Utah's Economically Disadvantaged Students and Higher Education
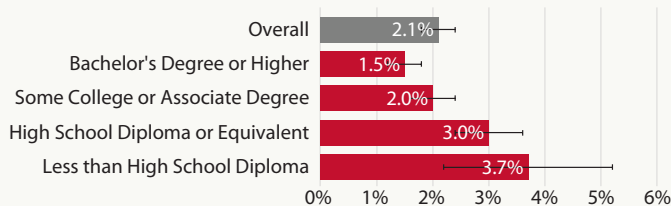
By Andrea Thomas Brandley, Research Associate

Many economically disadvantaged Utahns never enroll in higher education. Those that do are less likely to complete their degree or certificate than those who are not economically disadvantaged. Economic disadvantage is measured in a variety of ways but this report focuses primarily on an individual's family income from childhood, measured by eligibility for free or reduced-price lunch. Income level and educational attainment are closely correlated posing barriers for some Utahns in pursuing higher education and improving their income level. Education enhances economic outcomes and provides a multitude of societal benefits. Measuring economic disadvantage in higher education and pursuing interventions that improve outcomes for economically disadvantaged students could greatly impact these students' futures and provide additional talent for Utah's growing workforce needs.

1 **Education creates greater economic opportunity.**

- **Increases employment** – Unemployment rates decline with increasing years of education.
- **Decreases poverty** – Poverty rates decline with increasing years of education.
- **Increases earnings** – Median earnings rise with increasing years of education.
- **Increases economic mobility** – The percentage of individuals who have a family income higher than their parents is 11 percentage points higher among those with a college degree as compared with those without a college degree.
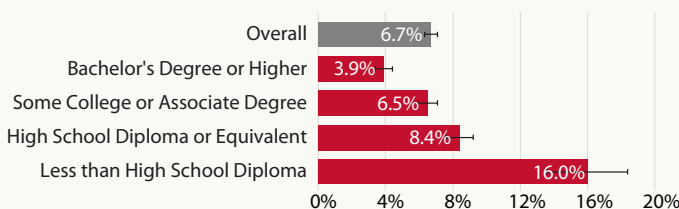
Economic and Education Indicators

Figure 1: Utah Unemployment Rate, 2019

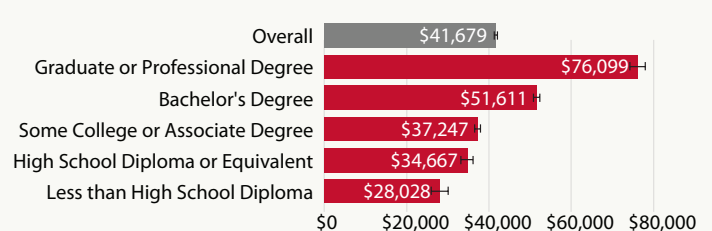|	
Overall	2.1%
Bachelor's Degree or Higher	1.5%
Some College or Associate Degree	2.0%
High School Diploma or Equivalent	3.0%
Less than High School Diploma	3.7%

Note: Data are for individuals age 25 to 64.
Source: U.S. Census Bureau American Community Survey 1-Year Estimates

Figure 2: Utah Poverty Rate, 2019

Overall	6.7%
Bachelor's Degree or Higher	3.9%
Some College or Associate Degree	6.5%
High School Diploma or Equivalent	8.4%
Less than High School Diploma	16.0%

Note: Data are for individuals age 25 and older.
Source: U.S. Census Bureau American Community Survey 1-Year Estimates

Figure 3: Utah Median Annual Earnings, 2019

Overall	$41,679
Graduate or Professional Degree	$76,099
Bachelor's Degree	$51,611
Some College or Associate Degree	$37,247
High School Diploma or Equivalent	$34,667
Less than High School Diploma	$28,028

Note: Data are for individuals age 25 and older.
Source: U.S. Census Bureau American Community Survey 1-Year Estimates

Figure 4: U.S. Economic Mobility
Share of children with family income above their parents' family income, by child's education level

