



HigherEdUtah2020

2010 Report

Good planning is a dynamic process. As such, this strategic plan, approved by the State Board of Regents on December 9, 2010, will continue to evolve as the Regents and the Commissioner of Higher Education persist in collaborating with Utah's education community, political and business leaders and the general public to determine what actions must be pursued to ensure a prosperous future for the state.

This document is the *2010 Report* of the **HigherEdUtah2020** strategic plan. The State Board of Regents and the Commissioner of Higher Education will produce a report each January that will chart the progress Utah has made towards its **big goal**: To have 66% of Utahns—men and women age 25 to 64—with a postsecondary degree or certificate by the year 2020. Additionally, the annual reports will account for changes in recommended strategies as technology and teaching pedagogies continue to advance and improve to better shape the learning process and outcomes.

The *2010 Report*, which is the inaugural report of the **HigherEdUtah2020** plan, was developed after much input, feedback, and support from the education community and its stakeholders. Thanks to all those who have taken the time to review and help align the direction of the plan with the demands of 21st century's knowledge-based economy. Utah's prosperity depends upon its citizens meeting these demands by attaining the level of education they desire that is also commensurate with workforce opportunities.

Preface

Utah, a state of promise and opportunity, stands at a juncture along the path of the future of education for the state. From this vantage point, we can see the diverging paths that lie before us. One is a challenging climb that will test our collective resolve. The other may appear at first to maintain even ground, but will, in a short time, lead us on a downhill course that affects our people and our way of life. With collective will and resolve, we can choose and successfully navigate the high road.

Recognizing the seriousness of the challenge before us, Governor Gary R. Herbert called upon the Utah State Board of Regents and the Commissioner of Higher Education to present a plan for how Utah's colleges and universities will meet the needs of students and the talent demands of employers in the 21st century. The purpose of this document is to answer the Governor's call and unify the state in its need to increase the level of educational attainment of its citizens—from a high school diploma to an employable certificate, from a certificate to an associate's degree, from an associate's degree to a bachelor's degree, from a bachelor's degree to a master's degree and so forth—to better ensure that Utahns can be economically prosperous and enjoy the benefits of an educated society.

The first portion of the document, the Case Statement, focuses on WHY Utah must increase the number of its degree and certificate holders if it is going to be prosperous in the 21st century's knowledge-based economy. This second section, the Action Plan, offers recommendations about HOW Utah may attain its **big goal** through strategic changes to state policy and the higher education infrastructure, practices, and culture.



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EXECUTIVE SUMMARY



 SOUTHERN UTAH UNIVERSITY

CASE STATEMENT

Purpose

Analysis of Utah's economic outlook reveals two megatrends at the intersection of education and economics:

1. In the last two decades, Utah has lost the advantage it once held of being among the most highly-educated states in the nation (as gauged by the number of adults ages 25 to 64 with an associate's degree or higher). At the same time, the U.S. has fallen from being 1st in the world for educational attainment to 10th, while almost all other developed nations are increasing their attainment rates.
2. The emergence of the knowledge-based economy is transforming economies around the world, including Utah's. The demand for more, better-trained and educated employees has skyrocketed and will continue to grow. According to the Georgetown University Center on Education and the Workforce, 66% of all jobs in Utah by 2018 will require postsecondary education. Those without postsecondary education will fall out of the middle class; no longer can a high school degree produce a comfortable living.

Currently, only 39% of Utahns hold an associate's degree or higher. This will not be sufficient for Utah to develop a robust economy in a global marketplace, nor for Utah's citizens to prosper individually or collectively. As there is a direct correlation between the education of a population and its economic prosperity, the long term well-being of the state and its people are at risk if deliberate actions are not taken.

Governor Gary R. Herbert has called upon the Utah State Board of Regents and the Commissioner of Higher Education to present a plan for how Utah's colleges and universities will meet the needs of students and the talent demands of employers in the 21st century. The purpose of this document is to answer the Governor's call to unify state efforts to increase the level of educational attainment of its citizens.

Utah's Big Goal

To meet Utah's education and workforce needs, the Board of Regents and Commissioner of Higher Education have set a **big goal** for Utah: to have 66% of Utahns—men and women age 25 to 64—with a postsecondary degree or certificate by the year 2020; specifically, to have 55% of Utah's workforce with an associate's degree or higher and 11% with a postsecondary certificate that leads to a livable wage.

To reach this goal within the next ten years, the state of Utah must take aggressive action. Utah System of Higher Education (USHE) institutions, along with other Utah public and private partners in higher education, will need to enroll approximately 109,000 more students (based on 2009 participation and completion rates). Of these, about 33,000 are expected growth over this period. This means that Utah will need to enroll an additional 76,000 students beyond the current enrollment and projected natural growth.

Simply put, capacity must increase. USHE institutions currently enroll about 165,000 students and estimate the ability to increase their collective capacity to

accommodate 49,000 more students, given traditional growth of resources and no additional budget cuts. Based on USHE calculations, this will leave the state about 60,000 students short of the 109,000 additional student target. Private institutions report zero to moderate increases in capacity to help accommodate the 109,000 more students; thus, the bulk of the demand for meeting Utah's **big goal** will need to be met by USHE institutions.

The increase in capacity among USHE institutions can be achieved by a) improving the management of the student pipeline, including training additional faculty and staff to teach and support more students; b) increasing efficiencies—increased use of facilities to accommodate more evening, weekend, and online programs and improved rates of participation and completion; and c) expanding technological capabilities and physical facilities. All of these solutions will require a significant investment in higher education, an investment that is synonymous with economic development.

Strategic Priorities

To achieve Utah's **big goal**, the state must address three strategic priorities:

1. Increase the rate of **student participation** in higher education (postsecondary education programs). This includes enrolling more and better-prepared students in college directly from high school. It also means increasing the participation rate of returning adult learners from across all regions of the state. Current statistics point to sectors where targeted efforts to increase the number of graduates can make a difference:
 - In 2008, Utah's high school graduation rate was 88%. Of those graduates, 44% went to college within one year of high school graduation (36% of the state's 19 year-old population). Furthermore, of those high school students who took the ACT test in 2009, only 24% met the college readiness benchmark in all four areas of the test (English, math, reading, and science).
 - In 2008, close to 370,000 Utahns (nearly 28% of the adult population) had completed some college without earning a degree. If only a small portion of this group were to return to college to complete either a two- or four-year degree, the impact would be significant.
2. Increase the rate of **student completion** in their chosen field of study or training. Currently, only 49% of Utah's first-time, full-time freshmen complete a bachelor's degree within six years of starting their program of study. To improve the rate of student completion, Utah will need to address issues of student retention, time to completion, and affordability.
3. Increase the level of **economic innovation**. To provide meaningful employment opportunities for graduates and to strengthen the economy, Utah will need to align education programs with future talent-force needs and establish a climate where partnerships among government, education, and industry flourish.

Action Plan

The State Board of Regents and Commissioner of Higher Education propose a five-point Action Plan that incorporates the three strategic priorities into five focus areas:

1. Expand the pipeline of college/career-ready and college-inclined high school graduates.
2. Stop leakages in the higher education pipeline by increasing the number who persist and complete their education once they enter college.
3. Expand the ability of colleges and universities to provide quality opportunities for more students.
4. Transform the way higher education meets the needs of the 21st-century student through effective and efficient use of technology, while sustaining academic quality.
5. Better leverage higher education in growing Utah's economy as a way to extend prosperity and grow the tax base of the state.

Conclusion

Successful implementation of the recommendations from the Action Plan will require the combined efforts of the State Board of Regents, the USHE institutions and Boards of Trustees, Utah's private higher education community, the State Board of Education and K-12 school districts, the Governor and Utah Legislature, and the support of Utah's business community, other community leaders, and the general public.

Higher education in Utah is a great investment. According to the University of Utah, every public dollar invested in higher education yields a \$7 return into Utah's economy. Not only are these returns felt in the education sector of the state, which is a \$4.8 billion industry in itself, but in increased tax revenues, in growth of business and industry, and in the quality of life for Utah's people. Today's investment in education will yield prosperity and a vibrant economy for Utah tomorrow.

CASE STATEMENT OVERVIEW

EDUCATION'S BIG QUESTIONS

66% of all jobs in Utah will require a post-secondary degree or certificate by 2020.



Where Will the Jobs Be in 2020?

Most of Utah's jobs will be in occupations that require education beyond high school. According to the Georgetown University Center on Education and the Workforce, 66% of all jobs in Utah by 2018 will require postsecondary education.¹ Indeed, the jobs requiring a postsecondary credential or degree will grow over twice the rate than those only requiring a high school diploma.

The Georgetown University report projects that by 2018, Utah will have:

- 172,000 jobs in **managerial and professional office** occupations, 142,000 or 82% of which will require a postsecondary degree or certificate.
- 101,000 jobs in **science, technology, engineering and mathematics** occupations, 92,000 or 91% of which will require a postsecondary degree or certificate.
- 112,000 jobs in **healthcare** (both practitioners and support), 95,000 or 85% of which will require a postsecondary degree or certificate.
- 99,000 jobs in **education**, 92,000 or 93% of which will require a postsecondary degree or certificate.²

The demands are real and significant. In total, over 1,000,000 of the jobs in Utah will require some level of college education. (At least 202,000 of these will be new jobs.)

In fact, Utah ranks eighth in the U.S. for the highest proportion of jobs that will require postsecondary education.³ Utah must embrace the opportunity of an economy that demands college preparation and produce a **talent-force** prepared for 21st century.

A "talent-force" consists of able people prepared to succeed in the twenty-first century's dynamic knowledge-based economy. That requires the know-how to perform essential functions, the ability to adapt to an ever changing work environment, and the skill to think critically and communicate effectively, in writing, in speech, and through technology.

These skills are typically developed and refined through a liberal arts college experience.



How Will Utah Prepare?

To succeed as a state, the Utah Board of Regents and the Commissioner of Higher Education, William A. Sederburg, have set a clear goal—ambitious but attainable: To have 66% of Utahns—men and women age 25 to 64—with a postsecondary certificate or degree by the year 2020; specifically, to have 55% of Utah’s workforce with an associate’s degree or higher and 11% with a postsecondary certificate that leads to a livable wage. We will do this while enhancing the quality of our degree programs. This will help ensure Utah’s prosperity by producing the requisite 21st-century talent-force.

