: West County (Prescott area), East County (Verde Valley), and Balance of County.

Yavapai County Population by Location



Source: Economic Modeling Specialists, Intl., 2018

POPULATION

Yavapai County's 2018 population is 231,092. Over the next five years, the county population is forecasted to grow by 3.0%, below the Arizona (4.5%) and U.S. projections of 3.5%.

National, Arizona, and Yavapai County Population and Projections

	2010	2018	2023	Net Growth Forecast (2017-2022)	% Growth Forecast (2018-2023)
United States	308,745,538	326,881,190	338,457,818	11,576,628	3.5%
Arizona	6,392,017	7,069,515	7,389,407	319,892	4.5%
Yavapai County	211,033	231,092	238,067	6,975	3.0%

Source: EASI Analytics Inc., 2018

Examining sub-county areas, almost two-thirds of Yavapai County residents live in the west county, while about a third reside in the east county. Five-year growth forecasts for all sub-county areas are about 3%.

Yavapai County Sub Area Population and Projections

	2010	2018	2023	Net Growth Forecast (2018-2023)	% Growth Forecast (2016-2022)
Yavapai County	211,033	231,092	238,067	6,975	3.0%
West	133,038	145,776	150,166	4,390	3.0%
East	68,338	74,663	76,953	2,290	3.1%
Balance	9,657	12,295	12,667	372	3.0%

Source: EASI Analytics Inc., 2018

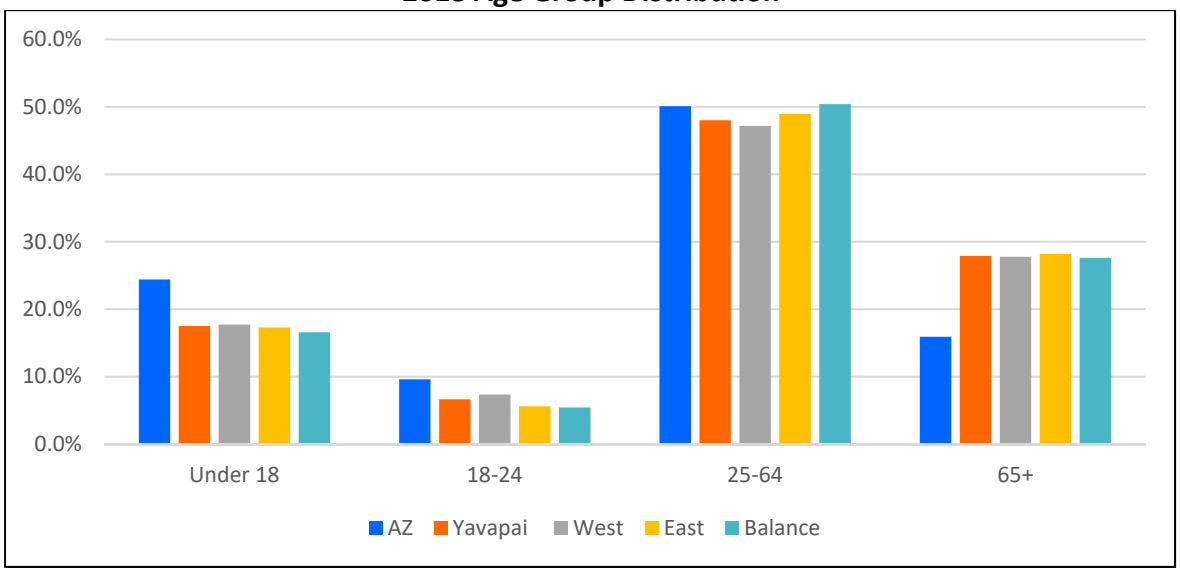
Note: Region populations are determined by zip code and may not equal county total.

The Yavapai communities expected to grow the fastest over the next 5 years include Prescott, Prescott Valley, Cottonwood, and Sedona.

AGE GROUPS

Yavapai County's share of the population age 65 and older is near twice that of the Arizona as a whole. The over 65 populations are consistent over the three sub-county areas. Nearly half of the county's population is workforce age (25-64). The west sub-county area has the largest proportion of traditional-age college students (18-24).

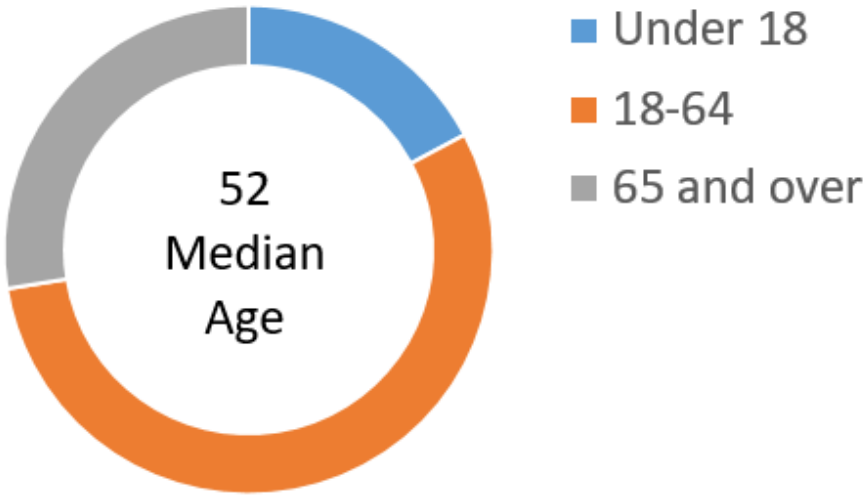
2018 Age Group Distribution



Source: EASI Analytics, Inc., 2018

Another indication of Yavapai County's significantly older population can be seen in the comparisons of median age. Yavapai County median age has continued to grow faster than the U.S. and Arizona median age. The 2018 median age for the U.S. and AZ are 38 and 37, respectively.

2018 Yavapai County by Age Group and Median Age



Source: EASI Analytics, Inc., 2018

A closer inspection of age groups shows that the largest increases will occur in the age groups 55 and over, and will add 9286 new residents by 2023. In contrast, the 45-54 age group will shrink by 2,151 along with declines in 35 to 44 (-576) and 12 to 17 (-341). These age trends represent a potentially significant shift for Yavapai College and its curriculum and program offerings.

Yavapai County Population Projections by Age Group

	2018	2023	Net Growth Forecast (2018-2023)	% Growth Forecast (2018-2023)
Population, Median Age	51.8	53.8		3.9
Population Aged 0 to 5 Years	12,612	12,386	-226	-1.8%
Population Aged 6 to 11 Years	13,615	13,575	-40	-0.3%
Population Aged 12 to17 Years	14,225	13,884	-341	-2.4%
Population Aged 18 to 24 Years	15,302	15,206	-96	-0.6%
Population Aged 25 to 34 Years	20,677	21,796	1,119	5.4%
Population Aged 35 to 44 Years	20,161	19,585	-576	-2.9%
Population Aged 45 to 54 Years	27,907	25,756	-2,151	-7.7%
Population Aged 55 to 64 Years	41,855	43,679	1,824	4.4%
Population Aged 65 to 74 Years	40,310	47,262	6,952	17.2%
Population Aged 75 to 84 Years	17,468	17,557	89	0.5%
Population Aged 85 Years & Older	6,960	7,381	421	6.0%

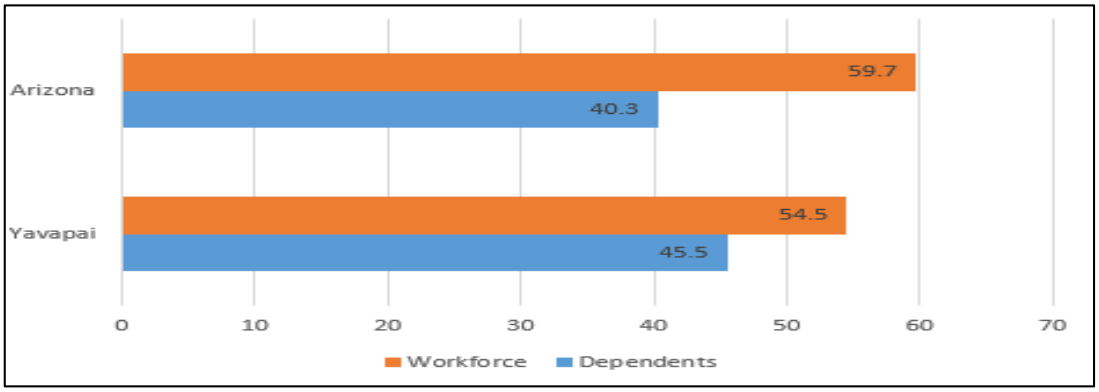
Source: Easy Analytics, Inc., 2018

DEPENDENCY RATIO

Yavapai County's dependency ratio of 83.5% is significantly higher than the state as a whole (67.5%). Additionally, both Yavapai County and the state's dependency ratio are trending up from last year of 82.2% and 66.9% respectively.

A high dependency ratio indicates there may be an increased burden on the economically active portion of the population and government to provide increased social services (education, pensions, and health care) to the economically inactive population that contributes minimally to the tax base.

Work Force vs. Dependents



Source: EASI Analytics, Inc., 2018

RACE AND ETHNICITY

The overwhelming majority (86%) of Yavapai County residents are White with a median age of 56. Hispanics make up the next largest group at 14% with a median age (28.1) that is 50% younger then the majority race.