Without a College Degree	63%
With a College Degree	74%
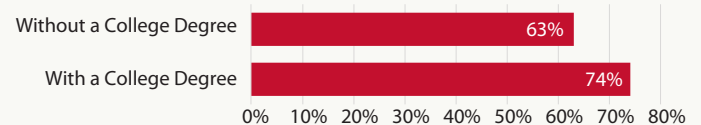
Note: Economic mobility between the parental generation of the 1960s and 1970s and their adult children
Source: Brookings Institute[13]

* Figures 1-3 show survey-based estimates that are subject to sample variation. The error bars show an interval of plausible values with a 90% confidence level. Values for groups with non-overlapping error bars are statistically different to the same degree of confidence.
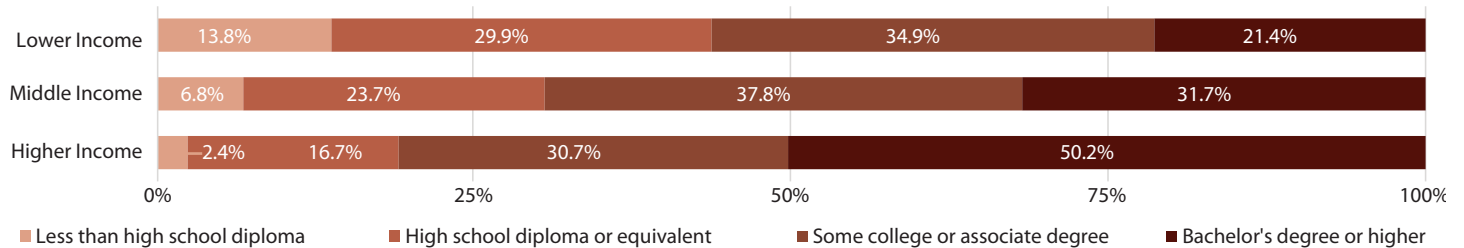
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2 Income level and educational attainment are closely tied.

- **Lower educational attainment** - Those with lower income levels earn lower levels of educational attainment as shown in Figure 5.

- **This relationship is bi-directional -** Those with lower levels of educational attainment also have lower income levels. This bi-directional relationship can create a cyclical problem posing barriers for economically disadvantaged populations improving income levels and educational attainment.

- **This relationship is strong –** The relationship between education and income is strong. The difference in income between those with a college degree and those without has grown over time.[1]

3 Economically disadvantaged students enroll and complete college at lower rates than non-economically disadvantaged students.

- **Lower enrollment** – Economically disadvantaged students enroll in college at a rate nearly 20 percentage points lower than their peers who are not economically disadvantaged as shown in Figure 6.[2]

- **Lower completion** – Among those who do enroll, economically disadvantaged students complete at a rate 17 percentage points less than those who are not economically disadvantaged within 8 years of graduating high school as shown in Figure 7.
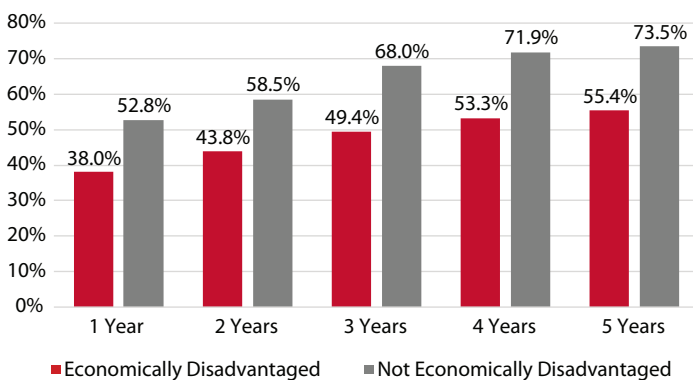
Figure 5: Educational Attainment by Income Level in Utah, 2019

	Less than high school diploma	High school diploma or equivalent	Some college or associate degree	Bachelor's degree or higher
Lower Income	13.8%	29.9%	34.9%	21.4%
Middle Income	6.8%	23.7%	37.8%	31.7%
Higher Income	2.4%	16.7%	30.7%	50.2%

