



UTAH SYSTEM OF
HIGHER EDUCATION

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Completion Patterns within the Utah System of Higher Education

From 1960 to 2016, the percentage of recent U.S. high school graduates who went on to higher education increased from 45.1% to 69.8%.ⁱ Those enrollments were driven by economic factors such as a Degree Wage Premium (the increase in wages associated with a degree), a decline in manufacturing jobs, and increases in knowledge-based employment and professional and business jobs.ⁱⁱ These factors drove more people into higher education from the 1960s to today, including large increases in the proportion of women, low income students, and students from previously underrepresented demographic groups.ⁱⁱⁱ Increased demand for college enrollment and changing labor markets created shifts in the number and kinds of institutions of higher education across the country. New community colleges were created and existing two-year and four-year state colleges transitioned into universities.^{iv} This was the case in Utah along with the rest of the country. Salt Lake Community College was created in 1967 to meet the increased demand, while four existing state colleges attained university status: Weber State and Southern Utah in 1991, Utah Valley in 2008, and Utah Tech in 2013. (The University of Utah was founded in 1850 and Snow College and Utah State University in 1888.)

Nationally, the increase in the rate of college enrollment has corresponded with decreases in completion rates.^v Across the United States, only about 50% of students who begin college or university will graduate. Today, 1 in 5 Americans has some college, no degree, and low-income students and students of color are most likely to be pushed out of higher education.^{vi}

State legislatures and state systems of higher education play a key role in affecting educational attainment through policy and funding mechanisms that can increase both demand- and supply-side factors for higher education. Institutional roles and missions, which in Utah are set by the legislature and defined by the Board of Higher Education, are strongly correlated with particular completion patterns through two key factors that national research has identified as keys to completion rates: supply-side practices such as funding levels, institutional practices, and resources including adequate levels of faculty, instructional supports for students, and other student services and demand-side practices such as the students who enroll, as reflected in admissions policies (selective vs. open access).^{vii}

National data show that graduation rates differ markedly by institutional role. Institutions that accept a smaller proportion of applicants have higher completion rates, particularly when students are selected on the basis of academic performance. Generally speaking, completion rates are 20% higher at research and doctoral universities than at other four-year institutions, and four-year institutions have

completion rates 20% higher than two-year colleges. Open-access institutions that allow anyone to enroll have completion rates 20-40% lower than selective institutions of the same institutional type.^{viii}

While Utah System of Higher Education (USHE) completion patterns reflect these broader national trends, which are rooted in international economic patterns and sociocultural shifts, there are some characteristics affecting college degree completion that are specific to the state. This issue brief pulls from national and Utah-based research to discuss those factors as they relate to USHE degree-granting institutions and identifies how the Board of Higher Education's Strategic Plan is addressing them.

Institutional Roles, Enrollment, and Completion

Research attempting to quantify the impact of supply and demand factors on completion has concluded that academic preparation of students is the best predictor of whether a student will graduate from college, but supply side issues, as measured in instructional expenditures and in faculty-to-student ratios, may account for 25% of the overall decrease in completion rates noted across the country. Nationwide, from the 1970s to today, instructional cost per student at institutions of higher education increased across the board, rising from an average of \$14,610 at public universities in the 1970s to \$22,559 in 2000-2001.^{ix} However, those conglomerated numbers, which lump together research institutions with open access schools, fail to capture the stratification in resources based on institutional roles. While there have been large funding increases at prominent, selective public research institutions in some states, institutions in other states or with other institutional roles have experienced "stagnation and decline" in resources.^x (The 2022 USHE Data Book shows average expenditures per full-time equivalent student by level of instruction are lower than the national averages cited above and will be presented below.)

The base resource stratification between institutions further intensifies in two ways: less prepared students sort into the most "elastic" sectors of higher education (open access institutions) and those academically underprepared students need more resources to successfully complete degrees. However, the more elastic institutions also tend to have fewer resources per students than more selective institutions.

Utah institutions receive higher legislative funding than some other states, although the proportion of funding through state appropriations has dropped from 75% in 2000 to 50% today.^{xi} USHE institutions have a commitment to keeping tuition low for students, and even though they have had to proportionally increase their tuition in line with decreases in state appropriations, they still have generally lower tuition rates than their peers. Low tuition for all students regardless of family income levels does result in correspondingly lower revenues to provide resources per student than comparable institutions with higher tuition rates but more need-based aid (see Table 2 below).