To achieve this goal, Utah must realize three strategic priorities:

1. Increase the rate of **student participation** in higher education (postsecondary education programs).
2. Increase the rate of **student completion** in their chosen field of training or study.
3. Increase the level of **economic innovation**.

Call to Action

To increase the rates of participation, completion, and economic innovation, Utah's legislature, business community, and general public must increase their investment in higher education now—nothing will have more impact on local communities and the state's prosperity.

Additionally, Utah's higher education institutions must repurpose their resources to ensure they are providing a relevant, high quality educational experience in the most efficient and effective way possible. In so doing, Utah will position itself for success by developing the talent-force required by 21st-century employers to create competitive businesses and sustainable communities.





How Will Higher Education Answer the Call?

The Utah System of Higher Education (USHE) will build upon the diverse strengths of each of its institutions to play a vital role in reaching Utah's goal for higher education. From its research and regional universities to its state and community colleges, each institution's mission will be advanced through this service to our state and our local communities. (The role of each USHE institution in meeting Utah's goal is described in a later section.) Additionally, the Utah College of Applied Technology and private institutions of higher education, both for-profit and not-for-profit, will play a significant role with the USHE institutions in helping the state of Utah attain its **big goal**.

UTAH'S INSTITUTIONS OF HIGHER EDUCATION WILL ANSWER THE CALL BY WORKING TOGETHER.

RECOGNIZING THE CHALLENGE

In order for our state to remain competitive, we must focus on improving our educational systems.



The Challenge We Face

The relationship between higher education and economic prosperity has increased in our generation and will continue to increase in the future. The technology of the 21st century's knowledge-based economy has steadily eliminated jobs of past generations—jobs filled by middle-class workers with only a high school diploma or less. Simultaneously, we are faced with demands for better-trained, better-educated employees. Globalization has also increased the need for Utah to differentiate itself with a more highly-educated talent-force than those of emerging economies.



“This is the opportunity for people to develop the skills to succeed in the future. In order for our state to remain competitive, we must focus on improving our public education system. A good education is a powerful tool to empower the individual to succeed.”

Gov. Gary Herbert



Governor Gary R. Herbert emphasized this issue in his Inaugural Address, explaining: “We cannot have sustainable economic growth—or be competitive in what is now a global marketplace—if we don’t properly educate the rising generation. In the 21st century, our competition isn’t just Idaho, Colorado, or California. It’s India, Canada, Mexico, and China. Today, more than merely gaining a diploma, our students need the skills that will provide a passport to the world.”⁴

Leaders of other states and of the nation as a whole concur. From the White House⁵ to national organizations like the Lumina Foundation for Education and the Bill and Melinda Gates Foundation,⁶ there is a national urgency to ensure that all students have the opportunity to succeed in their education beyond high school and to complete an associate’s degree or higher or a certificate that leads to family-sustaining income.

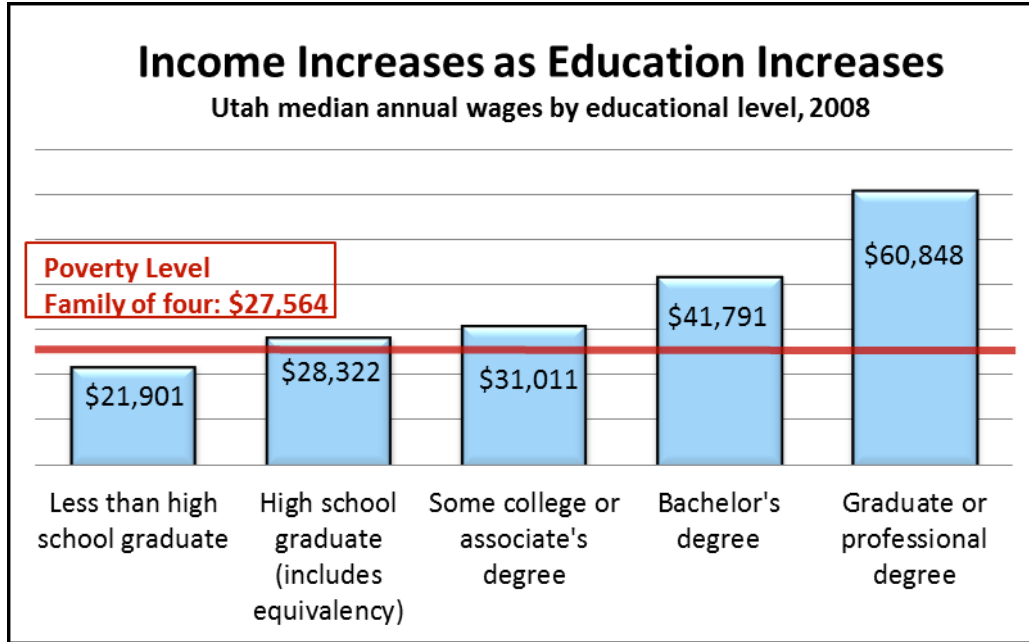
Education and the Public Good

Economic Prosperity

Economic prosperity is directly linked to an individual's level of educational achievement. Higher education has a powerful positive impact on personal earning potential—the greater the level of educational attainment, the more likely a person is to earn a higher wage.⁷ A high school graduate with no postsecondary education or training hovers on the state's annual poverty level, which is \$27,564 for a family of four with a median income of \$28,322.⁸ Contrast this with the median annual income of \$31,011 for a person with some college (including an associate's degree or certificate).⁹ More significantly, a person with a bachelor's degree increases his or her median income by 35% to \$41,791 and a person with a graduate degree by 97% to \$60,848.¹⁰

According to the U.S. Department of Labor and the Bureau of Labor Statistics, 56% of the jobs in 2008 that had a minimum median annual income of \$32,390 required a postsecondary degree or certificate. And, while 40% of the jobs of the same minimum median annual income required significant on-the-job training, many of these jobs—such as chemical plant and system operator, police officer, or firefighter—also required postsecondary training or certification. Only 4% of the jobs with a \$32,390 minimum median annual income or greater allowed for short-term training or no postsecondary education.¹¹

FIGURE 1

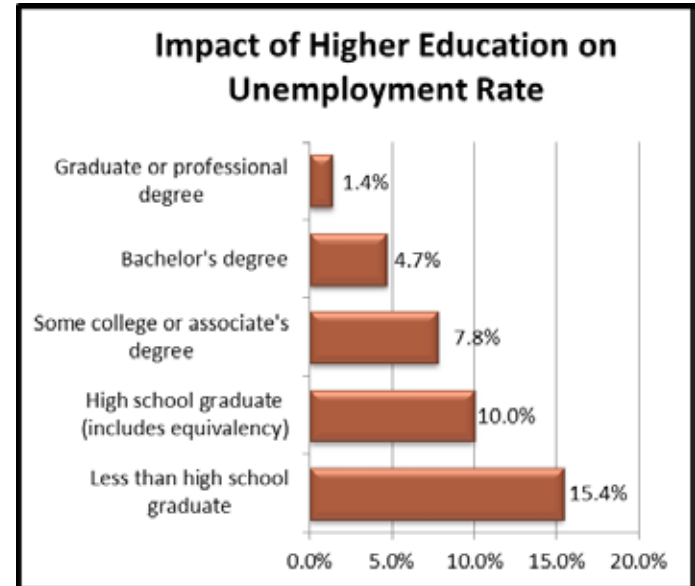


Source: USHE, Office of Institutional Research and Analysis

Employment Stability

Men and women with higher levels of education are less likely to be laid off and unemployed in tough economic times like Utah and the nation are currently experiencing. In Utah, of those with a bachelor's degree, only 4.7% were unemployed in 2009 compared to 10.0% of those who are high school graduates and 15.4% of those who did not complete high school. National statistics show similar trends. As illustrated in Figure 2, there is a direct correlation between the level of educational degree attainment and the probability of being unemployed—the more education a person has, the less likely he or she is to be unemployed.¹² A more educated workforce is generally a more stable workforce.

FIGURE 2



Source: USHE, Office of Institutional Research and Analysis



Economic Growth

For Utah to flourish — to develop new jobs and raise the general standard living—a higher percentage of our educated workforce must attain graduate and professional degrees. Advanced degrees are linked with the creation of highly paid jobs. Further, in today's knowledge-based economy, we need to increase the *asset of knowledge*. This doesn't only apply to the knowledge gained by workers through education and experience, but also to the knowledge of credentialed faculty who teach them and to accomplished business executives who can mentor young entrepreneurs. We also need high-quality researchers who extend knowledge on a national and international level. We need knowledgeable public administrators and state leaders who can create and sustain an environment where such development thrives. This knowledge base is developed within our research and graduate institutions and programs.

Personal and Societal Benefits of Higher Education

The benefits of education, particularly well-focused higher education, include career opportunities, economic stability and a richer, deeper quality of life. Students who attend college obtain a wide range of personal, financial, and other lifelong benefits; likewise, taxpayers and society as a whole derive a multitude of direct and indirect benefits when citizens have access to postsecondary education. Furthermore, there is a positive correlation between higher levels of education and lifelong benefits for men and women of all racial/ethnic groups.¹³

The Lumina Foundation for Education asserts that social and economic concerns are best addressed by educating many more people beyond high school. As education levels increase, the economy improves, tax revenues rise, civic engagement is strengthened, and the costs of crime, poverty, and health care are diminished; in short, the human condition is dramatically improved.¹⁴

A well-educated society is the foundation of a thriving middle class—individuals and families with a comfortable standard of living and significant economic security. The strength of the middle-class is significant to the future of the U.S. and the state of Utah. The middle-class is the largest contributor and, therefore, the foundation of the country's and state's tax base. The middle-class supports public services like education, government, law enforcement, water systems, and social services like public housing, Medicaid, and Social Security. Its growth leads to the betterment of all. Its decline could lead to an economic maelstrom with tax revenues spiraling downward as more people fall out of the middle class and increase the population that draws upon social services.