Note: The Gardner Institute bases its income level estimates on household income, compared with state medians and federal poverty guidelines by household size.[14]
Source: Kem C. Gardner Policy Institute analysis of data from the U.S. Census Bureau, American Community Survey, Integrated Public Use Microdata Series

**Figure 6: Utah College Enrollment Within Five Years of Graduating High School**

(Cohorts 2008 - 2017)

	1 Year	2 Years	3 Years	4 Years	5 Years
Economically Disadvantaged	38.0%	43.8%	49.4%	53.3%	55.4%
Not Economically Disadvantaged	52.8%	58.5%	68.0%	71.9%	73.5%

Note: Economic disadvantage measured by a student's eligibility for free or reduced-price lunch
Source: Utah System of Higher Education (Henry et. al., 2017)

Figure 7: Utah College Completion Within Eight Years of Graduating High School

(Cohorts 2008 - 2010)
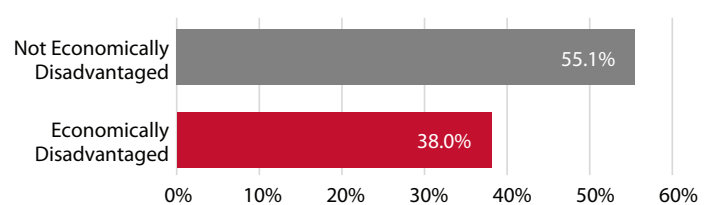
	Percentage
Not Economically Disadvantaged	55.1%
Economically Disadvantaged	38.0%

Note: Economic disadvantage measured by a student's eligibility for free or reduced-price lunch
Source: Utah System of Higher Education (Henry et. al., 2017)

4 **Economically disadvantaged students face many barriers to college enrollment and completion.**

- **Lower academic preparedness** – As evidenced by K-12 student achievement shown in Figure 8, economically disadvantaged students enter college less academically prepared than their peers who are not economically disadvantaged.

- **More likely to work and attend part-time** – Lower-income students are more likely to work more hours per week and are also more likely to attend college part-time. Splitting their focus and reducing credit loads can lead to longer completion times and higher chances of dropping out prior to completion.[3]

- **Many additional barriers** – Students from economically disadvantaged backgrounds are more likely to delay enrollment, have children and family responsibilities, be a single parent, be a first-generation college student, and are less likely to engage in academic and social experiences and utilize support services.[4]

5 **Rising tuition costs could pose barrier for economically disadvantaged students but grant aid may help offset these costs.**

- **Rising tuition/fees** – Over the last two decades, average Utah tuition/fees have more than doubled in inflation-adjusted dollars, shown in Figure 9.

- **Financial aid has also increased** – Both the share and average amount of aid Utah students receive has increased over the last decade in real dollars as shown in figure 10.

- **Published costs deter students** – The "sticker shock" of tuition prices can deter students from applying and enrolling in college even if they would be eligible for financial aid.[5]

- **Tailored recruiting helps** – Recruiting that informs low-income students of available financial aid and provides support in obtaining it has been shown to increase enrollment of economically disadvantaged students.[6]