Yavapai County Race and Ethnicity

	2018	2023	Net Growth Forecast (2018-2023)	% Growth Forecast (2018-2023)
POPULATION BY RACE				
White Population, Alone	204,059	209,288	5,229	2.6%
Black Population, Alone	1,609	1,761	152	9.4%
Asian Population, Alone	2,655	2,921	266	10.0%
American Indian and Alaska Native Alone	4,217	4,461	244	5.8%
Other Race Alone	12,386	13,156	770	6.2%
Two or More Races	6,166	6,480	314	5.1%
POPULATION BY ETHNICITY				
Hispanic Population	33,094	34,702	1,608	4.9%
White Non-Hispanic Population	184,653	188,442	3,789	2.1%

Source: Easy Analytics, Inc., 2018

Yavapai College Median Age by Race and Ethnicity

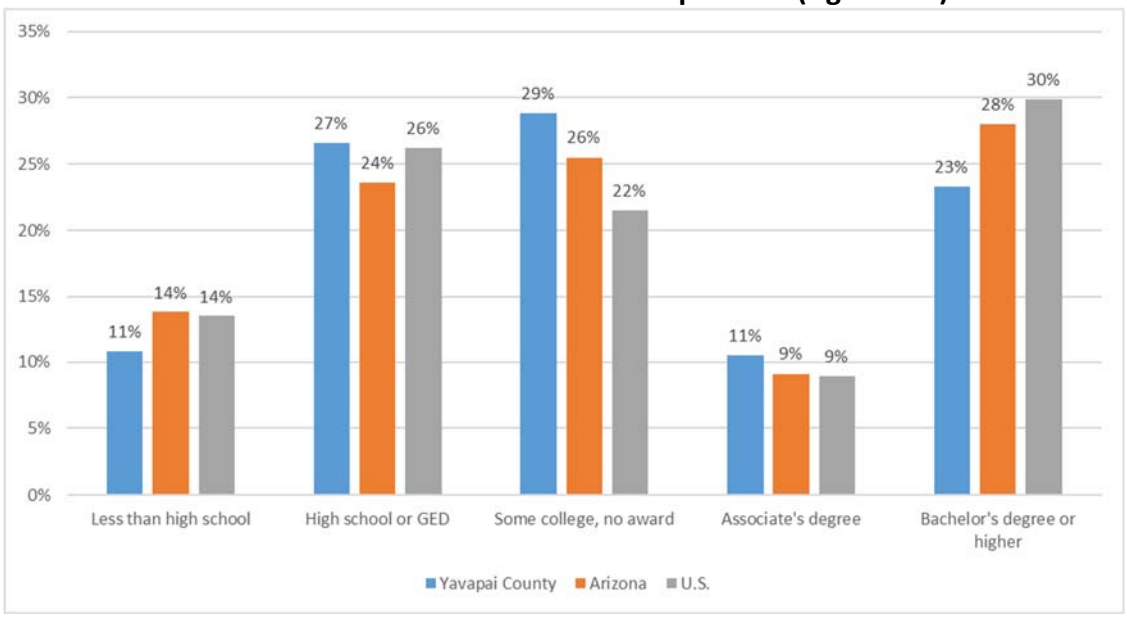
	2018	2023
MEDIAN AGE BY RACE		
White Median Age	54.6	56.2
Black Median Age	38.7	42.6
Asian Median Age	45.5	46.1
American Indian and Alaska Native Median Age	35.9	38.1
Other Race Median Age	27.2	27.6
Two or More Races Median Age	25.8	26.1
MEDIAN AGE BY ETHNICITY		
Hispanic Median Age	28.1	29.1
White Non-Hispanic Median Age	56.3	57.9

Source: EASI Analytics, Inc., 2018

EDUCATIONAL ATTAINMENT

Given Yavapai County's significantly older population, it is important to examine educational attainment for the workforce population (25-64). Yavapai County's bachelor's degree attainment rate is about 1.3 times lower than the U.S. level and 1.2 times lower than the Arizona level. However, the County's rate of workers with some college or an associate degree outperforms both state and national percentages.

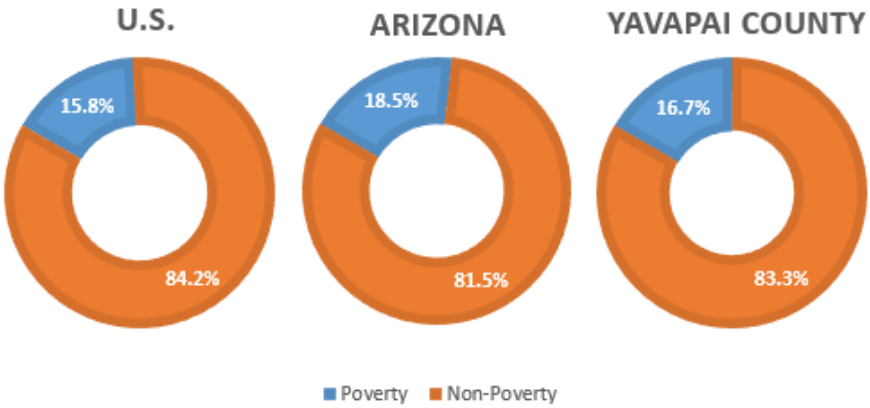
Educational Attainment Workforce Population (Age 25-64)



Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

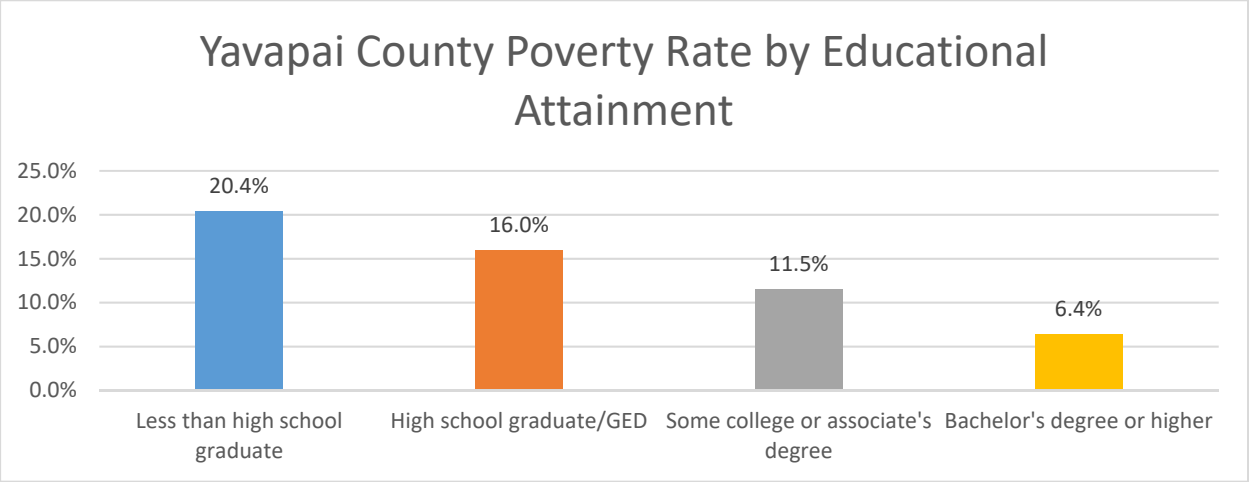
POVERTY

Yavapai County's poverty rates have been relatively stable over the past three years and remain lower than the Arizona rate, but slightly above the national figure.



Source: EASI Analytics, Inc., 2017

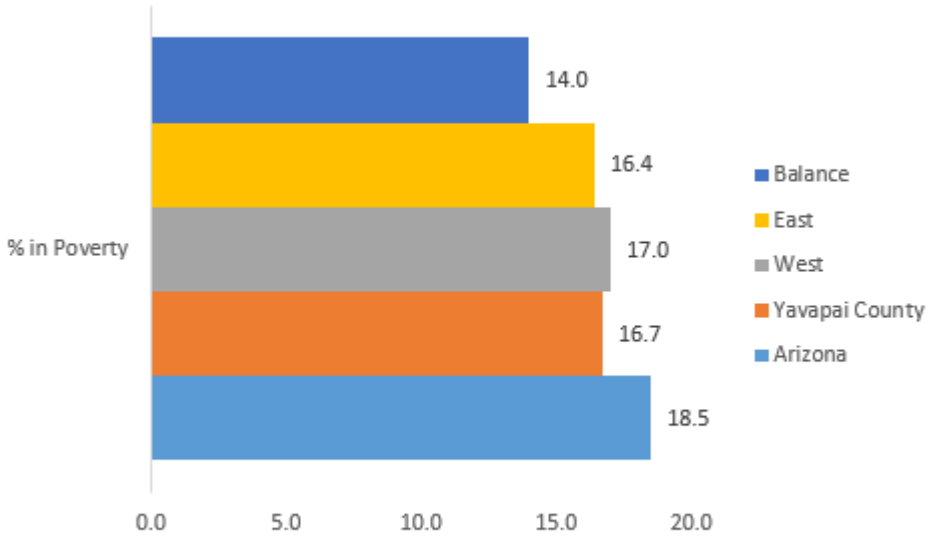
Education and poverty. There is a direct association between educational attainment and a region's poverty rate. Poverty rates are significantly lower for County residents with a postsecondary credential.



Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

A look at sub-county areas finds the east county has the highest poverty populations, with both east and west below the Arizona percentage, but exceeding the national level of poverty.

Poverty Population



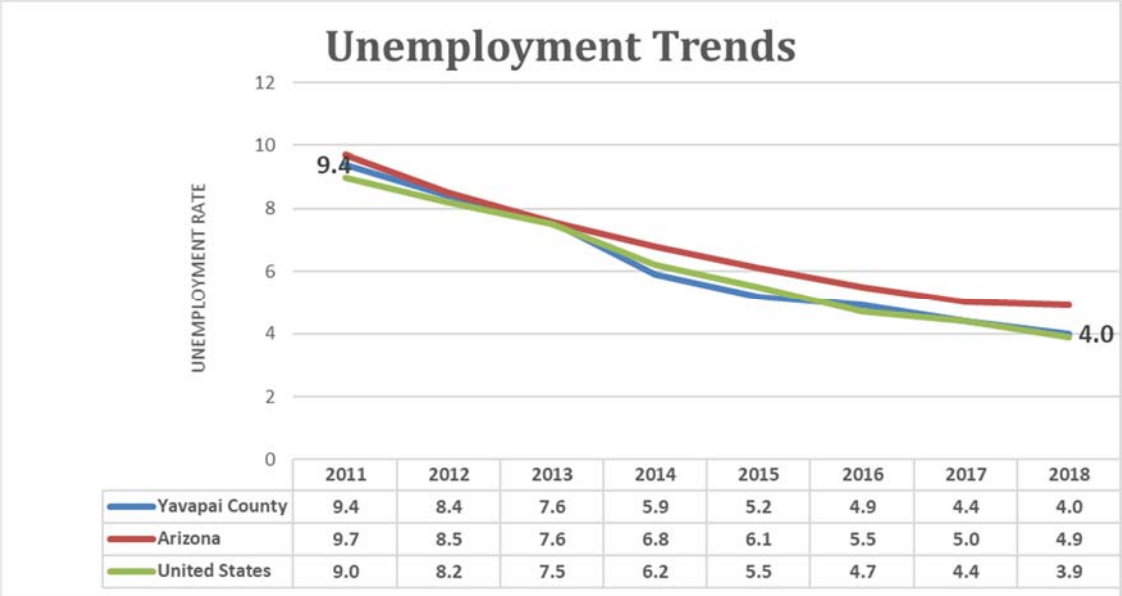
Source: EASI Analytics, Inc., 2017

ECONOMIC

This section presents economic trends impacting colleges and universities. In addition to national and state trends, specific information for Yavapai County is included.

ECONOMIC TRENDS

Unemployment. Numerous factors affect community college enrollment. Community college enrollment typically runs counter-cyclical to employment rates. Hence, when unemployment rates drop, this has a negative effect on community college enrollments as students re-enter the workforce. Research has shown that for every one percent change in unemployment, community colleges will experience an inverse two percent change in enrollment.[5] Yavapai County's unemployment rate of 4.0 is below the Arizona rate and approaching pre-recession levels.