"The non-tangible benefits of receiving a college degree are, at minimum, equivalent to the monetary ones, and they extend from individuals to families and communities."

Utah Women in Education Task Force



The Benefits of Higher Education for Individuals and Society

- On the average, better-educated people live longer and enjoy healthier lives.
- People with college degrees demonstrate increased civic and community involvement.
- People with higher levels of education tend to get jobs with better health care benefits and pensions and to require fewer social services.
- People with college degrees often donate more to local charities and volunteer their time in the community more because they work fewer hours to sustain their households and families.
- A broad educational experience provides the communication skills as well as creative and critical thinking skills necessary to perform in an economy that demands its workers develop habits of lifelong learning.
- Evidence shows that a college education increases one's sense of life satisfaction or overall happiness.
- Societies that have higher levels of education are safer and have less poverty.

Source: College Board, Education Pays, 2010

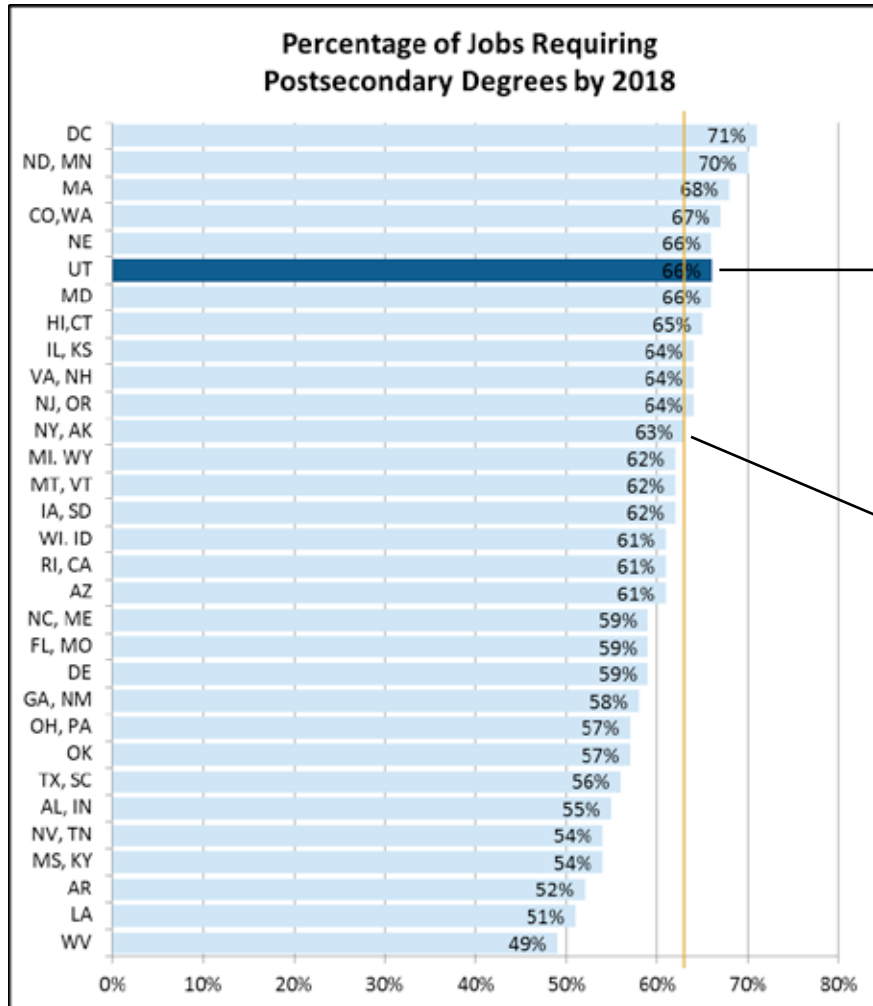
More Jobs Will Require Higher Education

The vast majority of jobs in the future economy will require some level of postsecondary education. The Center on Education and the Workforce at Georgetown University reports that **two-thirds of all jobs by 2018 will require a postsecondary degree or certificate.**¹⁵ Their analysis also indicates that occupations with high levels of non-repetitive tasks, such as managerial and professional jobs, tend to require postsecondary training and education. These types of jobs are growing while jobs that require repetitive tasks that can be automated, like production jobs, are declining.

Other noteworthy national and state research organizations predict the same or similar rise in education requirements of the national workforce, including the Lumina Foundation for Education, The College Board Advocacy and Policy Center, the Bill and Melinda Gates Foundation, the White House, and the Utah Department of Workforce Services.



FIGURE 3



66% of all jobs in Utah will require postsecondary education by 2018; this is the 8th highest percentage in the nation.

National Average: 63% of all jobs will require postsecondary education by 2018

Source: USHE, The Georgetown University Center on Education and the Workforce, "Help Wanted: Projections of Jobs and Education Requirements through 2018," June 2010 (See Appendix A.)

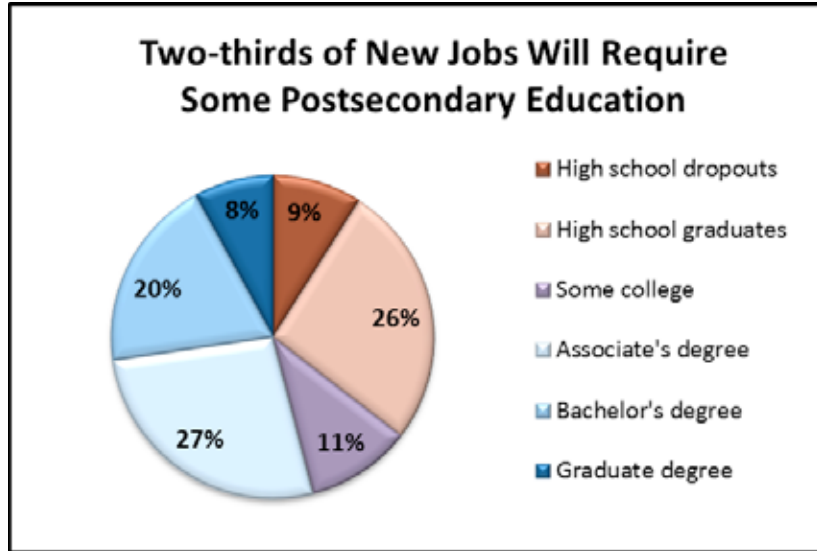
According to the Georgetown report, 66% of all jobs in Utah by 2018 will require postsecondary education.

The best research available indicates that the gap in earnings between those with postsecondary degrees and those without will continue to grow.¹⁶ No longer can a person expect to enter into or remain a part of the middle class with only a high school diploma or less. The Georgetown University report emphasizes this point: “As the economy gets back on track over the next five years, 60 million Americans are at risk of being locked out of the middle class, toiling in predominantly low-wage jobs that require high school diplomas or less.” Without direct intervention and a thoughtful plan for an educated workforce, the middle class and the tax base it represents will decline.

Occupational Groups	High School or less	Some College	Associate's or Higher	Total Jobs
Managerial and Professional Office	34,000	18,000 (10%)	123,000 (72%)	172,000
Science & Technology	8,000	9,000 (9%)	83,000 (83%)	101,000
Community Services and Arts	6,000	5,000 (8%)	48,000 (82%)	59,000
Education	8,000	7,000 (8%)	85,000 (86%)	99,000
Healthcare	16,000	26,000 (23%)	69,000 (62%)	112,000
Food & Personal Services	83,000	14,000 (6%)	92,000 (39%)	234,000
Sales and Office Support	163,000	56,000 (12%)	265,000 (54%)	486,000
Blue Collar	229,000	31,000 (6%)	123,000 (25%)	488,000
TOTAL	584,000	173,000 (4%)	890,000 (55%)	1,647,000

Source: The Georgetown University Center on Education and the Workforce, June 2010 (see Appendix A for complete table with occupational breakdowns).

FIGURE 4



According to the Georgetown report, 66% of all jobs in Utah by 2018 will require postsecondary education. As Figure 4 illustrates, the Georgetown University report estimates that 55% of jobs in Utah will require an associate's degree or higher by the year 2018. Another 11% will require some training beyond high school, primarily certificates. (Most of these, however, do not produce a livable wage independent of additional certification or degrees.) Thus, 66%, or two-thirds of jobs will require at least some postsecondary education.

Utah's goal mirrors the Georgetown University estimates, but adds to it, calling for 55% of its workforce age 25 to 64 to have an associate's degree or higher and an additional 11% with a postsecondary certificate that **leads to a livable wage** by 2020.

Source: The Georgetown University Center on Education and the Workforce, "Help Wanted: Projections of Jobs and Education Requirements Through 2018," June 2010.

Where Are We Now?

The United States no longer leads the world in educational attainment, and Utah is not a leading state in the nation.