Figure 8: Utah K-12 Student Achievement, 2018-2021
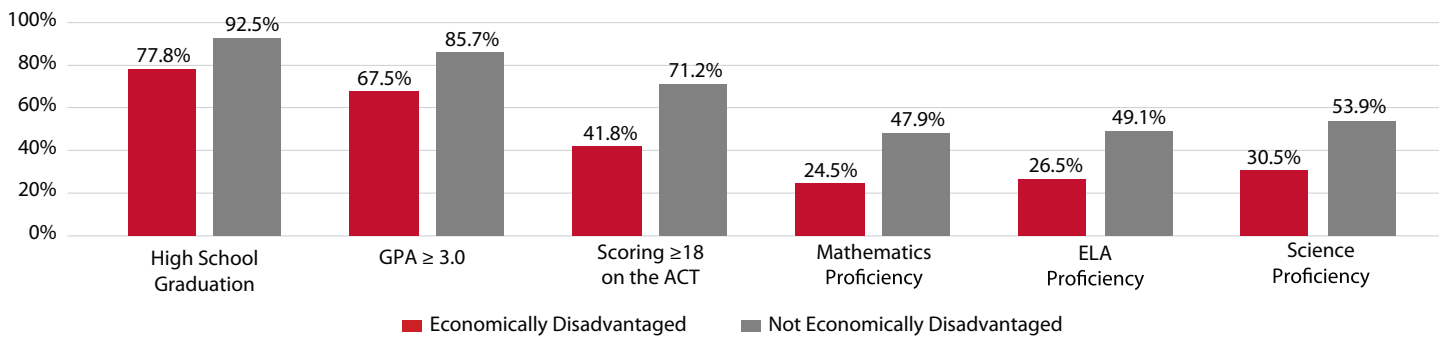
Note: Economic disadvantage measured by a student's eligibility for free or reduced-price lunch. Mathematics, English Language Arts, and Science proficiency represent an average of 3rd-8th graders as measured by RISE test scores. ACT scores use 2018 data, GPA uses 2019 data, the remaining metrics use 2021 data.
Source: Kem C. Gardner Policy Institute analysis of Utah State Board of Education data

Figure 9: Average Undergraduate Resident Tuition and Fees for USHE Degree Granting Institutions and U.S. Public Universities, FY 2000, 2010, and 2020

In 2020 dollars
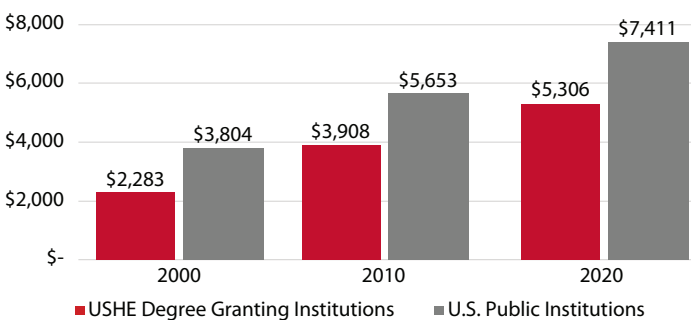
Note: Data are for the entire academic year and are average charges for full-time students.
Source: Utah System of Higher Education and National Center for Education Statistics Table 330[10]

Figure 10: Undergraduate Students Receiving Federal, State, Local, Institutional, or Other Sources of Grant Aid, 2010 & 2020
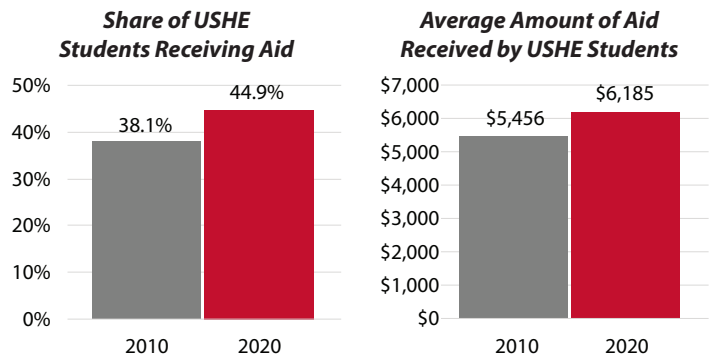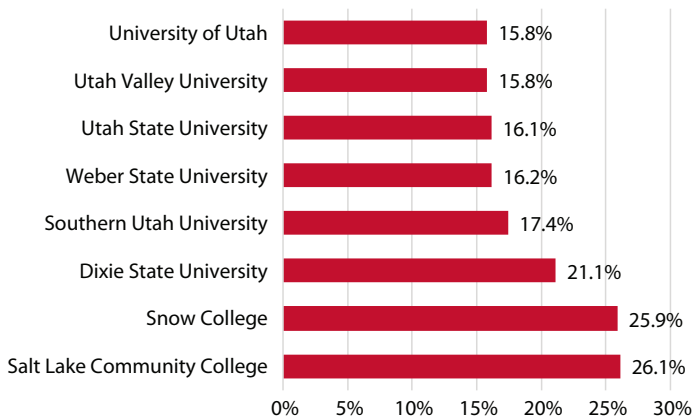