A key metric for assessing the availability of resources to provide academic supports for students is the ratio of full-time equivalent students per full-time equivalent faculty member. That ratio has been slightly increasing at USHE institutions, while the critical expenditures per student have been decreasing (except for a slight growth in expenditures in vocational programs within degree-granting institutions), as shown in the following tables:^{xii}

Table 1

USHE Data Book 2022: Tab C Cost Study

USHE Direct Appropriated Instructional Expenditures

	2017-18	2018-19	2019-20	2020-21
Appropriated Direct Cost per FTE Student				
Vocational	\$5,729	\$5,634	\$5,256	\$5,435
Lower Division	\$4,207	\$4,294	\$4,487	\$4,460
Upper Division	\$8,016	\$7,793	\$7,941	\$7,669
Basic Graduate	\$12,511	\$12,583	\$12,389	\$11,505
Advanced Graduate	\$17,377	\$15,567	\$17,107	\$14,644
All Levels	\$6,335	\$6,352	\$6,558	\$6,404

	2017-18	2018-19	2019-20	2020-21
Appropriated Student to Faculty Ratios				
Vocational	17.2	17.2	17.6	17.9
Lower Division	22.7	22.3	22.3	23.2
Upper Division	16.0	16.1	16.0	16.6
Basic Graduate	14.1	14.0	13.9	15.3
Advanced Graduate	10.1	10.7	12.1	13.9
All Levels	18.4	18.3	18.3	19.0

Demand-side issues, as reflected in institutional admissions policies, also have a profound impact on completion rates, since institutions that admit academically underprepared students will have lower completion rates than selective institutions. By some estimates, academic under-preparation of students accounts for 30% of the decline in US completion rates generally over the last several decades and up to 90% of the decrease at open access community colleges.^{xiii} All USHE degree-granting institutions are open access institutions except the University of Utah and Utah State University’s Logan campus; USU’s regional campuses are open access and count in USU completion metrics.

Thus access, affordability, and completion, three extremely crucial elements of the Board’s strategic plan, are interconnected and also in a state of tension, as changes in one element will have an effect on the others. As Bound and Turner note, “Institutions may face tradeoffs between fulfilling an open

access mission by increasing enrollment at low tuition with reduced resources per student and either raising tuition, which may reduce ‘access,’ or limiting enrollment in order to increase resources per student.” Institutions may increase completion by decreasing access through selective admissions.^{xiv} Which of these elements takes precedence over the others is often determined by institutional role and tuition policies.

Even within a shared institutional role, however, there can be variations in outcomes. The following table uses information from the USHE Data Book and IPEDs Data Feedback Reports to compare state appropriations, tuition, and completion rates for the USHE degree-granting institutions with their peer institutions in other states (institutions with relatively similar institutional roles, missions, public nature, and urban, suburban, or rural location). All USHE institutions with the exception of Snow College and Salt Lake Community College have lower completion rates than their national peers. Although Utah ranks 14th highest in the country for the proportion of the population with a bachelor’s degree or higher, it has room for improvement and increasing relatively low completion rates could have a big impact, especially among Utahns ages 25-34.^{xv}

Table 2
State Appropriations, Tuition, and Completion Rates of USHE Institutions and Their National Peers

Institution	IPEDS FFFT Completion 150% time	Median of peer institutions (per IPEDs FDR)	Cost of instruction per FTE student	Comparison of cost of inst. peer institutions	State appropriations per FTE Student	Comparison of state appropriations with peer institutions	Tuition	Comparison of tuition with peer institutions
UU	70%	84.00%	\$15,447	76.50%	\$11,587	121.70%	\$12,004	82.30%
USU	50%	60%	\$10,613	89%	\$9,047	95%	\$6,483	69%
SUU	46%	61%	\$6,692	78.80%	\$5,072	67.50%	\$6,714	102.90%
Snow	41%	30%	\$7,412	115.60%	\$7,979	132%	\$2,913	96.40%
Weber	36%	56%	\$5,943	77.90%	\$4,756	89.50%	\$4,656	64.70%
Utah Tech	35%	39%	\$3,799	53%	\$5,102	83.90%	\$5,967	135.80%
UVU	32%	35%	\$5,153	68.60%	\$3,959	72.50%	\$4,961	70.20%
SLCC	26%	25%	\$5,549	101%	\$5,847	154%	\$3,464	151%