Despite the importance of higher education, national levels of degree attainment are lagging. According to the National College Board Advocacy and Policy Center, only 39% of Americans age 25-64 have earned an associate's degree or higher. Over the last generation the U.S. has slid from 1st to 10th in educational attainment of persons having earned an associate's degree or higher.¹⁷ Of the top ten countries in educational attainment, the U.S. now trails the Russian Federation (54%), Canada (48%), Israel (44%) and Japan (40%).¹⁸ The U.S. is likely to slide even further in the 2010 Census.¹⁹

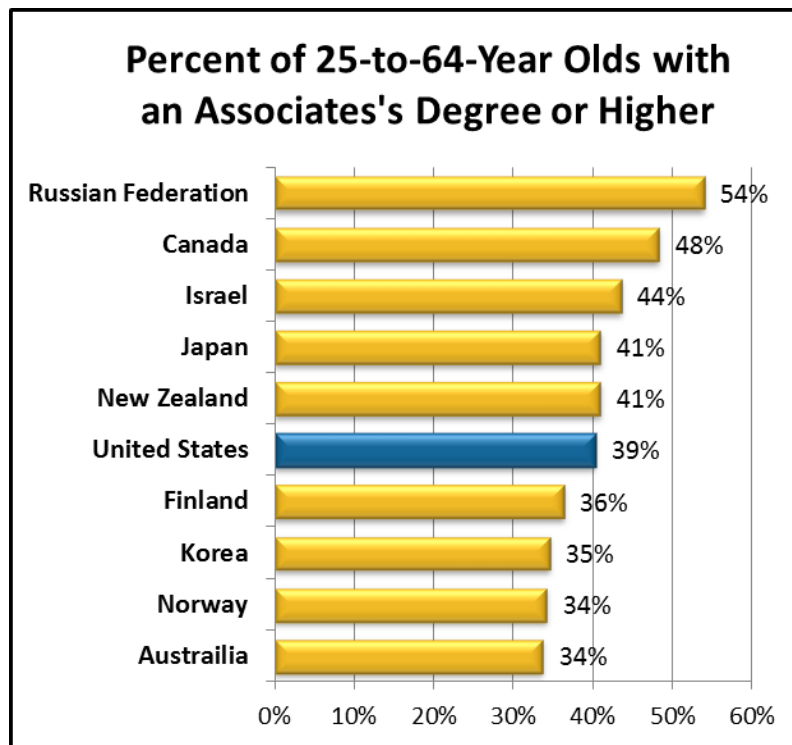
Utah has declined from 3rd in the nation for postsecondary attainment in 1960²⁰ to 26th in 2008.²¹ Currently, Utah's degree attainment rate is the same as the national average— only 39% with an associate's degree or higher.²²



The long-term prosperity of our nation and state are at risk if deliberate actions are not taken. Thus, the National Governors' Association (NGA) has launched its *Complete to Compete* initiative challenging states to increase their college completion rates and higher education efficiency.²³ Even more pointedly, the Lumina Foundation for Education (with the support of the Bill and Melinda Gates Foundation²⁴ and others) has established a goal of increasing the percentage of Americans with high-quality, in-demand degrees and certificates to 60% by the year 2025.²⁵

Using these goals as a guideline, the Utah System of Higher Education has determined to partner with the higher and public education communities and stakeholders to raise Utah's attainment of associate's degrees or higher from 39% to 55% by 2020. To achieve this goal, the state of Utah must act deliberately to improve rates of higher education participation and degree completion in ways that directly build the state's economy. *Utah's future prosperity depends upon it.*

FIGURE 5



Source: College Board, The College Completion Agenda, 2010

THE PLAN: UTAH'S BIG GOAL

Utah's **big goal** is to have 66% of Utahns with a postsecondary degree or certificate by 2020.



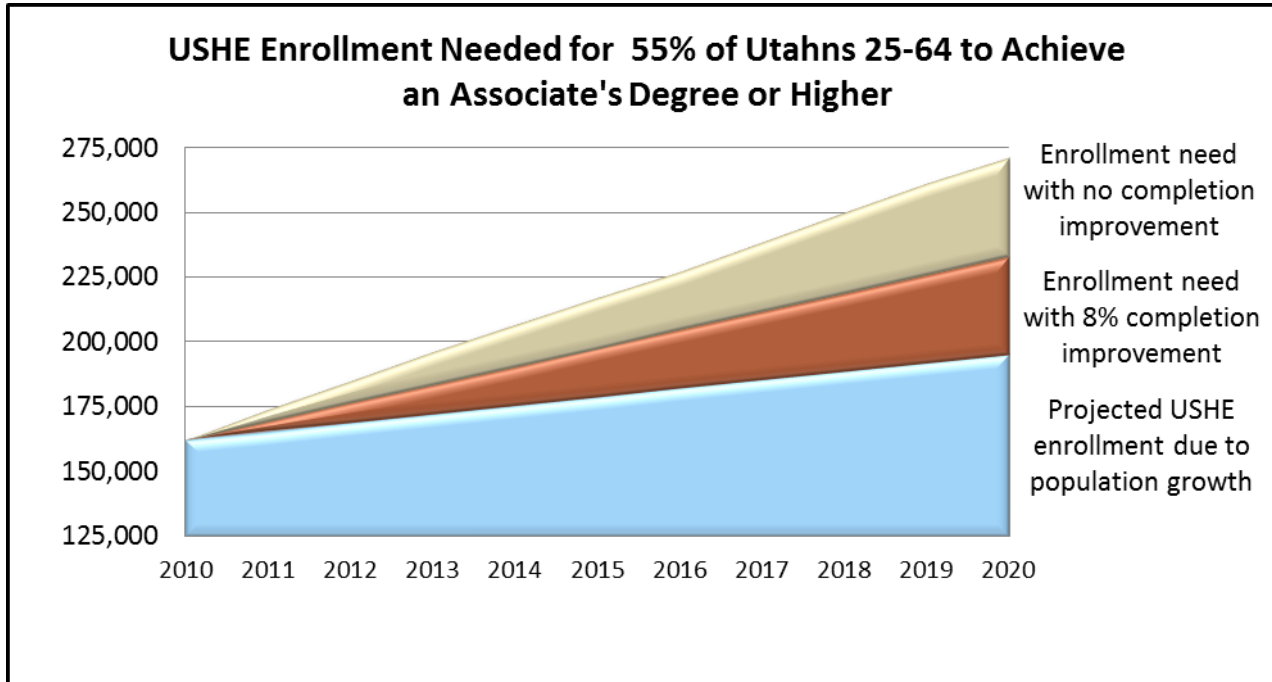
Utah's Big Goal

To meet Utah's education and workforce needs, the State Board of Regents and Commissioner of Higher Education have set a **big goal** for Utah: to have 66% of Utahns—men and women age 25 to 64—with a postsecondary degree or certificate by the year 2020; specifically, to have 55% of Utah's workforce with an associate's degree or higher and 11% with a postsecondary certificate that leads to a livable wage.²⁶

This means that **Utah will need to enroll an additional 76,000 students over and above the expected growth of 33,000 students, totaling 109,000 students needing access to Utah's higher educational network by the year 2020.** (Expected growth is based on 2009 rates of participation and completion for both public and private institutions and projected population changes over the next ten years.) An increase of 109,000 students is about a 67% increase over the total of 164,862 students enrolled in the fall of 2009.²⁷ (Currently, 72% of Utah college students attend a public institution.)

Based on 2009 USHE institutional headcount figures, an increase of 109,000 students is roughly equal to adding another University of Utah, Utah State University, Weber State University, Southern Utah University, Dixie State College, and Snow College to the state's higher education network within ten years. Obviously, such a massive expansion of physical facilities is unrealistic. However, the need for expanded infrastructure (facilities and technology capacities) to accommodate this increased demand is real and must be strategically prioritized according to system and institutional priorities. A significant variable that will influence this prioritization process will undoubtedly be the state's growth projections by county.

FIGURE 6



Source: USHE, Office of Institutional Research and Analysis

Capacity Challenges

Simply put, capacity must increase in order to reach Utah's **big goal**.

As part of this planning process, USHE and the Utah-based private institutions that account for 95% of all degrees and certificates awarded in 2008-09 were asked to estimate their student headcount capacity by the year 2020.²⁸ The estimates assumed traditional growth in resources and facilities (mirroring those of the last decade) and no budget cuts. The reporting private institutions projected zero to moderate growth in student capacity to help accommodate the 109,000 more students needed to attain Utah's **big goal**. **Clearly, the bulk of the demand for meeting Utah's big goal will need to be met by USHE institutions.**

Increasing capacity of USHE institutions, however, must be accomplished without compromising quality. Thus, an essential factor in estimating the capacity of a campus is understanding where class size and frequency of offering are maximized without compromising the quality of the instruction and learning. It may be easy to assume that adding another student or ten to a class is as easy as adding their names to the role, but it is not. Depending on the type of class and on available and appropriate

technologies, adding more students may impede the effectiveness of a professor to train and prepare students for the workforce. Quality cannot be sacrificed for the sake of capacity.

USHE institutions estimate that without compromising quality, they may be able to accommodate 49,000 more students by 2020—about 60,000 fewer than required by the **big goal**.²⁹ This gap of 60,000 cannot be closed without **an aggressive strategy for growth and enhanced efficiency** by USHE institutions in partnership with the Governor, legislature, and public.

Expected Growth	33,000	Above the current enrollment of 165,000 students. Projection based on population growth
Additional Growth	<u>+ 76,000</u>	Additional growth required to meet Utah's 66% goal
Big Goal Target	109,000	
Current Peak Capacity	<u>- 49,000</u>	Estimates of additional students that could be accommodated, given current conditions
Distance from Target	60,000	Gap that must be filled by an aggressive growth strategy
Source: USHE, Office of Institutional Research and Analysis		

Addressing Capacity Challenges

Enrolling more students, however, is not the only way to achieve Utah's **big goal**. We will need to enhance the student pipeline while at the same time, transforming higher education through technology, utilizing our facilities more efficiency, and expanding infrastructure.

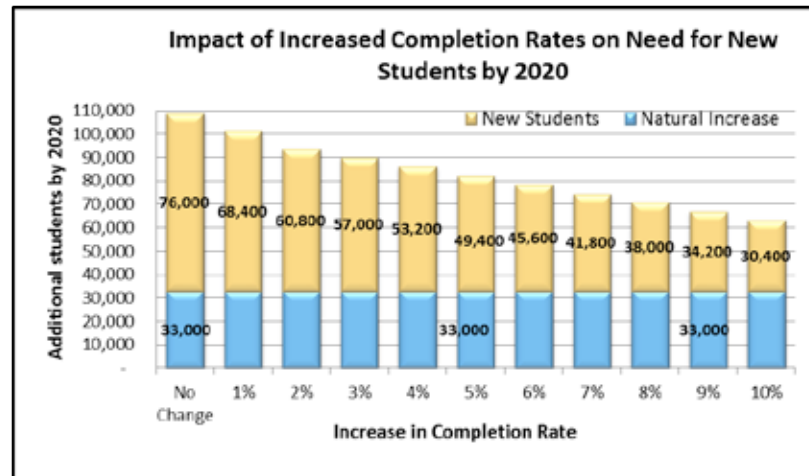
Improving the Student Pipeline

The **student pipeline** refers to the total population of students enrolled at any given time in an institution and system of higher education. Admittedly, not every student who begins college will complete a degree, but, as will be discussed later, many more of our students could than do. As depicted in Figure 7, if we, for example, increase completion rates by 3%, we would reduce from 76,000 to 57,000 the number of additional students required to meet Utah's goal by 2020.