	2011	2012	2013	2014	2015	2016	2017	2018
Yavapai County	9.4	8.4	7.6	5.9	5.2	4.9	4.4	4.0
Arizona	9.7	8.5	7.6	6.8	6.1	5.5	5.0	4.9
United States	9.0	8.2	7.5	6.2	5.5	4.7	4.4	3.9

Source: Economic Research, Federal Reserve Bank of Saint Louis; April, seasonally adjusted

High Cost of Living. Yavapai County's overall cost of living is higher than the national and Arizona average. The primary driving factor is housing costs.

Cost of Living West Yavapai County

Cost of Living	Prescott	Prescott Valley	Chino Valley	United States
Grocery	99.7	99.7	99.7	100
Health	98	98	98	100
Housing	162	117	130	100
Utilities	90	90	90	100
Transportation	93	93	93	100
Miscellaneous	96	96	96	100
Overall	117	103	107	100

Source: Sperling's, 2016

Cost of Living East Yavapai County

Cost of Living	Cottonwood	Camp Verde	Sedona	United States
Grocery	99.7	99.7	99.7	100
Health	98	98	98	100
Housing	100	105	227	100
Utilities	90	90	90	100
Transportation	93	93	93	100
Miscellaneous	96	96	96	100
Overall	97	99	138	100

Source: Sperling's, 2016

Cost of Living Regional Competitors

Cost of Living	Phoenix	Flagstaff	United States
Grocery	98.6	110	100
Health	95	103	100
Housing	103	171	100
Utilities	98	92	100
Transportation	101	106	100
Miscellaneous	96	97	100
Overall	99	124	100

Source: Sperling's, 2016

Aging Workforce. Every month, more than a quarter-million Americans turn 65.[6] As baby boomers exit the workforce, their replacements are not better educated, as witnessed by recent data showing Americans age 55 to 59 hold more advanced postsecondary degrees than their 30 to 34 counterparts did.

By 2020, 65% of jobs will require some postsecondary training.[7] These projections suggest a need and demand for the educational services provided by Yavapai College.

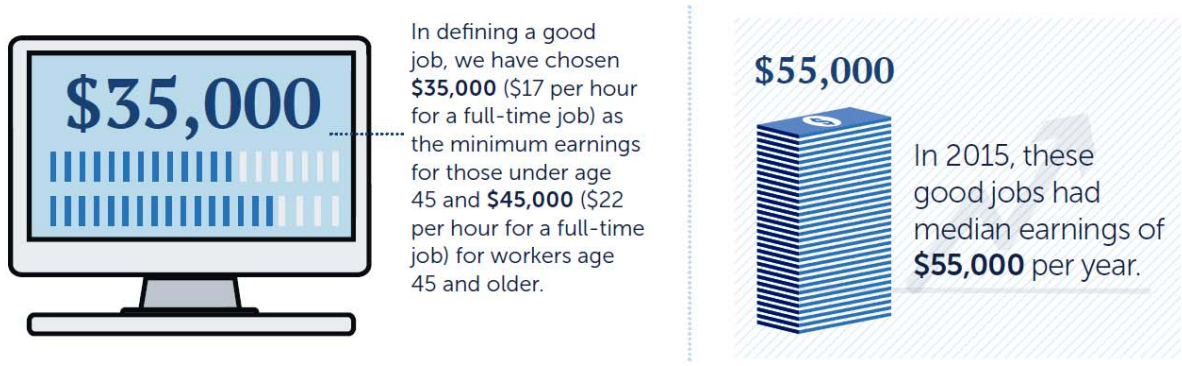
Arizona Jobs Requiring Less than a Bachelor's Degree

Jobs by educational attainment				
Educational attainment	Number of workers	Workers with good jobs	Median earnings	Median earnings of workers with good jobs
Non-BA Workers				
Less than high school	232,000	39,000	$20,000	$50,000
High school graduate	512,000	160,000	$28,000	$53,000
Some college	609,000	257,000	$34,000	$56,000
Associate's degree	232,000	115,000	$37,000	$59,000
All non-BA workers	**1,586,000**	**571,000**	**$31,000**	**$55,000**
BA+ Workers				
Bachelor's or higher	751,000	517,000	$53,000	$72,000
All workers	**2,337,000**	**1,088,000**	**$36,000**	**$61,000**

Source: Georgetown University Center on Education and the Workforce analysis of Bureau of the Census, *American Community Survey* microdata 2013-2015.

30 million workers aged 25-64 have good paying jobs that do not require a bachelor's degree[8]. These good paying jobs have median annual earnings of $55,000. While traditional manufacturing jobs have declined the number of good jobs in skilled-service areas such as computer technology and health care are increasing. Yavapai College is in a position to supply workers with required training, but the key will be to relocate more of these jobs to Yavapai County. Efforts in business attraction through the Prescott Economic Development, Prescott Valley Economic Development Foundation, and Verde Valley Regional Economic Organization are aimed at the relocation of middle- to high-wage positions in manufacturing and aerospace to Yavapai County.

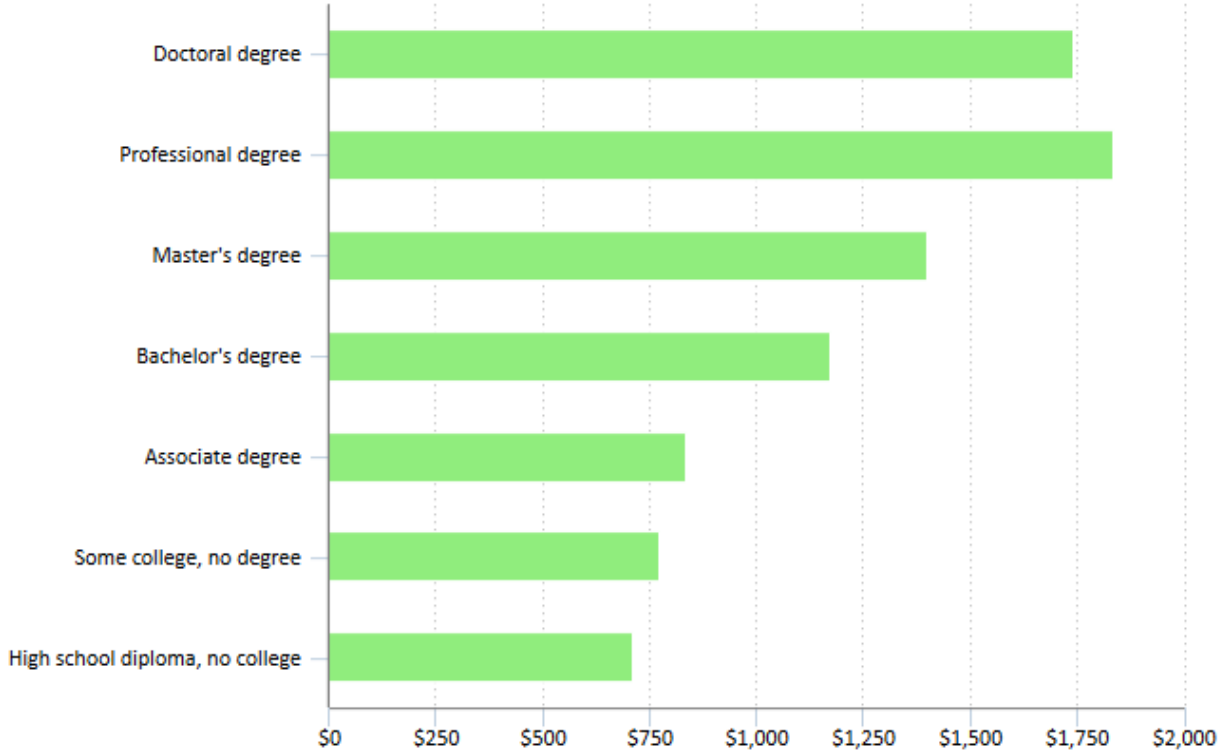
Figure 1. What is a good job?



Source: Carnevale et al., *Good Jobs That Pay without a BA*, 2017.

Education Pays. Over a career, a high school diploma is worth $1.3 million; a bachelor's degree is worth $2.3 million; a Ph.D. earns $3.3 million and a professional degree $3.7 million.[9]

Median Weekly Earnings by Highest Educational Attainment, 2017



Source: U.S. Bureau of Labor Statistics, Persons age 25 and over.

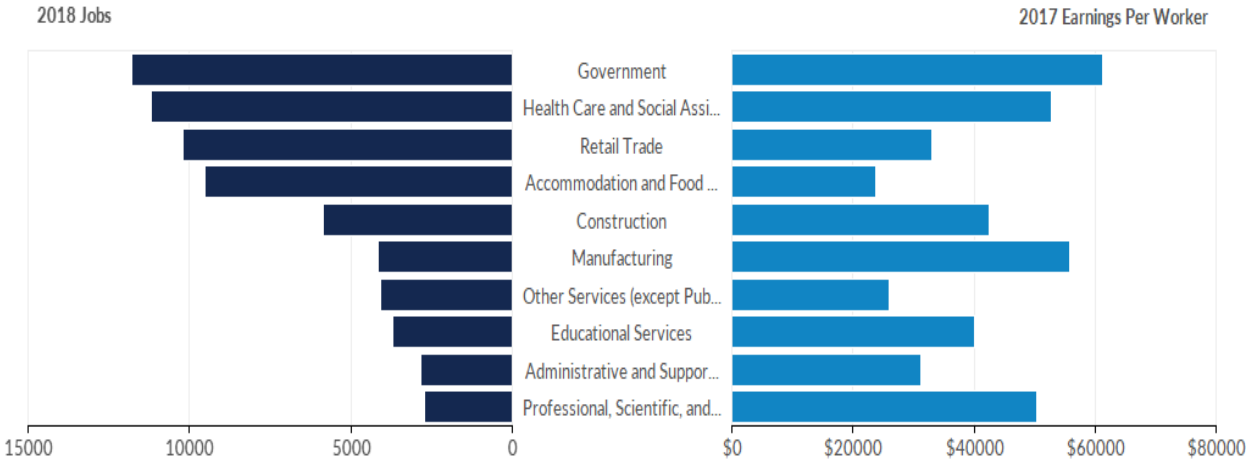
LABOR FORCE

This section addresses labor force trends in Yavapai County and alignment of Yavapai College programs with workforce demands.