Academic Factors Affecting Completion

College Readiness and Academic Preparation in High School

Numerous studies have concluded that a student’s academic preparation is the top predictor of whether they will successfully complete college or not.^{xvi} There is also a strong consensus on what constitutes academic preparation. Multiple decades of longitudinal studies, based on intensive examination of students’ high school transcripts and subsequent performance in college, have identified a critical core high school college readiness curriculum: four years of writing-intensive English; four years of mathematics culminating in pre-calculus or higher; lab-based courses in biology, physics, and chemistry; three years of social sciences; and two years of world language study.^{xvii} Participation in this college readiness high school curriculum predicts a student’s ability to complete a bachelor’s degree even more effectively than their high school grade point average, standardized test scores like the ACT, or their class ranking.^{xviii} The curriculum also meets the admissions requirements at the selective institutions in the state (the University of Utah, Utah State University, Westminster College, and Brigham Young University) and at selective out-of-state institutions like Harvard, Yale, Columbia, Berkeley, Princeton,

and Stanford. It is recommended by the National Center for Educational Statistics, the American Diploma Project, the Pew Charitable Trust, and the Association of American Universities. Multiple states have adopted it as their official high school college preparatory curriculum, either through “state scholar” programs or through changes to high school graduation requirements. Those states include Arizona, Arkansas, Colorado, Connecticut, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Nebraska, New Jersey, New Mexico, North Carolina, Oklahoma, Rhode Island, Virginia, Washington, and West Virginia.^{xix}

Utah’s high school graduation requirements are not completely aligned with the recommended college preparatory curriculum. Utah’s requirements differ in:

- Science: Utah requires 3 sciences credits, but misses the specificity of lab-based biology, chemistry, and physics.
- World Language Study: missing as a requirement; two years recommended.
- Math: Utah has only 3 rather than 4 four math requirements.

Although some students do end up filling these gaps in their high school schedules because they are aiming for the admissions requirements at selective institutions, others may not know to opt into advanced high school course work and will be at a disadvantage compared to their peers. College readiness is thus an equity issue.

Even if students do not follow the entire recommended college preparatory curriculum, Long et al found a 7 -11% increase in the likelihood of a student enrolling in a 4-year college if they take just one rigorous course during high school. The biggest impact comes from advanced English and math courses. Additional research found that 28% to 35% of the gaps in academic readiness among college-going Black, Hispanic, and low-income students and over 75% of the increase in college readiness among Asian students can be explained by the highest math course taken in high school.^{xx}

Because the Board of Higher Education does not control high school curricula and course taking, USHE has been using the Concurrent Enrollment program to ensure that students have access to advanced math and other subjects by offering key introductory college courses to high school students at extremely low tuition rates (thanks to generous funding by the legislature). Concurrent enrollment is available in all Local Educational Authorities across the state, including in rural communities. Because a fourth math credit is the most crucial gap in the Utah high school curriculum, USHE uses special legislative SB196 (2015) funding to provide pass-through money to degree-granting institutions specifically to increase student access to and completion of Concurrent Enrollment mathematics courses. During the first phases of funding, institutions worked to train more high school teachers to qualify as Concurrent Enrollment mathematics adjunct faculty. As part of the Board’s strategic plan initiatives around Introductory Course Success, the current funding phase is earmarked for increasing the number of students, and especially from underrepresented backgrounds, who successfully complete math requirements through Concurrent Enrollment.

The Board’s strategic plan reflects two additional initiatives aimed at encouraging all students to complete advanced high school coursework. USHE’s new Opportunity Scholarship rewards students for taking three advanced courses in English, Math, and Science via Concurrent Enrollment, Advanced

Placement, or International Baccalaureate programs. Another initiative will work with USBE on messaging college pathways to high school students.