To succeed, we need to improve the student pipeline by stopping the leaks—that is, by retaining and graduating more of the students who enroll in higher education. There are leaks, for instance, when students drop out because of poor performance without any institutional intervention; there are leaks when students can't find sufficient financial aid to continue. There are other

problems that slow or clog the pipeline, such as the lack of college readiness for many students that places them into developmental/remedial courses, difficulties transferring credit between institutions, and needed courses not being offered on schedule. There are backups in the pipeline when students take 5 or 6 years to complete a 4-year degree. There are also backups where the student and workforce demand far exceed the instructional capacity of an institution. Thus, institutions must address their ability to attract, hire, retain, and office qualified instructors (terminally degreed) to help increase the output of graduates credentialed in areas aligned with workforce demands.

FIGURE 7



Source: USHE, Office of Institutional Research and Analysis

Transforming Education through Technology

The apt use of technology can address many of the capacity and efficiency challenges that confront us while, at the same time, improving educational outcomes. Although technology continues to revolutionize many industries, its transformation of education is just beginning. The 2010 National Educational Technology Plan (NETP) calls for revolutionary transformation rather than evolutionary tinkering.³⁰

NETP suggests targeting investments in technology in five areas: 1) Learning—utilize technology to engage and empower all learners; 2) Assessment—find new and better ways to measure what matters; 3) Teaching—build the capacity of educators to enable the shift to a connected model of teaching; 4) Infrastructure—

provide students, educators, counselors, and others with the resources they need when and where they need them; and 5) Productivity—help us meet the fiscal responsibility of getting more out of each dollar we spend.³¹

While Utah has made great strides in offering online courses, programs, and services, the overall impact and potential of technology in instruction, student learning, and student support processes has yet to be realized. Specific recommendations on how technology can be better leveraged to improve the higher education experience are discussed in the Action Plan section.

“Technology will never replace good teachers. We all know that the most important factor in a student’s success is the teacher leading the class. That will never change. The best instruction happens when a caring, skilled instructor uses every resource at his or her disposal to help students learn—including the power of technology.”

U.S. Secretary of Education Arne Duncan,
The Digital Transformation in Education



Key Findings of the Economist Intelligence Unit

- Technology has had—and will continue to have—a significant impact on higher education. Technological innovation will have a major influence on teaching methodologies over the next five years. In fact, technology will become a core differentiator in attracting students and corporate partners.
- Online learning is gaining a firm foothold in universities around the world. Many institutions of higher education, especially those with a public-service mandate, consider online learning key to advancing their mission, placing advanced education within reach of people who might otherwise not be able to access it.
- Corporate-academic partnerships will form an increasing part of the university experience, at a time when locating funding and controlling costs are key concerns. To attract corporate partnerships, institutions will need to demonstrate a commitment to advanced technologies.

Source: The Future of Higher Education: How Technology Will Shape Learning, The Economist Intelligence Unit, 2008

Utilizing Facilities More Efficiently

Efficiency can be gained through the repurposing of existing resources to support more evening, weekend, and online programs, which help maximize the use of campus facilities. The strategy would particularly benefit working adult students who have difficulty attending classes during week days.

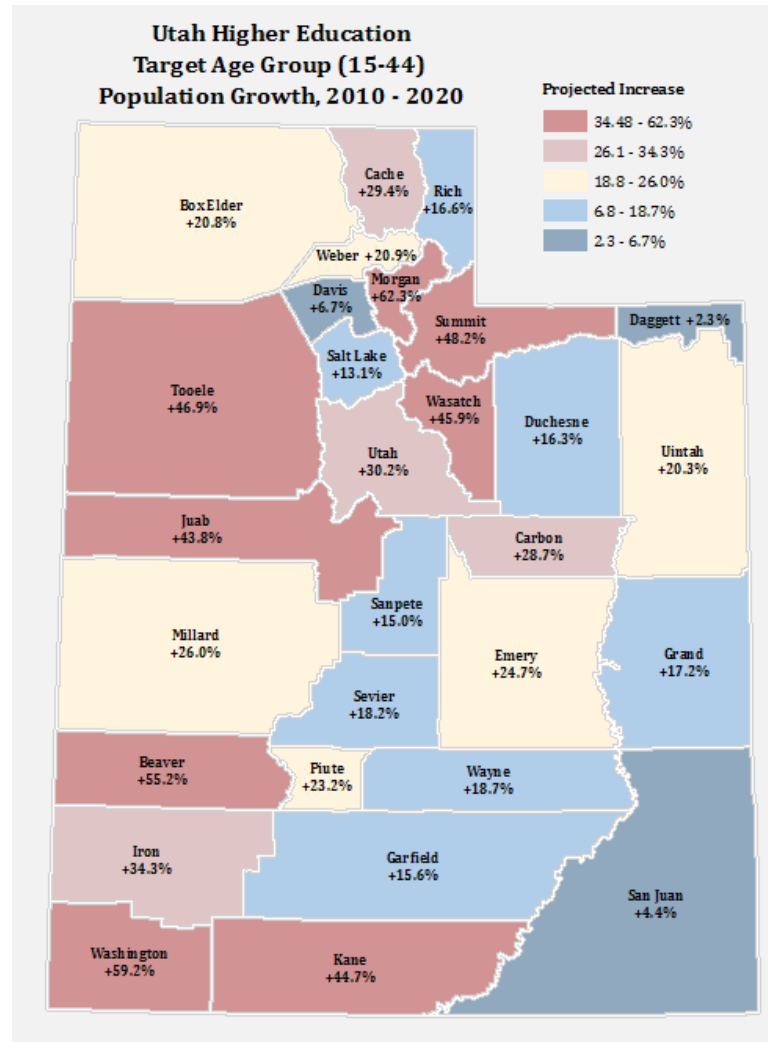
Expanding Physical Facilities

Another infrastructure issue challenging capacity is the ability to add, remodel, and expand physical facilities to adequately accommodate a growing student body in accordance with Utah's **big goal**. Specifically, to have the resources to 1) provide local access to postsecondary degree and training programs; 2) have enough and the right kind of instructional space to leverage new technologies and facilitate different learning styles; 3)

provide adequate space for faculty offices and support services—e.g., for advising, business, and auxiliary services; and 4) replace, update, or remodel aging facilities according to safety demands and energy cost-savings opportunities.

The strategic allocation of limited resources to address these infrastructure needs should take into account future population growth. Based upon 2009 population estimates from the Governor's Office of Planning and Budget, we can identify, by county, those areas of the state with the highest expectancy of growth and, thus, with the greatest probability for an increase in demand to access postsecondary degree and training programs through the year 2020 (see Figure 8).

FIGURE 8



Source: Map provided courtesy of Utah Geographic Center based on Governor's Office of Planning and Budget population projections

Degree Targets

According to projections,³² the total number of Utahns to earn an associate's degree or higher will increase by more than 83,000 by the year 2020. To achieve Utah's **big goal** an additional 109,000 Utahns will need to earn an associate's degree or higher by the year 2020.³³ Such an increase equates to roughly 4,000 more degrees earned by Utahns per year over the next ten years.

Degree & Certificate Definitions for Utah's Big Goal

Certificate:

- 900 cumulative membership hours
- A minimum 1 year in college

Degree:

- Associate's degree or higher

Table 3: Participation / Completion Matrix For Associate's Degrees and Higher

Percent of Big Goal Attained by the Year 2020

		0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
Participation Rate Increase	10%	103%	109%	114%	120%	125%	131%	136%	141%	147%	152%	158%
	9%	97%	102%	107%	112%	117%	123%	128%	133%	138%	143%	148%
	8%	90%	95%	100%	105%	110%	115%	119%	124%	129%	134%	139%
	7%	84%	88%	93%	97%	102%	106%	111%	115%	120%	124%	129%
	6%	77%	82%	86%	90%	94%	98%	103%	107%	111%	115%	119%
	5%	71%	75%	79%	83%	87%	90%	94%	98%	102%	106%	110%
	4%	64%	68%	72%	75%	79%	82%	86%	90%	93%	97%	100%
	3%	58%	61%	65%	68%	71%	74%	78%	81%	84%	87%	91%
	2%	52%	55%	58%	61%	63%	66%	69%	72%	75%	78%	81%
	1%	45%	48%	51%	53%	56%	58%	61%	64%	66%	69%	71%
	0%	39%	41%	43%	46%	48%	50%	53%	55%	57%	59%	62%
		0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%

Source: USHE, Office of Institutional Research and Analysis

Table 3 illustrates the impact of a percentage increase in participation (enrollment) and completion (graduation) rates for all populations from their 2010 rate. The numbers inside the matrix represent what percent of the **big goal** is met under the given conditions. The gold section indicates the combinations of increased participation and completions rates that will meet goal of 55% of the Utah population holding an associate's degree or higher by the year 2020. The blue section shows combinations that will fall short of the **big goal**. These estimates are based on current participation/completion rates and the changes in the Utah 18-65 year old population.

As part of the mix of degrees necessary to meet future economic needs, Utah will need more of its population earning graduate degrees. State-wide prosperity relies upon expertise and leadership associated with advanced degrees. For instance, many economic sectors in Utah already require a steady supply of master's- and doctorate-level skilled employees. This demand will

grow throughout the next decade. USHE institutions will continue to develop high-caliber, industry-driven, and research/entrepreneurial graduate programs to meet the expanding social, economic, and civic needs of the state. Utah's next generation of leaders in science, medicine, engineering, business, and civics will emerge from Utah's universities.



Credentials and Occupations that Can Produce a Livable Wage

Utah's **big goal** emphasizes degrees and certificates that can produce a livable wage. This emphasis has been placed because every type of credential does not produce a sufficient income to sustain a family. For example, employers will routinely require employees to complete a short-term certificate or training (certificates or training that require less than 900 hours or one year to complete) according to the requirements of their job function, but will not increase the employee's wages. Whereas, certificates that require more than 900 hours or one year to earn typically lead to an increase in wages because of the employees' increased level of specialized expertise.