INDUSTRY AND WORKFORCE GAP ANALYSIS

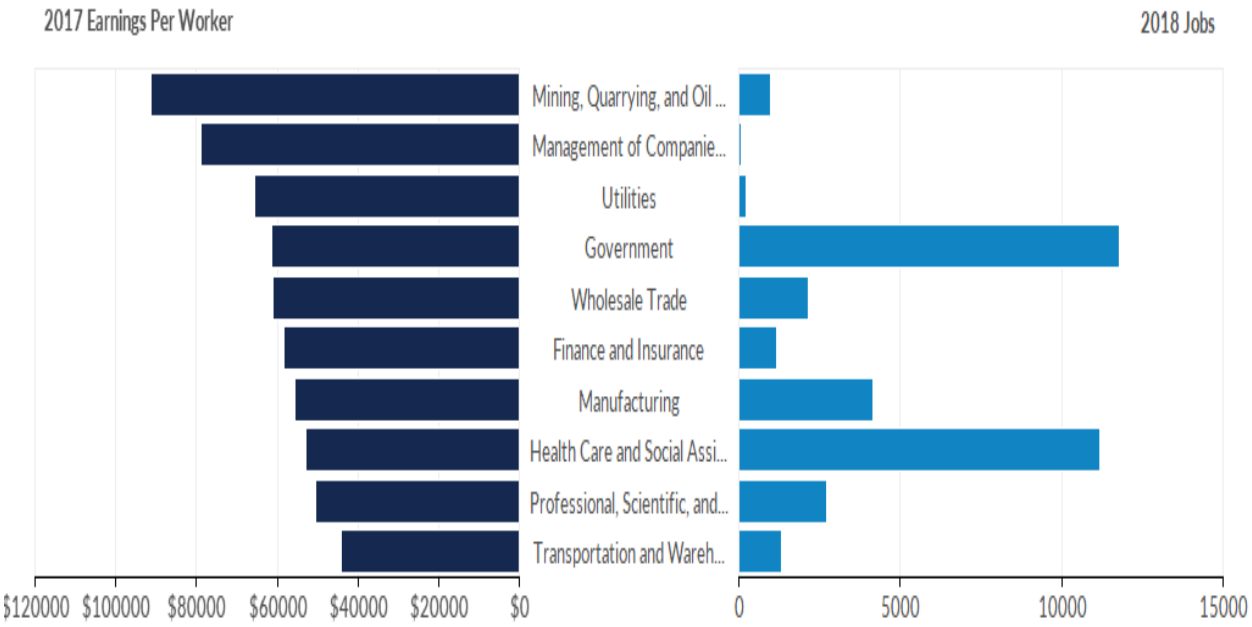
Yavapai County has the greatest amount of laborers in government, healthcare, retail, and food and accommodation. Of these top five sectors, three provide some of the highest wages for county employment. Government currently employ more than 11,778 people with average earnings per worker of $61,253, healthcare and social assistance has 11,176 jobs with earnings of $52,798, and manufacturing employs 4,170 people with average earnings around $55,760. Retail and food and accommodation industry sectors employ approximately 19,710 workers in the county with average earnings at $33,142 and $23,822 respectively. Since the recession, Yavapai County labor statistics show a 14% growth in social service occupations, most of which require some college, and 30% growth in healthcare related occupations in the recovery period.

Largest Industry Sectors in Yavapai County 2018



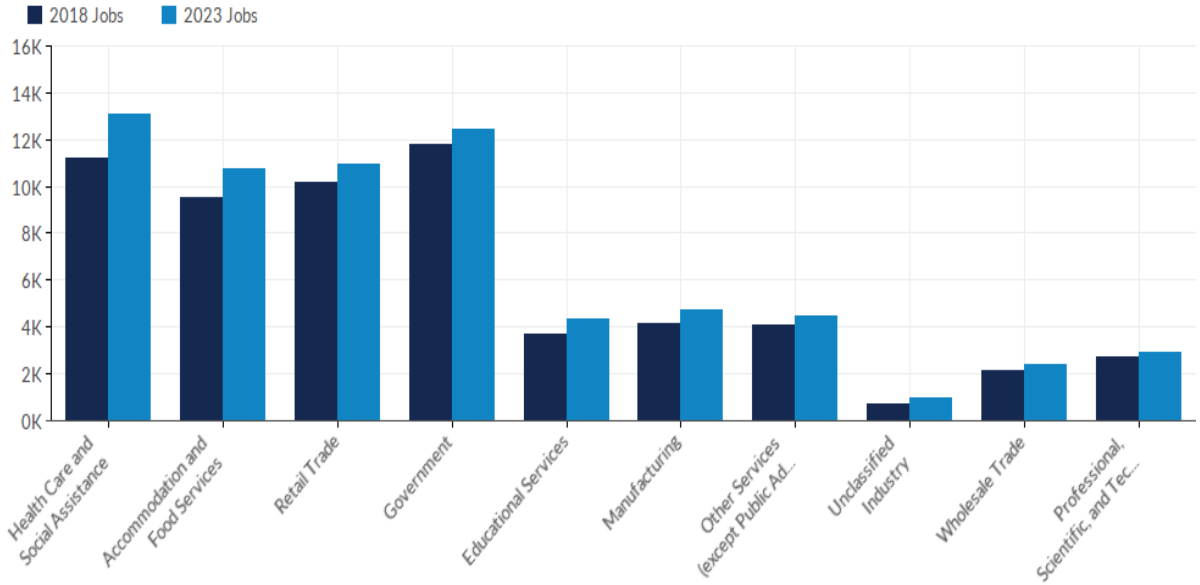
Source: Economic Modeling Specialists, Intl., 2018

Highest Paying Industries in Yavapai County 20187



Source: Economic Modeling Specialists, Intl., 2018.

Fastest Growing Industries Forecast for Yavapai County 2018 to 2023



Source: Economic Modeling Specialists, Intl., 2018.

Cross-referencing industry sector growth with occupational growth verifies high demand for academic programs in healthcare, management, business and public administration.

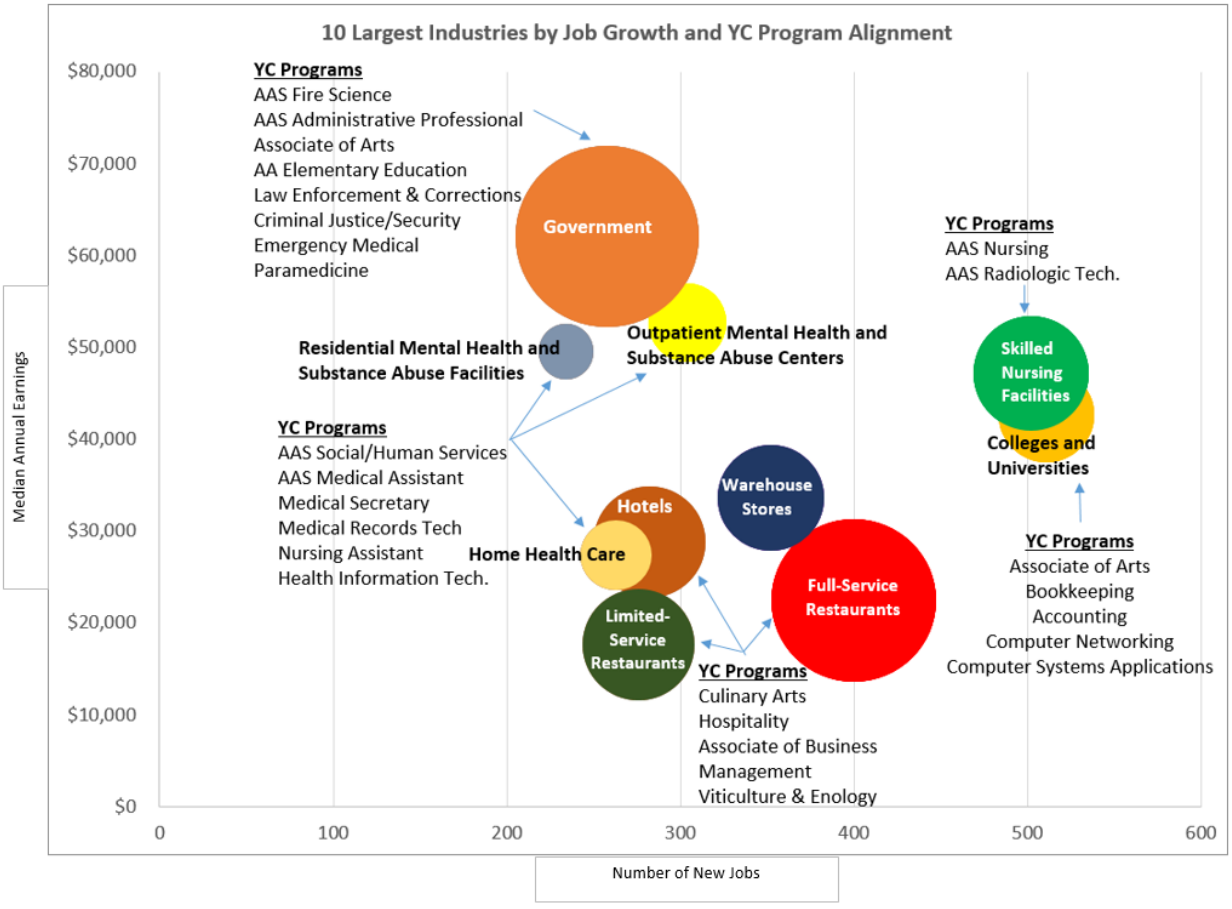
Top 30 Occupations in Yavapai County

Occupation	2018 Jobs	2023 Jobs	Change in Jobs (2018-2023)	% Change	Median Hourly Earnings
Retail Salespersons	2,454	2,644	190	8%	$11.56
Waiters and Waitresses	2,195	2,431	236	11%	$10.01
Cashiers	2,086	2,246	160	8%	$10.16
Combined Food Preparation and Serving Workers, Including Fast Food	1,863	2,215	352	19%	$10.63
Registered Nurses	1,617	1,834	217	13%	$35.32
Office Clerks, General	1,606	1,720	114	7%	$14.42
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,508	1,574	66	4%	$15.08
General and Operations Managers	1,465	1,585	120	8%	$31.04
Maids and Housekeeping Cleaners	1,221	1,337	116	10%	$10.66
First-Line Supervisors of Retail Sales Workers	1,147	1,218	71	6%	$15.14
Cooks, Restaurant	1,123	1,266	143	13%	$12.03
Stock Clerks and Order Fillers	1,067	1,178	111	10%	$11.90
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,034	1,147	113	11%	$12.56
Personal Care Aides	958	1,170	212	22%	$10.82