Note: Inflation adjusted to 2020 dollars. Private scholarships and COVID-19 relief funds are excluded from this measure.
Source: The U.S. Department of Education's Integrated Postsecondary Education Data System

6 The share of students who are economically disadvantaged differs across USHE institutions.
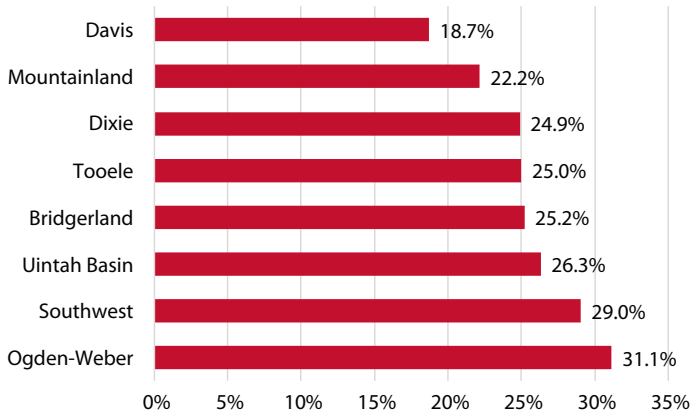
- **Student populations differ across schools** – Of students whose economic status is known (see appendix B for details), economically disadvantaged students make up a larger share of the student population at community colleges and most technical colleges compared to regional and research institutions as shown in Figures 11 and 12.

- **Many never enroll –** These data only shed light on students enrolled in college. Many economically disadvantaged students never enroll. As shown in figure 6, only 55.4% of economically disadvantaged students enrolled within 5 years of graduating high school.

Figure 11: Share of Students who are Economically Disadvantaged by Degree-Granting Institution, 2019-2020

Institution	Share
University of Utah	15.8%
Utah Valley University	15.8%
Utah State University	16.1%
Weber State University	16.2%
Southern Utah University	17.4%
Dixie State University	21.1%
Snow College	25.9%
Salt Lake Community College	26.1%

Note: Economic disadvantage measured by a student's eligibility for free or reduced-price lunch. Graduate students, non-credential seeking technical college students, and students without a USBE record were excluded from this analysis, see appendix A for details.
Source: Kem C. Gardner Policy Institute analysis of Utah Data Research Center, Utah System of Higher Education, and Utah State Board of Education data

Figure 12: Share of Students who are Economically Disadvantaged by Technical College, 2019-2020

Technical College	Share
Davis	18.7%
Mountainland	22.2%
Dixie	24.9%
Tooele	25.0%
Bridgerland	25.2%
Uintah Basin	26.3%
Southwest	29.0%
Ogden-Weber	31.1%

Note: Economic disadvantage measured by a student's eligibility for free or reduced-price lunch. Graduate students, non-credential seeking technical college students, and students without a USBE record were excluded from this analysis, see appendix A for details.
Source: Kem C. Gardner Policy Institute analysis of Utah Data Research Center, Utah System of Higher Education, and Utah State Board of Education data

7 Many different interventions have been tried with varying impacts; measurement poses challenges.

- **Many interventions exist –** Many types of interventions have shown positive impacts on improving enrollment and/or completion for economically disadvantaged students.[7, 8]

- **Impacts vary –** However, impacts can vary significantly across different populations and with different implementation.[9]

- **Measurement poses challenges -** There are many possible measures of economic disadvantage in higher education that pose differing challenges. Finding consistent reliable measurement will be key to understanding the problem, measuring the impacts of interventions, and tracking progress. See Appendix A for more information.

8 Education improves Utah's long-term future for everyone.

- **Benefits society** – Improving outcomes for economically disadvantaged students benefits not only these students, but society as a whole. Many of these benefits are summarized in Table 1.