Developmental Education and Co-Requisite Remediation

All institutions in the Utah System of Higher Education except the University of Utah and the Logan Campus of USU are open access institutions, meaning that students are fully eligible to enroll in college whether they are academically prepared or not, as long as they have a high school diploma or the equivalent. This open-access mission is important to allow as many interested Utahns as possible the chance to earn a college degree, but the reality is that the majority of new college students in the system are academically underprepared to take credit-bearing classes.^{xxi}

The majority of graduating Utah high school seniors do not meet national college readiness markers and are underprepared for college-level coursework. USHE schools use a variety of placement measures to ensure students are not inappropriately defined as underprepared for academic work, but the rates of college readiness demonstrated in patterns of ACT scores are reflective of similar patterns found in alternative measures. The ACT identifies college readiness “benchmark” scores in four subject areas—English, Reading, Math, and Science—based on those scores’ ability to predict a 75% or greater chance of earning at least a C in related college courses. Subject scores are compiled into a composite score with a possible high of 36 points; 22 is the minimal composite score a student could receive while meeting the benchmark score in each of the subject tests. Data for the Utah graduating high school class of 2019 are show in the following table, with 76% of high school seniors being underprepared in one or more areas.^{xxii}

Subject	Graduating Utah high school seniors meeting benchmarks
Meeting all four benchmarks (English, Reading, Science, Math)	24%
Meeting 0 benchmarks	38%
English College Readiness	57%
Math College Readiness	37%
Reading College Readiness	42%
Science College Readiness	34%

Students who miss college readiness benchmarks on the ACT or on alternative measures used for placement into college-level coursework will need some form of remediation to be successful in their courses.

Students who delay enrolling in college for whatever reason—jobs, marriage, voluntary religious or military service—typically require more remediation than students fresh from high school, as they have had more time for their skills to erode. This was reflected in a 2017 USHE study that found the average age of a student enrolled in a developmental course at USHE institutions was 23, about four years after graduating from high school.^{xxiii} Students who participate in LDS missionary service directly out of high

school are often affected by the gap of time between high school and college enrollment, particularly if they ended math courses in their junior year and have a 3-year lag before attempting college math.^{xxiv}

Students who arrive on campuses unprepared for college-level work find that it costs them extra time and money to complete developmental courses they would not have needed had they arrived fully prepared in all subjects. Institutions of higher education face their own costs and capacity challenges when trying to teach students the high school-level skills they need to master before beginning college course work, and the state ends up subsidizing a repeat of high school work.^{xxv}

Developmental courses may also delay or impede students' ability to graduate by adding extra courses to a students' schedule and may hinder their ability to receive financial aid.^{xxvi} To address those problems, USHE institutions have designed co-requisite courses to try to bypass extra developmental courses for students, particularly in math and English. Co-requisite courses embed development of missing skills into college-level classes, essentially combining a developmental course with a college-level course to save students time and money and increase their chances of attaining necessary skills. Preliminary data indicates that students have higher pass rates in those co-requisite courses, even compared to students who were academically ready and placed directly into college-level classes.^{xxvii} Co-requisite courses are being scaled up across the system as part of the Board's strategic plan initiative to improve success in introductory courses.

Introductory Course Success

A 2015 USHE study and follow up studies in 2020 and 2022 looked at the impact of key "gateway" courses on students' ability to graduate.^{xxviii} Those studies defined gateway courses as having large enrollments and serving as prerequisites to subsequent courses or as graduation requirements and thereby affecting large numbers of students. Those studies found that fewer than 49% of students who fail just one of those gateway courses will graduate, and disaggregated data reveal that underrepresented students were most likely to be pushed out of those courses or to fail them. The Board's Strategic Plan initiative on Introductory Course Success is aimed at getting students into critical introductory courses as soon as possible but with adequate supports to pass them successfully.

Because both math and writing skills are pre-requisites to several other college courses, once students enroll at USHE institutions, advising campaigns strongly encourage them to start on their math and English requirements immediately upon enrolling in college (if they have not completed those General Education requirements through college-level coursework while in high school or through challenge exams like AP or IB). The strategic plan initiative around structuring degree programs to facilitate completion will include an emphasis on structuring degree maps to get students into those key courses as quickly as possible.