The livable wage shown in Table 4 is the hourly rate that an individual must earn to support a family if he or she is the sole provider and is working full-time (2,080 hours per year). The state minimum wage is the same for all individuals, regardless of how many dependents they may have. The poverty rate is typically quoted as gross annual income. The table shows both the annual income and hourly wage for the sake of comparison. Wages that are less than the living wage are shown in red. Table 5 shows typical wages for occupations in Utah.

Table 4: Livable Wage Calculations for Utah					
Hourly Wages	One Adult	One Adult, One Child	Two Adults	Two Adults, One Child	Two Adults, Two Children
Poverty Wage	\$5.04	\$6.68	\$6.49	\$7.81	\$9.83
Minimum Wage	\$7.25	\$7.25	\$7.25	\$7.25	\$7.25
Living Wage	\$7.84	\$15.26	\$12.23	\$19.64	\$25.66
Required Annual Salary	\$16,308	\$31,736	\$25,444	\$40,847	\$53,375
Source: USHE, Office of Institutional Research and Analysis					



Table 5: Typical Hourly Wages in Utah

Occupation Area	Typical Wage
Food Preparation & Serving Related	\$8.37
Building & Grounds Cleaning & maintenance	\$9.39
Personal Care & Services	\$9.92
Farming, Fishing and Forestry	\$11.95
Office & Administrative Support	\$12.04
Sales and Related	\$12.32
Transportation and Material Moving	\$14.07
Production	\$14.20
Protective Service	\$15.14
Community & Social Services	\$15.43
Healthcare Support	\$15.43
Construction and Extraction	\$15.79
Education, Training & Library	\$16.11
Arts, Design, Entertainment, Sports & Media	\$16.68
Installation, Maintenance & Repair	\$17.07
Life, Physical & Social Science	\$21.98
Business & Financial Operations	\$25.30
Healthcare Practitioner & Technical	\$25.90
Legal	\$26.25
Computer & Mathematical	\$26.34
Architecture & Engineering	\$27.32
Management	\$33.54
Source: Utah Department of Workforce Services	

STRATEGIC PRIORITIES

Meeting the challenge with a clear vision



Strategic Priorities

Utah's challenge is to increase the reach and quality of education over the next decade in order to improve the quality of life in Utah in the face of a truly global economy. Meeting this challenge will test our collective commitment and resolve.

We will not meet this challenge without a clear plan. Thus, to initiate this planning process, the State Board of Regents has identified the following three strategic priorities:

1. Increase the rate of **student participation** in postsecondary education programs.

Sources include an expanded high school-to-college pipeline, early college for some high school students, and a return of adult learners who did not enroll in college directly after graduating from high school or fell short of completing a degree (see Figure 9).

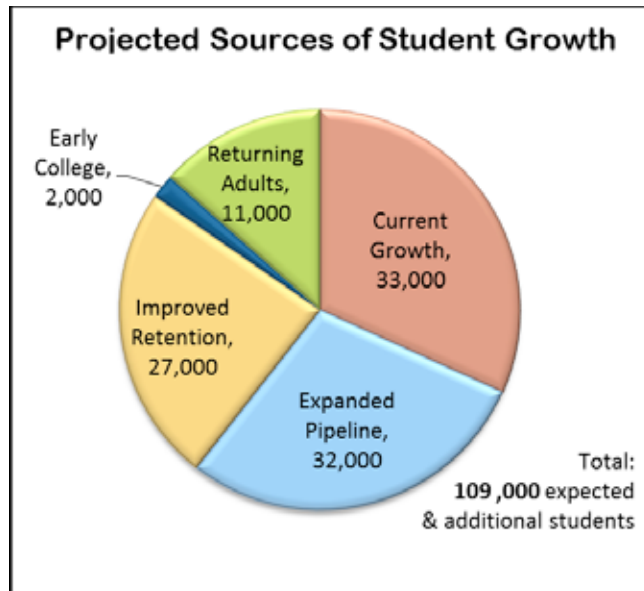
2. Increase the rate of **student completion** of a degree or certificate in their chosen field of study or training.

Many students devote considerable time and resources to obtaining an education, only to leave college without a degree. Low retention rates also cost Utah tax payers about \$24.5 million a year.

3. Increase the level of **economic innovation**.

In order to provide employment opportunities for graduates and to strengthen the knowledge-based economy in Utah and throughout the United States, we must expand and strengthen partnerships among business and industry, government, and education.

FIGURE 9



Source: USHE, Office of Institutional Research and Analysis

The following discussion examines these strategic priorities in more detail, setting forth the rationale for these approaches and articulating the challenges Utah faces in meeting them. This section is meant to be a brief overview of some of the salient issues. It opens the door for further discussion and collaboration. In the interest of space, the discussion focuses more on the problems to be addressed than on the existing strengths we have to build upon. Nevertheless, these strengths are significant and will be part of our on-going discussions and strategies.



Strategic Priority 1: Increase the Rate of Student Participation

Utah cannot prosper unless all of its citizens are included in the quest to raise the level of educational attainment and job preparation.



Lifelong Learning: A Necessity

Lifelong learning has become a necessity. In years past, a student could graduate from high school, obtain a job, and gainfully work throughout his or her lifetime—with little or no additional education or training. Today, education and training beyond high school is essential to maintain employment and earn a livable wage.

By 2018, 66% of the jobs in Utah will require some level of postsecondary education. Furthermore, with the rapid increases in technology, today's workplace requires workers who are willing to learn and adapt as occupational demands change.

Aspirations for higher education begin at an early age and are fostered by parents, teachers, counselors, and other mentors. We need to encourage youth from all backgrounds to reach their full potential—and provide the opportunities for them to do so.

Adults should also be encouraged to consider how education may improve their quality of life. Many have found greater fulfillment and made greater contributions to society by adding a higher degree or additional education or training to their existing education and work experience.





The High School to College Pipeline

Increase College Enrollment Immediately Following High School

If we are to have more students with postsecondary preparation, we will need to increase the number of prepared students enrolling in college from high school. While our high school graduation rate of 88%³⁴ is one of the highest in the nation, our high school-to-college matriculation rate is much lower. In 2008, of the 88% who graduated from high school, 44% went to college within one year of high school graduation. Of the total population of 19-year-olds in Utah, only 36% enrolled directly in college out of high school.³⁵

Some of the gap between high school graduation and college enrollment is accounted for by the “Mormon mission phenomenon,” where many young men (typically age 19-21) and young women (typically age 21-23) of the Mormon faith serve a two-year or eighteen-month church mission. However, a study that looked at college enrollment within three years post-high school graduation found that 64% of 2007 high school graduating class had attended at least one semester of college,³⁶ suggesting that missionary service may account for only about 20% of the gap. (More research may be needed in this area.)

Points of Discussion:

- 12% of Utah's population is between 18 and 24 years old, the 2nd highest in the nation (American Community Survey, 2008). The 18-24-year-old population has the greatest potential for achieving Utah's big goal within the next decade.
- 88% of high school age youth graduate in Utah, according to the Utah State Office of Education (USOE). This is one of the highest percentages in the nation.
- 44% of high school graduates in 2008 went to college within one year of high school graduation (USOE).
- 36% of Utah's 19-year-old population was enrolled in college in 2008. (This calculation includes immigrants who did not graduate from Utah high schools.) Utah ranks 28th in the nation. (*Measuring Up, 2008*)
- A high school diploma will no longer be sufficient to earn a family-sustaining wage in Utah (discussed previously).

Other circumstances that may account for this gap are insufficient financial resources and the rising cost of higher education, inadequate preparation for college, low high school performance, lack of career direction, and low expectation for college (especially among minorities and women). These issues will be discussed in more detail hereafter.

Notably, the *Measuring Up 2008* report indicates that student enrollment in college by age 19 has dropped by 14% in Utah since the early 1990s, in contrast to a nationwide increase of 8%.³⁷ Some observers attribute part of this decline to changing demographics in the state (e.g., an increasing number of immigrants). These demographic changes will need to be addressed for the state as a whole to advance.

Current ACT participation rates and scores are good indicators of Utah's high school students' inclination toward and preparation for college.

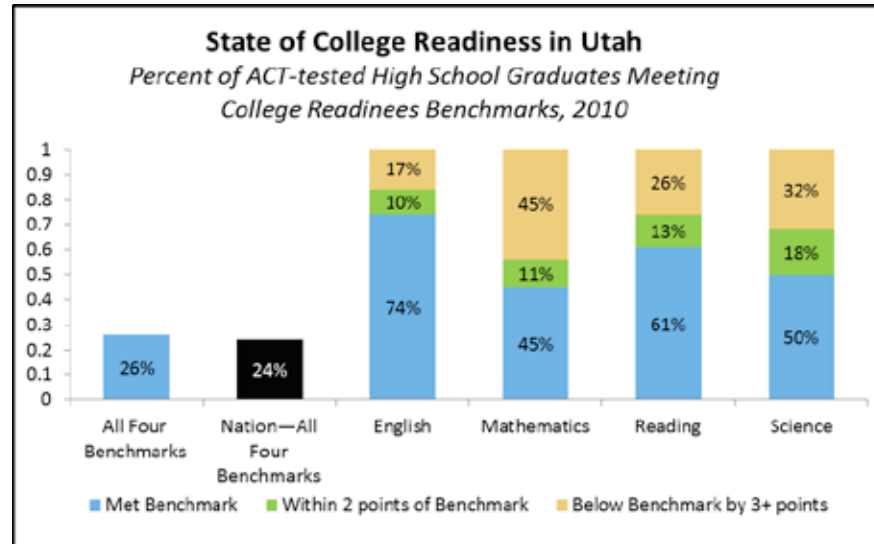
- Of the high school graduating class of 2010, 71% took the ACT test (the college entrance exam required by most of Utah's institutions of higher education).
- Last year, 23% of 10th grade students took the PLAN test (the pre-ACT test taken by college-bound sophomores).
- Last year, 5% of 8th-grade students took ACT's EXPLORE test (a test intended to help students choose a career direction and plan high school courses).