- **Improved workforce** – In FY 2021, 55,436 degrees and certificates were awarded to students attending Utah's public degree-granting institutions and technical colleges providing more prepared employees for Utah's workforce.[10]

Table 1: Benefits of Education

Individual Benefits	Societal Benefits
• Increased earnings • Increased economic mobility • Better health outcomes • More likely to receive employer-provided health insurance • More likely to do educational activities with their children	• Stronger community • Increased GDP • Decreased crime • Increased volunteering • Increased voter participation • Increased tax contributions • Lower unemployment rate • Reduced reliance on public assistance • Reduced healthcare costs • Decreased poverty rate

Source: Kem C. Gardner Policy Institute based on literature review

# Appendix A: Measuring Economic Disadvantage

Measuring economic disadvantage in higher education proves challenging. Some of the most common measures and their benefits and challenges are discussed below.

Free or Reduced-Price Lunch: The primary measure used in this report (students' eligibility for free or reduced-price lunch) was attained through a data matching request through the Utah Data Research Center (see Appendix B for details). However, colleges do not routinely have access to this data for their students. Additionally, the measure was only available for students who attended K-12 schools in state since 2006 so out-of-state students and older students were not included in the measure. This measure will likely improve as time passes and the share of college students who attended school in 2006 or later continues to rise. In this report, free or reduced-price lunch data was available for 62.2% of all students enrolled in a USHE institution in the 2019-2020 school year. Since about 18% of USHE students are out-of-state students, this measure includes an even larger share of in-state students. It is also possible that if this measure was made available to colleges, it could be comparable across institutions and states since the National School Lunch Program is available for K-12 students nationwide. This measure is likely to be highly accurate when measuring whether students come from an economically disadvantaged background since it is based on family income level in relation to the poverty level.

Pell Eligibility: Pell eligibility is the most common metric for higher education institutions to measure their economically disadvantaged population. This measure is advantageous because it is made available to institutions at the student-level and is comparable nationwide since it comes from the Free Application for Federal Student Aid (FAFSA). However, this measure also has challenges. Pell eligibility is only available for students who complete a FAFSA. In the 2020–2021 school year, Utah ranked second to last for FAFSA completion with 63% of high school seniors not completing the application.[11] FAFSA completion rates among USHE students has fallen over the last 5 years with only 41.8% of students completing the application in 2021. With more than half of students failing to complete the FAFSA, these students are ineligible for any aid that is based on Pell eligibility and go uncounted when attempting to ascertain the enrollment and success of economically disadvantaged students using this measure.

Beyond measurement, there are reasons to work towards higher FAFSA completion rates. In 2020–2021, Utah students had nearly $44 million in unclaimed federal aid. Additionally, FAFSA completion has been shown to improve the enrollment

Figure 13: FAFSA Completion Rates of USHE Students, 2016–2021
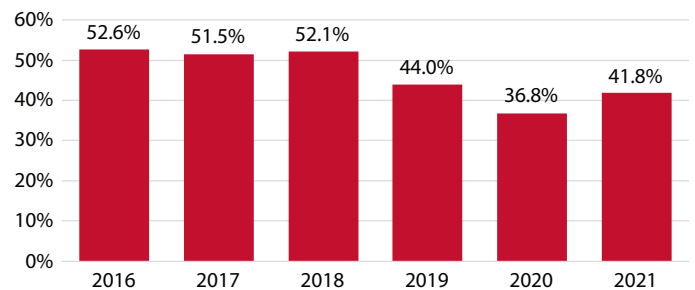
Source: Utah System of Higher Education[15]

rates of economically disadvantaged students. For students in the lowest socioeconomic quintile, FAFSA completion is associated with a 127% increase in immediate college enrollment.[12]

Income: Many research studies use income directly from tax records, self-reported measures, or aggregate census or survey-based data from entities like U.S. Census Bureau, federal and state tax commissions, Bureau of Labor Statistics, or Bureau of Economic Analysis. While this measure is useful in exploring the relationship between income and education, it is also not made available to institutions. While it is possible for institutions to ask for self-reported income from their students, students may be hesitant to provide this information and it is challenging to assess whether or not the self-reported data is accurate. It is also difficult to differentiate between a student's personal income and their family-income from childhood (when trying to ascertain whether they come from an economically disadvantaged background), particularly for older students.