Occupation	2018 Jobs	2023 Jobs	Change in Jobs (2018-2023)	% Change	Median Hourly Earnings
Landscaping and Grounds keeping Workers	952	1,053	101	11%	$11.15
Customer Service Representatives	908	994	86	9%	$13.68
Laborers and Freight, Stock, and Material Movers, Hand	864	941	77	9%	$12.73
Teacher Assistants	827	854	27	3%	$11.41
Heavy and Tractor-Trailer Truck Drivers	811	892	81	10%	$18.01
First-Line Supervisors of Office and Administrative Support Workers	806	870	64	8%	$20.69
Construction Laborers	783	789	6	1%	$13.13
Postsecondary Teachers	727	844	117	16%	$31.51
Maintenance and Repair Workers, General	725	816	91	13%	$14.74
Bookkeeping, Accounting, and Auditing Clerks	718	760	42	6%	$17.34
Receptionists and Information Clerks	639	702	63	10%	$12.69
Automotive Service Technicians and Mechanics	628	661	33	5%	$16.30
Food Preparation Workers	617	689	72	12%	$10.94
Police and Sheriff's Patrol Officers	614	658	44	7%	$28.58
Firefighters	603	632	29	5%	$21.91
First-Line Supervisors of Food Preparation and Serving Workers	599	677	78	13%	$14.10

ACADEMIC PROGRAM CORRELATION

Yavapai College has many current strengths and various opportunities for development of academic programming that corresponds with current industry demand. Correlating stackable credentials with occupational structures will contribute to increased enrollment by occupational cohort and create demand for upskilling through YC academic program options. Ensuring articulation between new and updated YC certificates and associates degrees to the state university system will increase enrollment by offering traditional and non-traditional students more options for mixing and matching their continuing education goals. Management, IT, and business professions appear throughout all top industry sectors. Academic programs in these fields can be leveraged with specialty industry-based stackable credentials and YC internship placement services to provide experiential learning in specific industries.



Source: Economic Modeling Specialists, Intl., 2017.

Industry Sector & Occupations	Strengths	Opportunities
<u>Healthcare and Social Assistance</u> <u>Occupations:</u> Healthcare Practitioners Technician Occupations Healthcare Support Occupations (Medical Assistant) Personal Care & Service (Caregiving) Management Occupations	Existing academic programming ▪ Nursing AAS ▪ Medial Assistant ▪ Technician Certs (phlebotomy, radiology, pharmacy) ▪ Certified Nursing Assistant ▪ Caregiver Certificate ▪ Health Information Systems	Correlate existing classes with specialty occupation-based stackable credentials. Increased internship opportunities. AAS → BSN
<u>Manufacturing</u> <u>Occupations</u>: Additive Manufacturing Technician Production/Assembly Occupations Installation, Maintenance, and Repair Technicians CNC Set-up/Operators CNC Programmer Steel Fabricator (Welding) Design Engineer (CAD systems) Management Occupations	Up-to-date equipment for machining, welding, and industrial machine mechanics RESA partnership Existing program that prepares students for 3rd party industry exams	Expand and correlate stackable credentials to occupations (e.g. CNC certificate → programmer → design engineer) Increased internship opportunities. Replication of RESA partnership model.

Industry Sector & Occupations	Strengths	Opportunities
Accommodation and Food Service Occupations: Front Desk Clerks Lodging Managers Building, Grounds Cleaning, and Maintenance Occupations Bookkeeping, Accounting, and Auditing Clerks Cooks, restaurant Food Preparation Workers Chefs and Head Cooks	Existing culinary cert. State of the art culinary equipment and facilities.	Stackable credentials that move from front desk to management (perhaps using registered apprenticeship program) Articulation with NAU Hospitality bachelors.
Retail Trade Occupations: Sales and Related Occupations Management Occupations Entrepreneurship	Existing management tracks: ▪ AAS ▪ Organizational Management Cert. ▪ Retail Management Cert.	Articulation of management program to NAU Service Industry Management bachelors.

Industry Sector & Occupations	Strengths	Opportunities
Wholesale Trade Occupations: Transportation and Material Moving Occupations Management Occupations	CDL coursework for commercial license preparation.	Research industry needs
Government and Administrative and Support Occupations: Administrative Assistant Public Administrator (project coordination and management)	Existing professional administration program has curriculum that fits into a public administration or public management certificate	New Public Administration Associates Create Public Management Certificate
Management of Companies, Information, Finance and Insurance Occupations: Business Administration Financial Management Accounting (CPA) Computer Support Specialists Network Administrators Software Developers, Applications Software Developers, Software Information Security Analysts	Existing business associates Existing accounting programs: Accounting AAS Accounting Assistant Cert. Basic Tax Cert. Bookkeeping Cert. Advanced Bookkeeping Cert. Existing IT programs: ▪ Computer Networking Technology AAS ▪ Computer Systems and Applications AAS ▪ Computer Application Specialist Cert. ▪ Computer Networking Technician ▪ Cyber Security	Manufacturing Operations cert. New Finance cert. New Coding associates

Industry Sector & Occupations	Strengths	Opportunities
Marketing, Design, and Communications Occupations: Web Designer Arts and Media Occupations Marketing and Communications Coordinator Marketing Manager	Existing classes built into other disciplines	New Marketing and Communications cert.
Utilities Occupations: Electrical Line-worker	Existing Electric Utility Technology Certificate	Expansion into other utility occupations

EDUCATION

This section addresses education trends impacting colleges and universities. In addition to national and state trends, specific information for Yavapai County is included.

K-12 EDUCATION TRENDS

Protests and Teacher Walkouts. RedforED, a movement led by Arizona public school teachers in 2018 called for increased school funding and teacher and support staff pay resulted in a statewide teachers strike and highlights the challenges facing Arizona public education. Teachers won a 9% salary increase for fiscal year 2019 and an increase in base funding adjusted for inflation. Fiscal year 2019 also begins a five-year plan to return funding cuts that began in 2009.

Challenged K-12 System. Ranked by expenditures per students, Arizona was 25th in 1980, 39th in 1992 and had fallen to 49th in 2016.[10] Arizona's expenditure of $7,566 is just 56% of the national average $11,787.

Colorado, Nevada, and Texas have used Arizona as a source for teacher recruitment adding to Arizona's struggle to retain quality teachers.

Example of billboards in Arizona attempting to recruit Arizona teachers with higher pay.

Student Performance. Since 2003, the National Center for Education Statistics (NCES) has compared each state's standard for proficient performance in reading and mathematics by placing the state standards onto a common scale defined by National Assessment of Educational Progress (NAEP) scores. Below are Arizona NAPE scores for grade 4 and grade 8 students in the subject areas of mathematics, reading, and science. Only grade 8 students in math score at the national average; in all other areas, the average scores for Arizona students are significantly below the national public average. [11]

ARIZONA

Grade 4 Math-2017 average score for Arizona is significantly lower than the national public average

ARIZONA

Grade 8 Math-2017 average score for Arizona is not significantly different than the national public average

ARIZONA

Grade 4 Reading-2017 average score for Arizona is significantly lower than the national public average

ARIZONA

Grade 8 Reading-2017 average score for Arizona is significantly lower than the national public average

ARIZONA

Grade 4 Science-2015 average score for Arizona is significantly lower than the national public average

ARIZONA

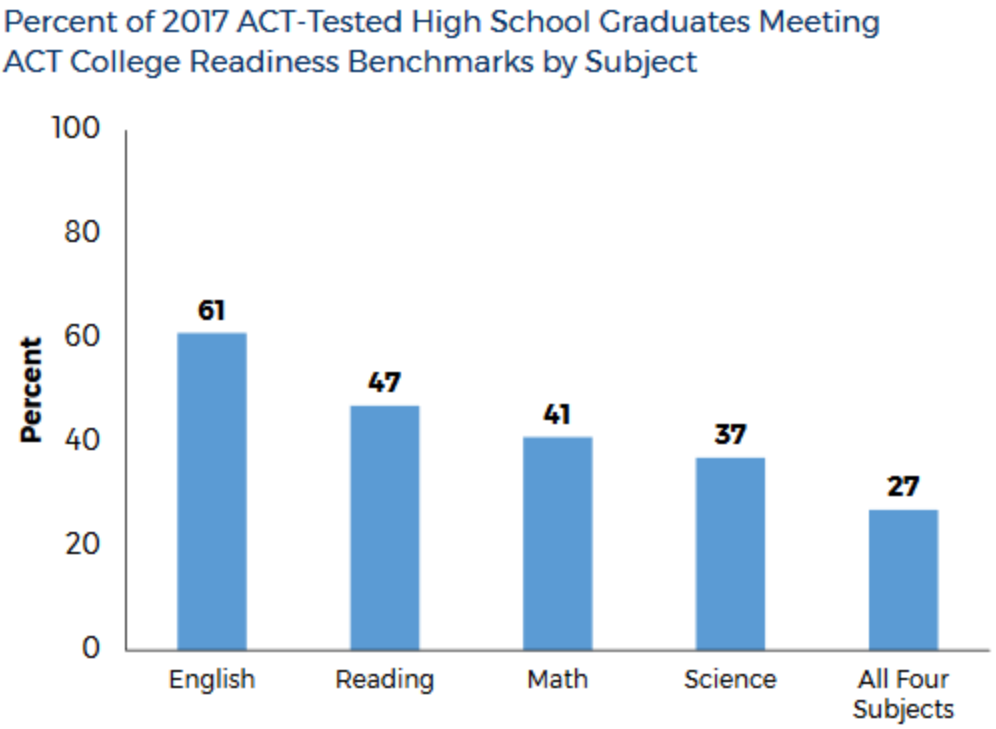
Grade 8 Science-2015 average score for Arizona is significantly lower than the national public average

When adjusted for cost of living, Arizona elementary and high school teachers are some of the lowest paid in the nation, ranking 50th and 49th respectively.[10] Attracting and retaining quality teachers is a significant challenge for state k-12 schools.