USHE uses annual High School Feedback reports to gauge how many new college students are successfully completing college English and Math courses during their first year and provides feedback to their high schools on their performance. For students from the Utah high school graduating class of 2020 who enrolled at a USHE institution the following fall, 385% enrolled in college-level math or had already completed those General Education math requirements through CE or AP or IB test scores while in high school; 20.9% enrolled in remedial math, which put them on a pathway to meeting the graduation

requirements. For English, 40.8% of the high school graduating class of 2020 completed their college-level English requirement by the end of their freshman year, either through advanced work in high school or enrollment at the institution; 3% enrolled in remedial English. ^{xxxix}

Math Pathways Redesign

Mathematics is the subject in which students most frequently require remediation and also has an outsized effect on whether a student will graduate. As part of the strategies around introductory course success and structuring degrees to facilitate completion, USHE institutions, the General Education Task Force, and the Academic Affairs unit of the Commissioner’s Office worked together to redesigned the Quantitative Literacy general education requirements for college graduation to better ensure students’ ability to earn degrees. In the past, most students were required to complete a calculus-focused mathematics pathway, even if their majors and future career plans did not require it. USHE institutions have made concerted efforts to examine math requirements by major and to advise students into an appropriate math pathway: Quantitative Literacy (Math 1030), Statistics (Math or STATS 1040), or College Algebra (Math 1050) for those who will need Calculus. Often, students who would require remediation in order to succeed in Math 1050 are able to place directly into Math 1030 or Math 1040 without extra coursework if their majors allow those pathways and the math pathways redesign has eliminated the need for developmental coursework for many students.^{xxx} Preliminary follow up research shows an increase in math enrollments and also an increase in math pass rates, and progress will be gauged as part of the Introductory Course Success tactic.^{xxxii}

Structuring Degrees to Facilitate Completion

High levels of student engagement with their campuses are associated with a higher likelihood of student persistence, as measured through national surveys like the Community College Survey of Student Engagement and the National Survey of Student Engagement. Student and faculty interactions and student participation in collaborative learning have particularly high importance.^{xxxiii} Teaching strategies that embed high levels of collaborative learning and student/faculty interactions are known as “high impact practices” or “HIPs”. Research demonstrates that they correspond with increasing odds of graduating and some studies indicate that the result may be more pronounced for students from underrepresented backgrounds.^{xxxiii} Yet not all students are able to access HIPs because of sociocultural or socioeconomic factors or because of large student-to-faculty ratios.

Part of the Board’s Strategic Plan Initiative around structuring degree pathways to facilitate completion is intended to embed high impact practices within a student’s major rather than making them optional, add-on choices that are difficult for students to access, particularly with limited time and resources. The Board will also be holding discussions on the research that takes place on USHE campuses and students’ access to undergraduate research opportunities. A Civic and Engaged Learning initiative, in which all USHE institutions are participating, is part of a national research project to assess the impact of Civic and Engaged or Community-Based Learning on student outcomes. A third initiative will address system-level faculty workload policies and required reporting documents that weight high impact

practices less heavily than lesser-quality practices like large class sizes. Those updates will provide institutions with flexibility to encourage high impact practices.

Transfer

Students from underrepresented demographic populations, first generation students, and low-income students are most likely to attend institutions with lower costs and closer to their homes and may eventually need to transfer to another institution.^{xxxiv} Utah also has high numbers of students who stop out for family or employment and need to attend a different institution than the one where they started when they are in a position to come back to school.^{xxxv}

About one third of currently-enrolled USHE students have transferred from another institution. USHE-based research has found that returning students, including transfer students, are more likely to graduate than first time students, but transfer students may be graduating with excessive credits and associated delays in time-to-completion. The successful completion rates of transfer students do not capture students who found transfer too difficult and ended up stopping out instead of switching institutions.^{xxxvi}

The Board's strategic plan initiative to streamline transfer is aimed at making it easier for students to understand their transfer options through the electronic Utah Transfer Guide, to receive full credit for their coursework when they do transfer by utilizing a common course numbering system and shared General Education Requirements across institutions, and by aligning lower division major coursework across institutions so that students' courses will fulfill their bachelor's-level major requirements if they transfer.