Proxy Measures: Due to the challenges of using Pell eligibility and the lack of access to free or reduced-price lunch or income data, institutions may choose to rely on proxy measures. Instead of measuring economic disadvantage directly, they use a proxy that correlates with family-income level and that is available to them. Some potential proxy measures include zip code, race/ethnicity, and parent's education level. These measures are correlative, but not direct measures. While these measures could give schools approximations, they face the obvious drawback of not measuring economic disadvantage directly.

As higher education stakeholders work toward improving outcomes for economically disadvantaged students, having consistent reliable measurement will be key to understanding the problem, measuring the impacts of interventions, and tracking progress.

Appendix B: Methodology

The Utah Data Research Center (UDRC) provided data for all students enrolled in a Utah System of Higher Education (USHE) institution at any point during the 2019-2020 school year who had a Utah State Board of Education (USBE) record. Graduate students and non-credential seeking technical college students were excluded from the analysis. Data included the student's institution, credit count, and Pell eligibility from USHE data and graduating GPA, gender, ethnicity, and economic status from USBE data. Economic status was measured through eligibility for free or reduced-price school lunch from the USBE data. Students who were ever eligible for free or reduced-price lunch were counted as "economically disadvantaged" throughout this report.

These matched records were used to calculate the share of students enrolled in each USHE institution that are economically disadvantaged. Not all students are included in these shares as some students were not matched to a USBE record. This could be because the students attended K-12 schools out of state, the students attended a Utah K-12 school prior to data collection, or the student's record went unmatched for another reason. Additionally, some records were excluded because their economic status was unavailable. Sixty-two percent of all students were matched to a USBE record with economic status known. This share varies from 34.9% at Uintah Basin Technical College to 70.9% at Snow College. Table 2 shows the share of students who were matched with economic status known and thus were included in Figures 10 and 11.

Additionally, data were provided for USBE graduating cohorts 2017-2020 regardless of whether they subsequently enrolled in a USHE institution. These data were used to calculate the share of students who had a GPA greater than or equal to 3.0 based on their economically disadvantaged status as shown in Figure 8. Only 2019 graduates were included in this measure.

Data for this research was accessible through Utah's state longitudinal data system database administered by the Utah Data Research Center, which includes data supplied by UDRC members. This research, including the methods, results, and conclusions neither necessarily reflect the views of, nor are endorsed by, the UDRC members. All errors are the responsibility of the author.

Table 2: Matched Student Records by Institution

Institution	Matched Student Records	Total USHE Student Records	Share of Student Records Matched
Dixie State University	9,253	14,315	64.6%
Salt Lake Community College	27,871	42,179	66.1%
Snow College	4,700	6,627	70.9%
Southern Utah University	6,067	13,718	44.2%
University of Utah	15,497	29,593	52.4%
Utah State University	17,152	29,964	57.2%
Utah Valley University	35,084	50,465	69.5%
Weber State University	24,904	35,545	70.1%

Institution	Matched Student Records	Total USHE Student Records	Share of Student Records Matched
Bridgerland Technical College	1,016	2,172	46.8%
Davis Technical College	1,967	4,041	48.7%
Dixie Technical College	462	1,040	44.4%
Mountainland Technical College	1,836	3,537	51.9%
Ogden-Weber Technical College	1,692	3,155	53.6%
Southwest Technical College	210	522	40.2%
Tooele Technical College	212	531	39.9%
Uintah Basin Technical College	228	653	34.9%
Total	**148,151**	**238,057**	**62.2%**