Points of Discussion:

- An insufficient number of high school students are preparing for college in their early high school and middle school years.
- The number of students planning to attend college (as indicated by ACT test-taking behaviors) is too low to meet Utah's goal.
- Performance in key areas critical to success in college is too low: only 26% of students in Utah taking the ACT met the benchmarks in all four subjects.
- Only 45% of Utah students taking the ACT met the benchmark in mathematics; only 32% met the benchmark in science.



FIGURE 10



Source: ACT “The Condition of College & Career Readiness, Class of 2010” (Utah Profile Report)

ACT Benchmark Scores Minimum ACT scores that indicate graduates are ready for entry-level college coursework are:

- English – 18
- Mathematics – 22
- Reading – 21
- Science – 24

Students with this minimum score have a 50% chance of a B grade or higher (and a 75% chance of a C grade or higher) in college-level entry classes.

The current number of college students in developmental/remedial courses is another indicator of student preparation for college. A significant number of students entering college, including returning adults, are unprepared to begin college-level coursework in all subjects, particularly in mathematics. Open enrollment institutions in particular devote considerable resources to developmental/remedial education, but all institutions are affected (see Table 6).

Table 6: Developmental/Remedial Course Registration (from unduplicated individuals) in USHE Institutions, AY 2008-2009			
Institution	English	Math	Total
USU		1,479	1,479
WSU	868	2,880	3,748
SUU		306	306
Snow	79	419	498
DSC	665	926	1,591
CEU	118	293	411
UVU	1,497	4,967	6,464
SLCC	3,610	7,055	10,916
Total	7,088	18,325	25,413

Source: USHE, Office of Institutional Research and Analysis

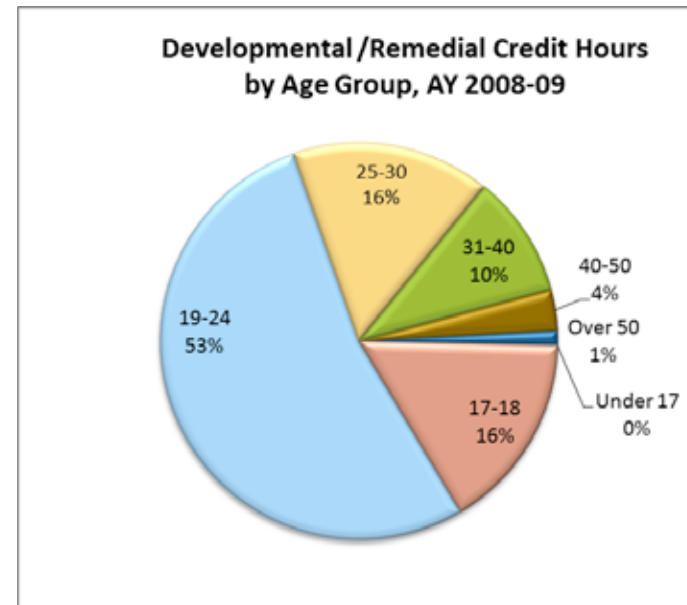


Points of Discussion:

- According to ACT, students best prepared to enter College Algebra will have completed rigorous high school courses in Algebra I, Algebra II, Geometry, and Pre Calculus. Students planning to major in some STEM (Science, Technology, Engineering and Math) disciplines will be best prepared if they have completed Calculus successfully during high school.
- Presently, a Utah high school diploma requires a minimum of three years of mathematics (although some districts have higher requirements). Less than half of all high school seniors in Utah enroll in any mathematics class in their senior year.
- Students who don't take math in their senior year of high school are frequently required to take remedial math because they have forgotten too much, even more so if they postpone college for any reason.
- Many students are ill prepared or delayed in selecting STEM majors in college because of a lack of rigorous training in mathematics.

As Figure 11 indicates, 53% of students requiring developmental/remedial courses are in the 19-to-24 age group. Of that group, 14% enrolled directly out of high school in 2008. Others in the group include continuing students who had previously enrolled out of high school and students who postponed college enrollment for a year or two.

FIGURE 11



Source: USHE, Office of Institutional Research and Analysis

Create higher expectations for K-12 students

At their August 6, 2010 meeting, the Utah State Board of Education (USOE) adopted *the K-12 Common Core State Standards for Mathematics and English Language Arts*. The Common Core State Standards, currently adopted by 33 other states, provide a consistent, clear understanding of what students are expected to know and be able to do so that teachers and parents know how to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that young people need for success in college and careers.

USOE is now working on implementation plans and support documents. The higher education community supports them in this endeavor as they consider recommendations from ACT³⁸ and from the USOE Mathematics Steering Committee,³⁹ some of which are presented herein. Clearly, parents will need to become active partners in supporting the standards and student learning (not just good grades) as these new standards are implemented.

Recommendations from ACT *QualityCore* Curriculum

Mathematics

- Algebra I
- Algebra II
- Geometry
- Pre-Calculus

Science

- Biology
- Chemistry
- Physics

English

- English 9
- English 10
- English 11
- English 12

Social Studies

- U.S. History
- Two other courses

Adopt rigorous core curriculum whether students are bound for college or for work. Help students keep their options open.

Points of Discussion:

- Some high school students consider that the greater part of their academic work in high school is finished after they have taken their college entrance and state exams in their junior year.
- How can we get more students to pursue a rigorous curriculum *through* their senior year of high school?

Recommendations from USOE Mathematics Steering Committee 2009 Final Report, *Is Utah Math Ready?*

- Require the study of mathematics in the senior year of high school.
- Promote a statewide effort addressing the importance, relevance, and necessity of mathematics in education and for career and post-high school readiness.
- Increase counseling support for parents and students to better acquire critical mathematics skills necessary for choice in postsecondary pathway selection.
- Create a culture and provide supports so that all students will graduate from high school.
- Encourage representatives from postsecondary institutions, business, and industry to be available as resources to teachers, counselors and students.

Robert Moses, founder of the Algebra Project, describes mathematics literacy as a civil right. Increasingly, advanced mathematics is becoming the gateway to both workforce training and college entrance.

Increase Opportunities for High School Students to Earn College Credits Early

There are multiple ways for students to shorten their paths to college completion by earning college credits while still in high school. These include tests offered by the Advanced Placement (AP) and International Baccalaureate (IB) programs, and early college dual-enrolled opportunities (concurrent enrollment).

Over 28,000 Utah students are concurrently enrolled in high school and college. Last year (AY 2009-10), high school students earned 108,294 college credits in General Education courses, including English 1010 and Math 1050. They earned 67,429 credits in CTE (Career and Technical Education) courses and 37,256 credits in other academic courses (with some overlap between the general education and CTE courses). Some students who choose this pathway are able to graduate from high school with an Associate's degree in General Education.

Points of Discussion:

- During the 2009-10 year, 133 public, charter, and alternative high schools participated in the concurrent enrollment program. Students from all USOE districts earned 193,384 hours of concurrent credit.
- The Association for Career and Technical Education suggests that institutions of higher education should create many pathways for high school students to enter higher education. Providing students with multiple entry points will assist them in making the transition from high school to college and careers, help them feel confident about enrolling in college, and give them an early stake in their higher education. This might involve an institution offering at least one concurrent enrollment course in each of the CTE areas for which it offers a degree.
- Another option would be to focus dual enrollment courses on those core courses that are key to most majors.

Many students who have taken college-level courses in high school, however, find that the courses they have taken have not advanced them toward a particular degree. They may have filled their transcripts with concurrent enrollment courses, but not with core courses required for specific degrees. A major in a STEM field, for instance, requires pre-requisites that are generally taken during the freshman and sophomore year of college. Students not taking these critical courses in early

college years may find that the effort to take concurrent enrollment courses does not pay off in shortening the path to college graduation.

We need to assure that high school pathways for early college credit both strengthen secondary education institutions and are focused on courses that will help students continue on and succeed in college.



Provide Advising on College Readiness Behaviors to More Elementary, Middle, and High School Students

Counseling on the course selections and other school experiences that will provide the student with the most options (including college enrollment) in the middle and high schools builds a college-going culture among students and helps students and families understand the value of college. To create this culture, school counseling programs must ensure that students and families understand the importance of taking college-preparatory courses, know how to navigate the college admission process, and comprehend the financial aid processes. Middle school programs are especially helpful to ensure that students are completing course work that will allow them to participate in a college preparatory curriculum upon entering high school.⁴⁰



Points of Discussion:

- Utah averages 1 counselor to 772 students (one of the highest ratios in the nation); the national average is 1 counselor to 467 students. (National College Board, The College Completion Agenda)
- The National College Board, Advocacy & Policy Center recommends one counselor to 250 students if we are to meet the nation's goals for increasing participation and completion in higher education.
- For students who are potentially the first generation in their families to attend college (including many in Utah's growing immigrant population), college advising is even more critical because students lack the advantage of parental experience in college.

While adequate advising by school counselors is essential to help students prepare for college and make decisions about educational opportunities, school counselors in Utah schools, like those across the nation, are extremely overloaded in the number of students to whom they must provide services. To reach Utah's **big goal**, we will need funds dedicated to hiring and retaining quality advisors who have current and accurate information on college expectations. We will also need the capacity to train counselors, including those already in the schools, to help meet this need.

"Within schools, no professional is more important to improving college enrollments than counselors. Research clearly shows that counselors, when consistently and frequently available and allowed to provide direct services to students and parents, can be a highly effective group of professionals who positively impact students' aspirations, achievements, and financial aid knowledge."

Patricia McDonough,

"Counseling and College Counseling in America's High Schools," University of California.

Increase Student Access to Financial Aid

With the rising cost of tuition necessitated by state cuts in support of higher education and the increased demands on public higher education institutions, affordability is a huge obstacle for many students. In addition to the need for more merit-based scholarships, which typically go to students who are already college-bound and who have greater access to financial resources, Utah has an urgent need to provide need-based financial aid to encourage the participation of low-income students (see current expenditures in Table 7). By all measures, Utah provides among the lowest amounts of financial aid per person than any other state (see Figure 12).⁴¹ In fact, the *Measuring Up 2008* report gives Utah an “F” in affordability.