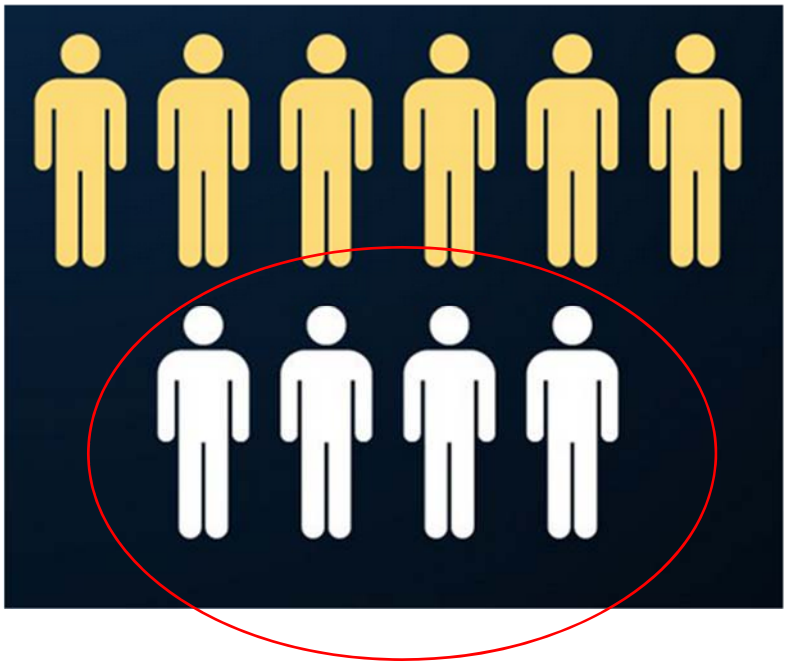
Where Arizona K-12 Ranks

Measure	National Rank
Expenditures per Student	49th
Median Elementary Teacher Pay	50th
Median Secondary Teacher Pay	49th

Underprepared Students. As many as two-thirds of students entering community colleges today require some level of remediation (Cohen & Brawer, 2014)[12]. *ACT* (2017) reports that just 27% of college-bound students met all four college-readiness benchmarks (English, mathematics, reading, and science).[13]

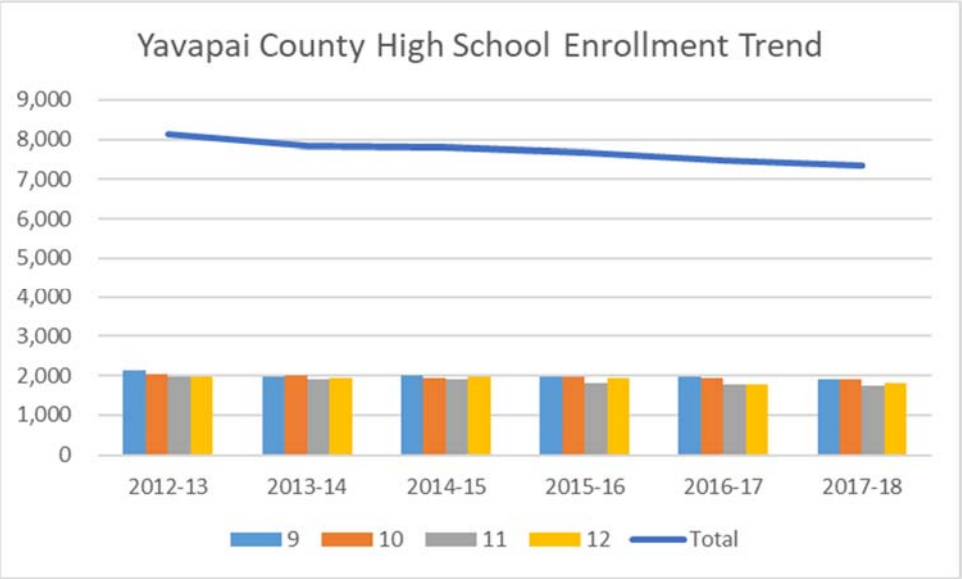


In 2017, more than 4 in 10 recent high school graduates enrolled in a developmental course at Yavapai College. Overall, about 6 in 10 degree-seeking students at YC require some level of remediation in English and/or mathematics.



YAVAPAI COUNTY HIGH SCHOOL ENROLLMENT TRENDS

Yavapai County high school enrollments continue to decline. The net decline between 2013 and 2018 was 779 students. The decline represents a compound average annual enrollment drop of nearly 2 percent.



Yavapai County High School Enrollment Trends

Year	9	10	11	12	Total
2012-13	2,147	2,032	1,988	1,969	8,136
2013-14	1,960	2,015	1,916	1,947	7,838
2014-15	1,999	1,929	1,912	1,975	7,815
2015-16	1,962	1,958	1,823	1,937	7,680
2016-17	1,976	1,942	1,786	1,787	7,491
2017-18*	1,906	1,904	1,736	1,811	7,357

Source: Arizona Department of Education—Arizona October 1 Enrollment Reports; *2017-18 enrollment forecasted by IER.

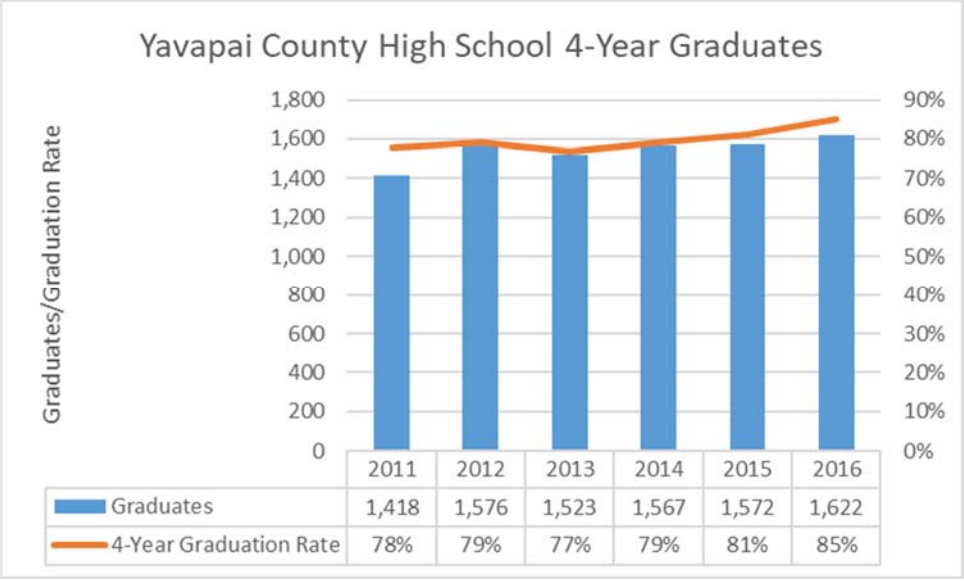
Selected Yavapai County High School Enrollment Trends

High School	2012-13	2013-14	2014-15	2015-16	2016-17	% Free Lunch 16-17
AZ Agribusiness & Equine Center (AAEC)	156	188	193	211	210	27%
BASIS Prescott	NA	NA	42	81	97	*
Bradshaw Mountain High School	1678	1547	1619	1673	1581	37%
Chino Valley High School	737	740	728	757	697	60%
Mayer High School	156	171	178	167	187	89%
Northpoint Expeditionary Learning Academy	138	166	170	169	180	32%
Prescott High School	1607	1585	1537	1487	1491	34%
Tri-City College Prep High School	199	217	216	221	224	*
Yavapai County High School	36	13	35	31	28	75%
Camp Verde High School	443	428	414	377	395	56%
Mingus Union High School	1177	1207	1151	1141	1135	48%
Mingus Union High School Online	19	13	12	12	*	*
Sedona Red Rock High School	490	470	471	435	367	7%
Ash Fork High School	70	77	77	73	74	89%
Bagdad Senior High School	117	125	124	113	99	59%
Seligman High School	51	54	54	55	44	57%

Source: Arizona Department of Education—Arizona October 1 Enrollment Reports; * indicates suppression of data due to small student counts.

HIGH SCHOOL GRADUATE TRENDS

Arizona high school enrollment and graduates to increase through 2024-25. The Western Interstate Commission for Higher Education (WICHE) projects that Arizona's high school graduates will increase by 6% from 67,909 in 2016-17 to 72,298 in 2024-25.[14] The growth in graduates is largely due to population of Hispanic students that make up the majority of K-12 students in the state.



Yavapai County high school graduates increase slightly. This small increase is due to improved graduation rates, not increased enrollment. The increase is not forecasted to be sustainable. Declining birth rates and the aging shift in net migration indicate the number of high school graduates will likely decline slightly over the next five years. The rising county high school graduation rate (85%) is encouraging and exceeds the Arizona graduation rate of 80%.

COLLEGE AND UNIVERSITY EDUCATION TRENDS

Pell in Jeopardy? After restoring year-round Pell access lawmakers have their eye on the $10.6 billion rainy day fund intended to ensure sustainability of student aid. President Trump has proposed taking $4 billion from this fund.[3] The 2018 reinstatement allows students who are more prone to stop out between the spring and fall semesters to continue their education in the summer term and finish their programs faster. YCs summer 2018 double-digit enrollment percentage growth is evidence of year-round Pell benefiting students.

Community College Enrollment Trends. Nationally, community colleges are forecasted to experience an eighth straight year of declining enrollment.

No Bottom Yet in 2-Year College Enrollments

> Some researchers are warning community colleges that enrollment isn't expected to improve, even as they grapple with declines in state funding and demand for better performance and outcomes.

By Ashley A. Smith // June 21, 2018 9 COMMENTS

Breaking with the national and state trends, in 2018, Yavapai College experienced an increase in both headcount and FTSE enrollment. Since 2011, YC has outperformed the national and Arizona enrollment trends.

Improving Retention Rates. Nationally, year-to-year retention rates for community colleges have stagnated. Yavapai College's first-time student retention rates have improved and been sustained for the past three years.

Low College Completion Rates. The federal graduation rate is based on 150% of the published time for the program which equates to a three-year community college completion. The three-year U.S. public community college graduation rate is 19.5% using the Department of Education's official graduation rate. Yavapai College's latest three-year graduation rate is 25%.

Using the credential-seeking cohort favored by the American Association of Community Colleges (AACC), YC's latest cohort had an 82% success rate that includes completion, transfer without completion, earning 30 or more credit hours, or still enrolled after six years. The portion of YC students completing a degree in this six-year period was 38%.

Financial Aid (SAP). The federal government has tightened Satisfactory Academic Progress (SAP) requirements. The maximum timeframe that a student may receive federal financial aid may be no more than 150% of the designated program length and includes all institutions attended. To be eligible for financial aid, one must successfully complete at least 67% of their term and cumulative attempted credit, which includes any courses taken at another institution.

TECHNOLOGY

This section addresses technology trends that higher education institutions must balance to ensure the security of information while meeting the ever-evolving changes demanded by students.

TECHNOLOGY TRENDS

Cybersecurity. Cybersecurity remains a top concern for colleges and universities. Higher education's collaborative nature in addition to housing personal identifiable information on students related to federal financial aid continues to make colleges high-value targets for cybercriminals. In response to data breaches, federal and state governments compliance mandates are increasing and requiring college IT staffs to spend more resources (human and financial) toward data security.

Artificial Intelligence. Is touch-enabled technology outdated? According to John Rome at Arizona State University, voice command technology like Amazon Echo, Google Home, or Microsoft Invoke represent the next generation of how students and colleges will access and interact with information. In fall 2017, Amazon provided 1,600 of Echo Dots to Arizona State University engineering students to develop new "skills" or voice applications. [15] Issues to ponder range from how institutions might use voice technology to disseminate information to what are the implications for student privacy?