Source: Utah Data Research Center

Endnotes

1. Wolla & Sullivan (2017)
2. Henrie et. al. (2019)
3. Utah Foundation (2021)
4. Brock (2010), The Pell Institute (n.d.), & Utah Foundation (2021)
5. Levine et. al. (2020)
6. Dynarsk et, al. (2018)
7. Castleman et. al. (2013), Daugherty et. al. (2016), National College Attainment Network (2019), The Pell Institute (2009), & Utah Foundation (2021)
8. See Utah Foundation report *"Beating the Odds: Post-Secondary Success for Adult, First-Generation and Lower-Income Students"* for an in-depth look at Utah-specific interventions for low-income college students.
9. Castleman et. al. (2013), Daugherty et. al. (2016), National College Attainment Network (2019), The Pell Institute (2009), & Utah Foundation (2021)
10. Utah System of Higher Education Completions data, https://ushe.edu/institutional-data-resources-degrees-awards/
11. National College Attainment Network (2022)
12. National College Attainment Network (2019)
13. Haskins (2016)
14. The policy brief, "Defining Utah's Middle Class," provides further methodology discussion (Pace, 2018).
15. Hoover (2022)

References

Brock, T. (2010). Young adults and higher education: barriers and breakthroughs to success. Future child. 20(1):109-32. doi: 10.1353/foc.0.0040. PMID: 20364624.

Castleman, B. L. & Long, B. T. (2013). Looking Beyond Enrollment: The Causal Effect of Need-Based Grants on College Access, Persistence, and Graduation. National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w19306/w19306.pdf

Daugherty, L., Johnston, W. R., & Tsai, T. (2016). Connecting College Students to Alternative Sources of Support. The Single Stop Community College Initiative and Postsecondary Outcomes. Rand Corporation. https://www.rand.org/pubs/research_reports/RR1740-1.html

Dynarski, S., Libassi, C.J., Michelmore, K., & Owen, S. (2018). Closing the Gap: The Effect of a Targeted Tuition-Free Promise on College Choices of High-Achieving, Low-Income Students. National Bureau of Economic Research. https://www.nber.org/papers/w25349

Haskins, R. (2016). Education and Economic Mobility. Brookings Institute. https://www.brookings.edu/wp-content/uploads/2016/07/02_economic_mobility_sawhill_ch8.pdf

Henrie, K., Curtain, J. A., & Ma, D. (2019). College Participation and Completion of Utah High School Graduates. Utah System of Higher Education. https://ushe.edu/wp-content/uploads/pdf/reports/2019_college_participation_completion_report.pdf

Hoover, C. (2022). FAFSA Completion in Utah. https://ushe.edu/wp-content/uploads/pdf/reports/issue_brief/2022/2021%20FAFSA%20Issue%20Brief_final.pdf

Levine, P.B., Ma, J., & Russell, L.C. (2020). Do college applicants respond to changes in sticker prices even when they don't matter? National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w26910/w26910.pdf

National College Attainment Network. (2019). Students in Higher-Poverty School Districts Are Less Likely to Apply for Financial Aid. https://www.ncan.org/news/480053/Students-in-Higher-Poverty-School-Districts-Are-Less-Likely-to-Apply-for-Financial-Aid.htm#:~:text=Nationally%2C%20students%20in%20the%20lowest,did%20not%20complete%20a%20FAFSA

National College Attainment Network. (2020). Pell Dollars Left on The Table. https://public.tableau.com/app/profile/bill.debaun.national.college.access.network/viz/PellDollarsLeftontheTable/VisualDashboard

Pace, L. (2018). Defining Utah's Middle Class. The Kem C. Gardner Policy Institute. https://gardner.utah.edu/wp-content/uploads/MiddleClass-FS-Dec2020.pdf?x71849

The Pell Institute. (n.d.) Moving Beyond Access: College Success For Low-Income, First-Generation Students. https://files.eric.ed.gov/fulltext/ED504448.pdf

The Pell Institute. (2009). National Studies Find TRIO Programs Effective at Increasing College Enrollment and Graduation. http://www.pellinstitute.org/downloads/publications-Studies_Find_TRIO_Programs_Effective_May_2009.pdf

Utah Foundation. (2021). Beating the Odds: Post-Secondary Success for Adult, First-Generation and Lower-Income Students. https://www.utahfoundation.org/wp-content/uploads/rr785.pdf

Wolla, S.A. & Sullivan, J. (2017). Education, Income, and Wealth. Page One Economics. https://files.stlouisfed.org/files/htdocs/publications/page1-econ/2017-01-03/education-income-and-wealth_SE.pdf