Improved Options for Credit for Prior Learning

As part of the Board's strategic plan, faculty major committees worked with the Academic Affairs unit of the Commissioner's Office to standardized the minimum scores needed to earn an established number of credits in commonly numbered courses aligned with specific AP and IB exams, so that students are ensured of receiving the same, transcribed, and transferable credits across the system for key introductory courses. Efforts are also underway to provide better options for returning adults to demonstrate competencies acquired through work or other experiences so they can earn credits for required courses and speed up their progress through a degree. Research by the Council on Adult and Experiential Learning and the Western Interstate Commission on Higher Education show that adult students who earn credit for prior learning are 17% more likely to graduate.^{xxxvii}

Personal and Familial Factors Affecting Completion

A 2022 survey of people who dropped out of USHE institutions found that 51% of respondents said that employment and family responsibilities contributed to their leaving school, and 30% of students indicated that they encountered significant mental or physical health challenges that also contributed to stopping out. Although 30% of the survey participants indicated a "high interest" in finishing their degree, only 16% indicated that the circumstances that caused them to stop out had been addressed sufficiently for them to contemplate returning.^{xxxviii}

Utah also has younger average ages for marriage and childbearing than other states, meaning a higher proportion of USHE students will encounter those familial challenges to graduating. A USU study on Utah women, for example, found that more than 1 in 4 undergraduate women in Utah and almost half of women graduate students are married, and 1 in 5 women students have at least one child. Married Utah women are 79% less likely to be enrolled in post-secondary education at all compared to married men. Women with children under age 5 are 31% less likely to be enrolled in post-secondary education compared to men with children under 5. ^{xxxix}

Utah also has a particular pattern of students delaying enrollment in college because of LDS missionary service. Students who delay matriculation are more likely to stop out and less likely to ultimately graduate, and national research indicates that “the negative effects of delayed matriculation can be large.” A one-year delay in matriculation increases the risk of dropping out by 27% and cuts the odds of graduation by 35%.^{xi} Especially when students have not completed their quantitative literacy requirements while in high school through Concurrent Enrollment or AP or IB exams, the odds of students completing college decrease for each year of delay. ^{xii}

In addition to the efforts to help students complete key gateway courses as early as possible, including while in high school, in order to decrease the impact of delayed matriculation, the Board’s strategic plan includes initiatives aimed at helping USHE institutions support students’ mental health and to provide supports for students with families via childcare, basic needs, and other services.

Economic Factors Affecting Completion

Cost of Attendance and Lack of Financial Aid

Surveys of students who stopped out of USHE degree-granting institutions found that 45% of respondents were unable to graduate because they could not afford the cost of their education, and among students age 25-30, cost was the number one reason for stopping out. ^{xlii} Utah also has low levels of financial aid for students, yet students who receive financial aid are more likely to persist, graduate, and graduate on time.^{xliii} When academic preparation and GPA are the same, low income students are still more likely to drop out than peers from higher socioeconomic situations.^{xliv}

Utah has very low numbers of students completing the Free Application for Federal Student Aid. This is due to a variety of factors, from the difficulty navigating a complicated application, to misunderstanding the benefits of completing the application in order to access grants and scholarships, not just student loans. There are also political and cultural levels of distrust of the federal government that influence willingness to seek federal financial aid. ^{xlv} Not completing the FAFSA leaves students unable to tap into significant federal funding opportunities, even though those opportunities have been funded in part by Utah taxpayers along with the rest of the country. The Board has strategic initiatives in place to try to improve FAFSA completion, and those efforts are starting to pay off. The state just moved up from last in the country for FAFSA completion to second-to-last.

Although Utah institutions enjoy relatively high state appropriations, which lowers the amount of tuition students pay, Utah is 11th lowest in the country in state financial aid per full time equivalent student. ^{xlvi} Students who receive loans are more likely to drop out entirely than are students who receive similar amounts through grants or scholarships, and the higher the award, the more likely a student is to

make it to graduation.^{xlvii} When Utah students do receive financial aid, it is often restricted to tuition and fees and does not cover the full cost of attendance, including housing, food, or transportation, let alone the lost opportunity costs of not working full time and the responsibilities that even younger, unmarried students may have to help provide financial support for their families.