Technological Disruption. Technology brought us innovations, increased efficiencies, and broadened access to higher education. Nonetheless, the pace of technological change also brings dramatic shifts in our ability to adapt to change and leverage the positive benefits of new technology. Canada's Prime Minister, Justin Trudeau, sums it up well when he said: "Think about it: The pace of change has never been this fast, yet it will never be this slow again." [16] It is imperative that higher education institutions take a strategic approach to technology to mitigate disruptions and help students and staff adjust to changes.

INTERNAL SCAN

This section highlights Yavapai College areas related to demographics, enrollment, retention, student success, and areas for improvement.

DEMOGRAPHICS

RECRUITMENT

Student Recruitment. The majority of recent Yavapai County high school graduates select Yavapai College to start their postsecondary studies.

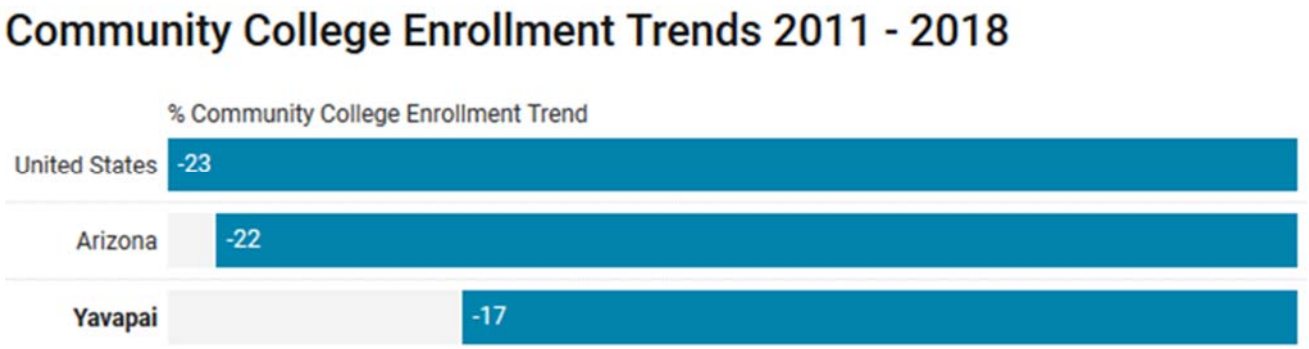
6 IN 10

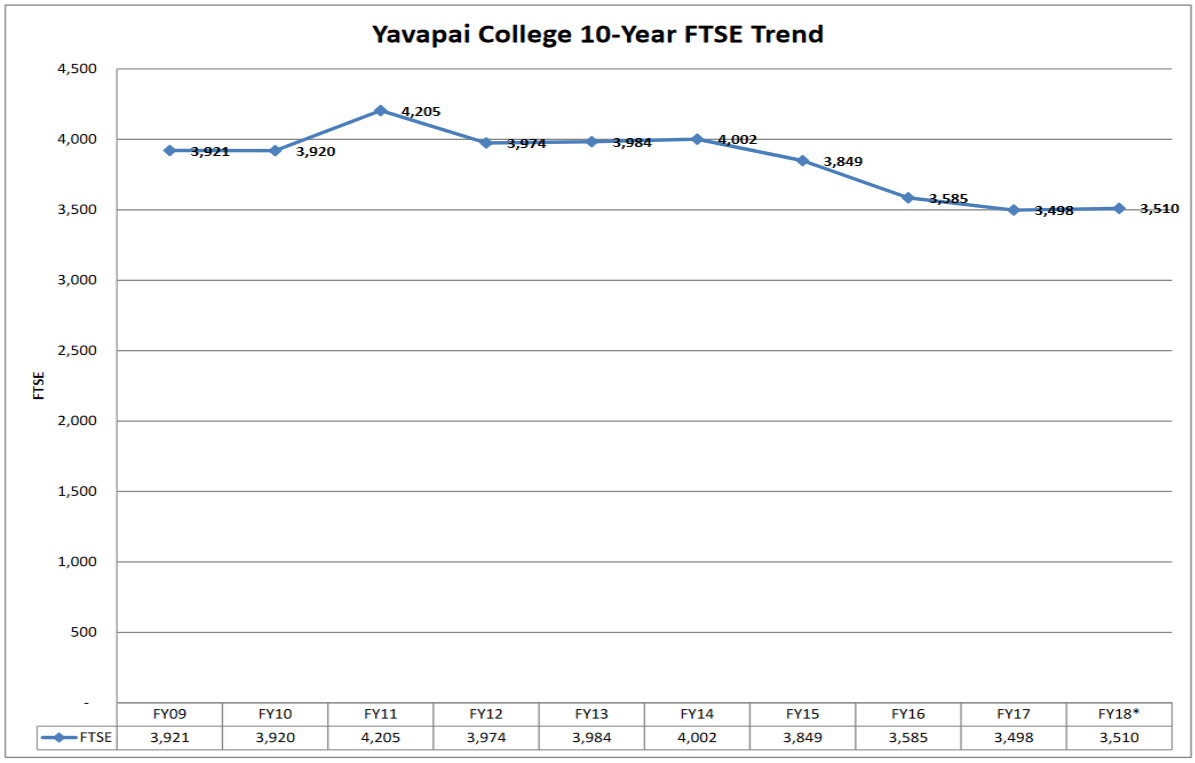
RECENT COLLEGE GOING COUNTY HIGH SCHOOL GRADUATES ATTENDED YAVAPAI COLLEGE.

Source: National Student Clearinghouse, 2015-16 high school graduates

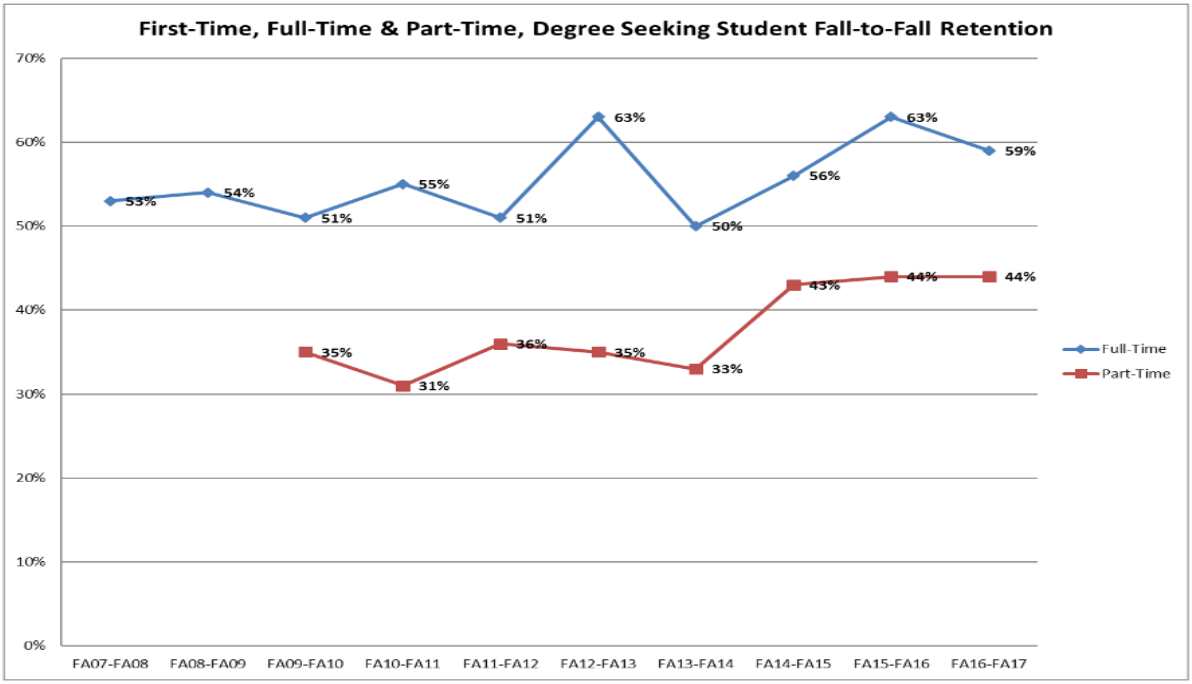
ENROLLMENT TRENDS

Enrollment. Breaking with the national and state trends, in 2018, Yavapai College experienced an increase in both headcount and FTSE enrollment. Since 2011, YC has outperformed the national and Arizona enrollment trends.





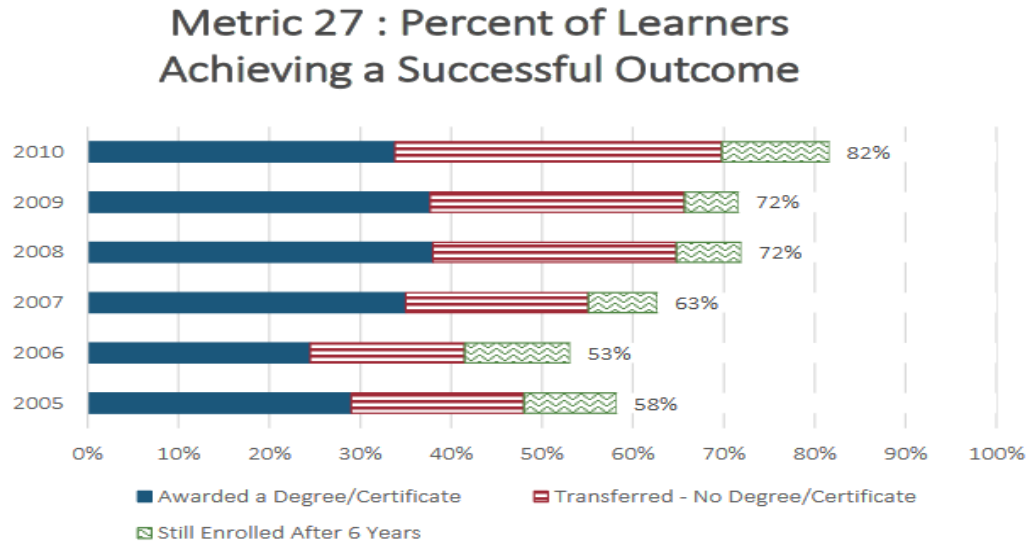
Retention. Nationally, year-to-year retention rates for community colleges have stagnated. Yavapai College's first-time student retention rates have improved and been sustained for the past three years.



Source: IPEDS

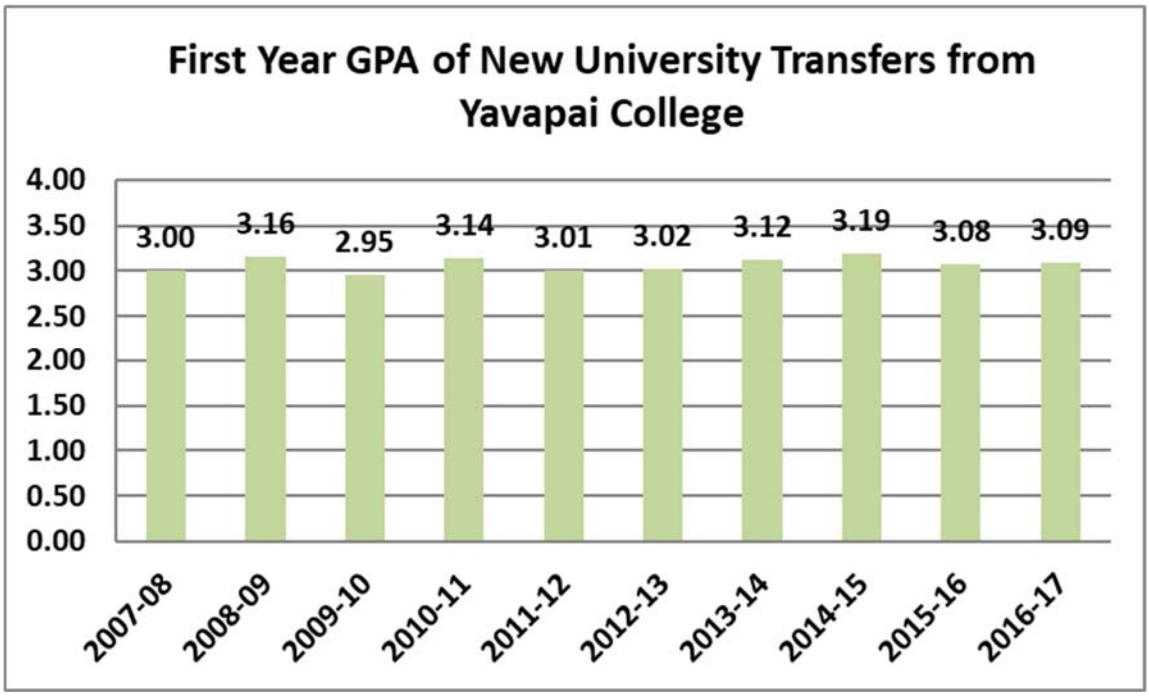
SUCCESSFUL OUTCOMES TRENDS

Successful Outcomes. Because community college students enter college with diverse education goals, and because most attend part-time and/or earn credits from multiple institutions the American Association of Community Colleges prefers using multiple successful outcome measures like awarded a degree/certificate, transferred with no degree/certificate, and still enrolled after six years.

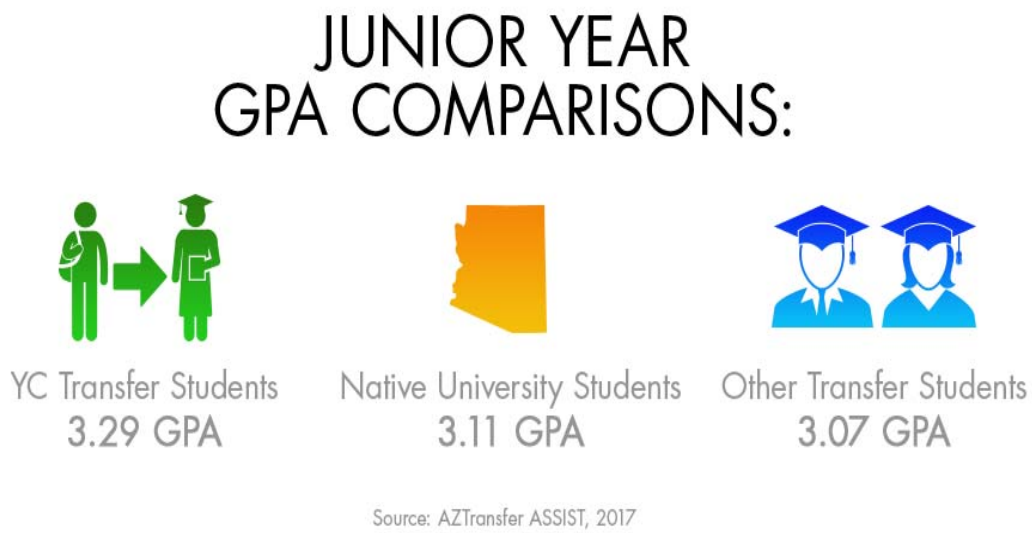


Source: Arizona Strategic Vision Project, Yavapai College, 2017

Transfer Outcomes. Yavapai College transfer students attending Arizona public universities regularly rank among the best in the nation. The National Community College Benchmark project shows that YC transfer students are in the top ten 10% nationally when compared on their first year GPA.



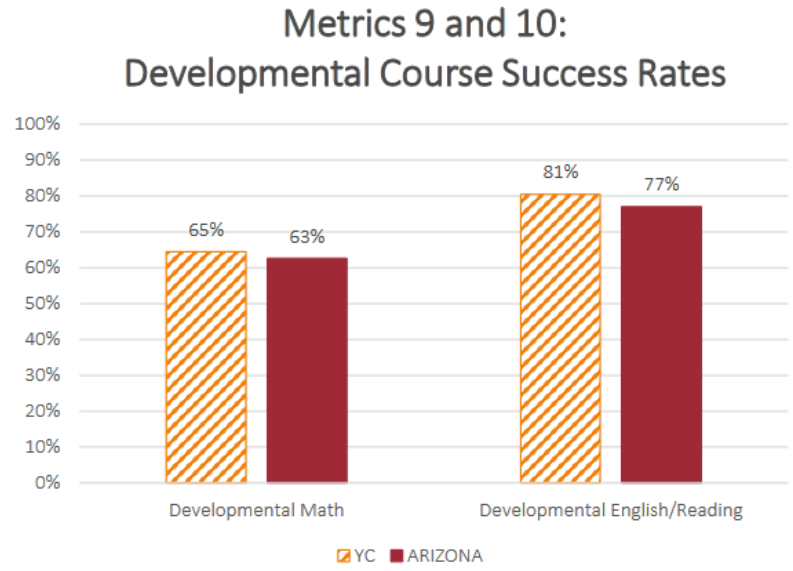
Additionally, Yavapai College transfer students regularly perform better than native university students and other community college transfers when comparing junior year GPAs.

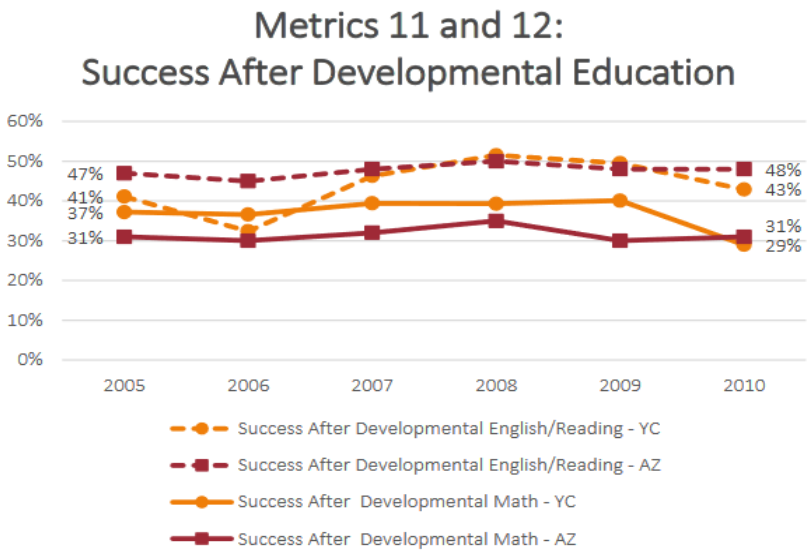


AREAS FOR IMPROVEMENT

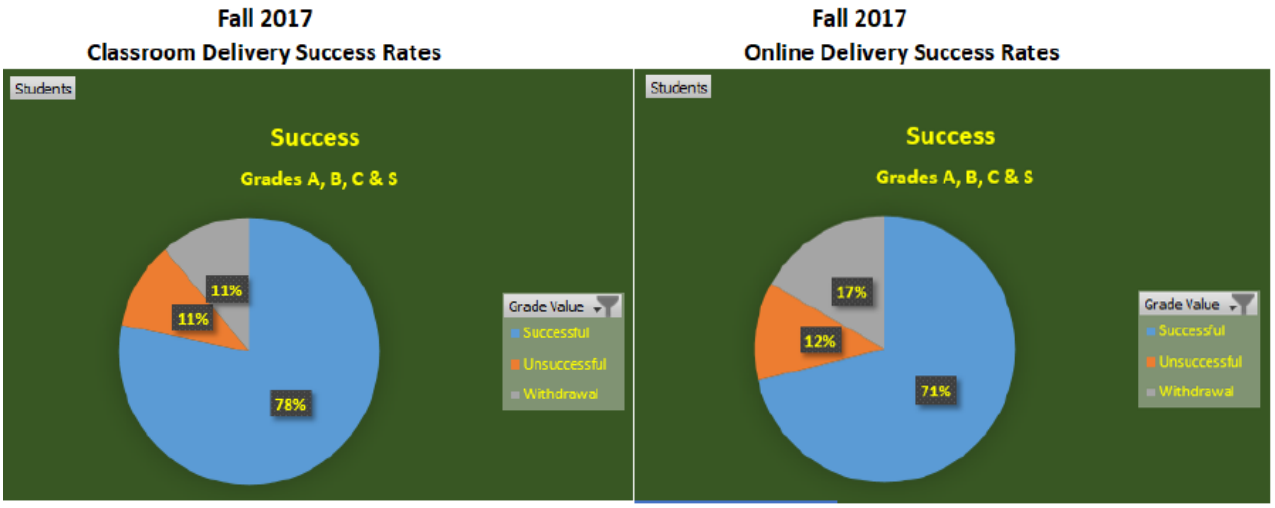
Areas for Improvement. While YC enjoys many successes, there are areas where evidence shows improvement efforts should be focused. Developmental education and improving online education are two areas identified by YCs strategic planning process for improvement. Both developmental education and online education are strategic priorities for academic year 2018-2019.

Developmental Education. Yavapai College's developmental pass rates are better than the Arizona community college average. Nonetheless, the success rates are too low, and success in college-level courses after developmental education remains a barrier to student completion.





Online Success Rates. Yavapai College's online course success rates lag face-to-face class success rates, which mirror national trends. YC has narrowed the success gap over the past eight years, but there remains room for significant improvement.



Success rates exclude dual enrollment and JTED.

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