Opportunity Costs

Dropping out of college prior to graduation can be a rational economic choice, if the net risk-adjusted returns of dropping out are greater than the net risk-adjusted returns of persisting. The net costs involved in higher education are one factor that students weigh against future benefits of earning a degree; another is the opportunity cost of lost revenue, and accrued interest on those revenues, when students attend school instead of working. More immediate costs may not be balanced out by the hope of future increased revenues.^{xlviii}

Opportunity costs may be especially large for students with pressing family obligations or immediate financial need. This includes not only married students and students who are parents, but students from low income families and cultural backgrounds that expect them to contribute to the family finances. Opportunity costs are also large for students who find well-compensated employment prior to graduation and may not expect to see a significant increase in their salary with a degree because they have already found a good job.^{xlix} A study commissioned by USHE found that, particularly for students who stop out after earning 60 credits, securing employment was cited as a primary factor for not graduating.¹

Utah data on the return-on-investment of a college degree suggest that graduates with a bachelor's degree earn roughly \$12,000 more per year than Utahns with only a high school diploma, but even for students who do not complete degree, there can be small increases in earnings of around \$6,000 for having some college. The biggest bump in wages for Utahns with some college, no degree may be linked to technical certificates (which are not degrees but which can bump up salaries by \$10,000 per year compared to a high school diploma, depending on the field) as opposed to students who have stopped out from degree programs, and the data sources make it hard to distinguish them. The largest jump in earnings comes when a student earns a degree, and people with bachelor's degrees have a median wage higher (\$51,611) than those with associate degrees and certificates (\$37,247), and people with graduate degrees have a median wage higher (\$76,099) than those with bachelor's degrees (Utahns with high school diplomas have a median wage of \$34,667).^{li} Having some college cuts unemployment rates from 3% to 2%, and people with a bachelor's degree have unemployment rates lower than 1.5%.^{lii} Those incremental shifts in wages contribute to the opportunity cost/net benefits calculations of pursuing a degree, particularly in a strong economy with low unemployment rates, as is currently the case in Utah.

Part-time Enrollment

Attendance and opportunity costs, Utah's cultural preference for avoiding student debt, family responsibilities, and being academically underprepared and needing to devote more study time in order to keep up with their classes may all cause students to attend school part time. By definition, part time attendance will delay completion, and it may also cause students to stop out or drop out altogether.^{liii} Both high enrollment intensity (i.e., taking 30 credits per academic year) and enrollment continuity

(continuing on from one academic year to the next without stopping out) are associated with better odds of completing college successfully and on time--in two years for an associate degree and four years for a bachelor's degree. ^{liv} However, a 2017 study found that the majority of USHE students work while attending school and only around 24% of USHE students are able to carry full time enrollment loads. Those rates are even lower for students from underrepresented populations; only around 17% of Hispanic students are able to attend full time. Some institutional roles are more likely to draw students who are able to enroll full time while others are more appealing to students who need greater flexibility to juggle school among other life responsibilities. Southern Utah University, due to its residential, small liberal arts mission, and Snow College, as a residential two-year school, have relatively high rates of full-time student enrollment. Nationally and within Utah, younger students are better positioned to enroll in college full-time than are older students. While only 1/3 of USHE students between the ages of 18-23 took 30 or more credits in the 2017 study, only 1/4 of students ages 24-29 did so, and only 1/6 of students between the ages of 30-39 were enrolled in 30 or more credits. ^{lv}

Conclusion

Utah has some strong economic supports that other states do not enjoy, such as relatively high state appropriations for higher education and funding for a robust concurrent enrollment program that both contribute to students' abilities to access higher education and earn a degree. It also enjoys strong collaboration between USHE institutions on degree structures, general education requirements, common course numbering, and alignment of credits for prior learning. However, a variety of academic, personal, family, and broader economic factors still affect whether students access higher education, persist in their studies, and make it to graduation. Those factors include widespread academic under-preparation, leading to high numbers of students in need of academic remediation and high failure rates in introductory courses; patterns of delayed matriculation; low ages for marriage and parenting; low rates of students accessing federal financial aid and low levels of state financial aid; part-time enrollment patterns; and a strong economy that raise the opportunity costs of delaying entry in the workforce in order to finish a degree. The Board of Higher Education is attempting to address as many of these factors as are within its influence through its Strategic Plan and through actively supporting institutions in their efforts to improve completion rates.

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