The correlation between lower income families and the likelihood of their children not participating in college is significant. **Utah ranks 42nd in the U.S. for college participation rates for students from low-income families**, in large part because Utah has not established need-based aid programs of any significance.⁴² The state’s investment in need-based financial aid is very low when compared with top performing states; families in

Utah devote an average of 21% of the family income to keep one child in college.⁴³ (And most families in Utah have more than one child.) Without addressing need-based aid, Utah will only exacerbate the divide between the “haves” and “have-nots.”

Type	Amount
Student Financial Aid	\$3,390,100
Utah Centennial Opportunity Program for Education Grant (UCOPE)	\$1,418,400
Utah Engineering and Computer Science Scholarship Program (UECSP)	\$39,200
New Century Scholarship Program	\$5,579,000
Regents' Scholarship	\$2,624,300
Total	\$13,051,000

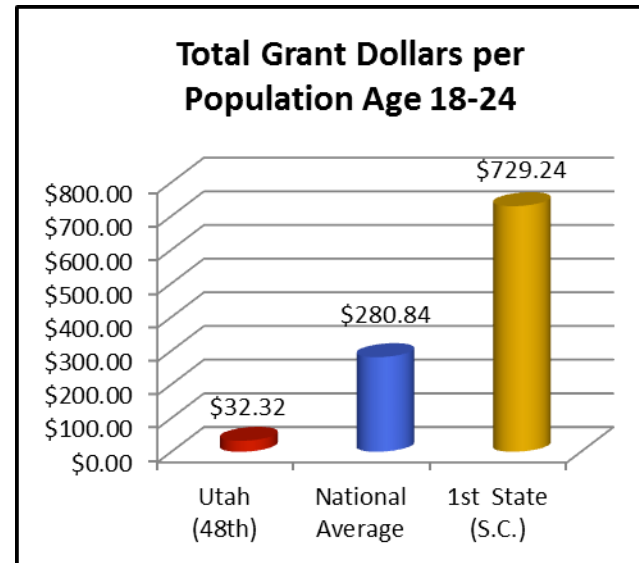
Source: USHE, Office of Institutional Research and Analysis

Points of Discussion:

- Utah ranks 48th of all states in grant dollars per population age 18-24. (National Association of State Student Grant and Aid Programs 40th Annual Survey Report, 2008-2009)
- Utah ranks 42nd of states for college participation of students from low-income families. (Postsecondary Education Opportunity #188, February 2008)
- Low income and minority students who receive grants are more likely to persist than those who receive loans. (Educational Policy Institute, StudentRetention.org)
- The state's investment in need-based financial aid is very low when compared with top performing states, and Utah does not offer low-priced college opportunities. (Measuring Up, 2008)

No student in Utah with a desire for higher education and the ability to succeed should walk away from the endeavor because of the expense.

FIGURE 12



Source: NASSGAP Annual Report, 2008-2009, p. 22

Raising Educational Attainment for Everyone

Adult Students (25-64+)

The mainstay of the state's talent-force, adults aged 25-64+, will be a vital component of Utah's efforts to raise educational attainment. This includes those who have never completed a degree as well as those who seek additional training. The adult population is already a substantial component of higher education and will become increasingly so as Utah demographic, economic, and workplace demands continue to shift.

According to the U.S. Department of Education, nationally 40% of today's students are aged 25 and older.⁴⁴ In Utah, 36% of students in USHE institutions are over 25.⁴⁵ This population, particularly the 25-45 age group, is estimated to grow by approximately 28% over the next 10 years.⁴⁶ By comparison, the number of Utah high school graduates is estimated to grow by only 24%⁴⁷ over the same time period. Education targeted to the needs of this population will be critical to the success and prosperity of Utah.

Institutions of higher education are constantly faced with the challenges of providing education and services to workers who fall outside the profile of the traditional college student. The severity of these needs fluctuates, depending on local, state, and national economic trends. In the current economy, the Utah Department of Workforce Services (DWS) reports that 55,900 jobs had been lost in 2009.⁴⁸ Even though a significant number of jobs have been created, it doesn't follow that those who lost the old jobs were hired for the new ones. Frequently, retraining through further education is required.



Adult Learners in Utah

- Adult learners (students over 25) already comprise 36% of students in USHE institutions.
- Utah's 25-45 age group is estimated to grow by 28% over the next 10 years.
- This population has tremendous potential for increased participation in higher education because of the number of individuals who have an incomplete degree or now see the benefit of furthering their education.
- Adult learners come from diverse backgrounds including:
 - Unemployed, needing training or retraining
 - Underemployed, needing training or retraining
 - Veterans, needing to resume or begin training
 - Displaced homemakers, needing training
 - Incomplete degrees, needing to resume training
 - Career changes, needing retraining
 - Career advancement, needing additional training.

A large number of adult and traditional-age students, face a number of significant barriers to participation in higher education and completion of degree programs. These barriers or concerns include:

- External commitments – families, work, time constraints
- Under preparation – low performance in K-12 years and/or a long absence from formal education
- Difficulty transferring credits from a former institution
- Uncertainty about financial aid and educational procedures
- Inflexible financial aid policies for half-time students
- Lack of affordable, flexible, quality child care.

As our nation passes through a period of significant change with respect to its economic security, demographic profile, and competitive position on the global stage, it is especially important that we enable our higher education institutions to become more responsive to the needs of students of all types.

– Stokes, *Hidden in Plain Sight: Adult Learners*



Points of Discussion:

A sample of changes that would be beneficial to adult learners includes:

- Easier transfer of credit from institution to institution.
- More flexible course, certificate, and degree programs (complete programs offered in the evenings, on weekends, and online).
- More flexible financial aid policies for those studying less than half-time.
- More flexible financial aid policies for those receiving funds from the Utah Department of Workforce Services.
- More access to flexible, affordable child care.
- Improved counseling services and access to services for non-traditional students.
- Increased course credit given for prior work experience or competencies certified by the CLEP or other exams.

Addressing these and related concerns will take considerable thought, effort, creativity, and flexibility. Some of these issues are within the control of an institution to address and resolve, such as the credit articulation from one institution to another and the flexibility of course, certificate, and degree offerings. Much has already been done to improve these options with more improvements yet to come.

Other issues to be addressed and resolved will require partnering with agencies like the Utah Higher Education Assistance Authority (UHEAA) and the Utah Department of Workforce Services (DWS). For example, UHEAA is currently exploring a private loan program and other financial aid options for students studying less than half time.

Traditional higher education programs and policies—created in an era when the 18- to 22-year-old, dependent, full-time student coming right out of high school was seen as the core market for higher education—are not well designed for the needs of adult learners, most of whom are “employees who study” rather than “students who work.”

Brian Bosworth, et.al.,

Adult Learners in Higher Education: Barriers to Success and Strategies to Improve Results

Minorities in Higher Education

In tackling the **big goal**, Utah must recognize its rapidly changing demographics. Over the past few decades, Utah has changed from a largely homogenous state to one that is more ethnically diverse. By the year 2020 over one-fifth (approximately 22%) of Utah's population will be an ethnic minority.⁴⁹ This is evident today in elementary schools across the state. Presently, ethnic minority populations are significantly under-represented in completion of higher education. Of the degrees awarded by USHE institutions in 2008-2009, only 10.7% were awarded to students from minority populations, while these groups comprise approximately 18% of the state population.⁵⁰ This must change.

The National Center for Public Policy and Higher Education reports that Utah has a 17% gap between Whites and all minorities in the percentage of 18- to 24-year-olds enrolled in college, which is one of the largest gaps in the nation. **The gap between Whites and Hispanics is 29%.**⁵¹ According to USHE data, while Hispanics comprise 12.3% of Utah's population, they

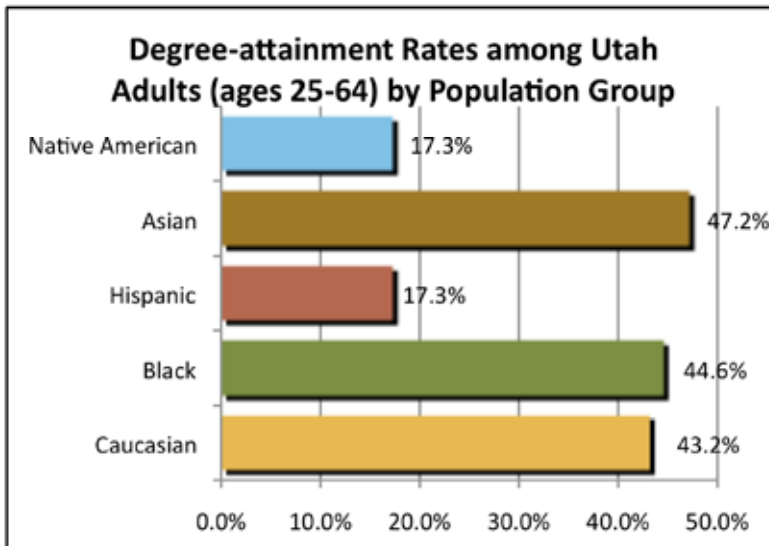
comprise only 5.4% of its college enrollment and 3.6% of those who receive degrees (see Table 8).⁵³ These trends must be reversed if Utah is to remain economically competitive and its residents relevant in the workplace.⁵⁴

Table 8: Utah Hispanics in Higher Education, 2008-2009	
Percent of Utah population	12.3%
Percent of USHE enrollment	5.4%
Percent of USHE graduates	3.6%
Sources: U.S. Census QuickFacts (2009 estimates); USHE 2010 Data Book.	

Utah cannot prosper unless all of its citizens are included in the quest to raise the level of educational attainment and job preparation.

Attainment gaps among racial and ethnic groups have persisted in Utah for decades, and the most recent degree-attainment rates (ages 25-64) for the state continue to reflect such gaps (see Figure 13).

FIGURE 13



Source: Lumina Foundation for Education, *A Stronger Nation*, 2010

The disparity begins much earlier than college. Utah's high school class of 2008 graduated 70% of Hispanic students compared with 91% of White students. Only 16% of the Hispanic high school graduates enrolled in college compared with 45% of Caucasians.⁵²

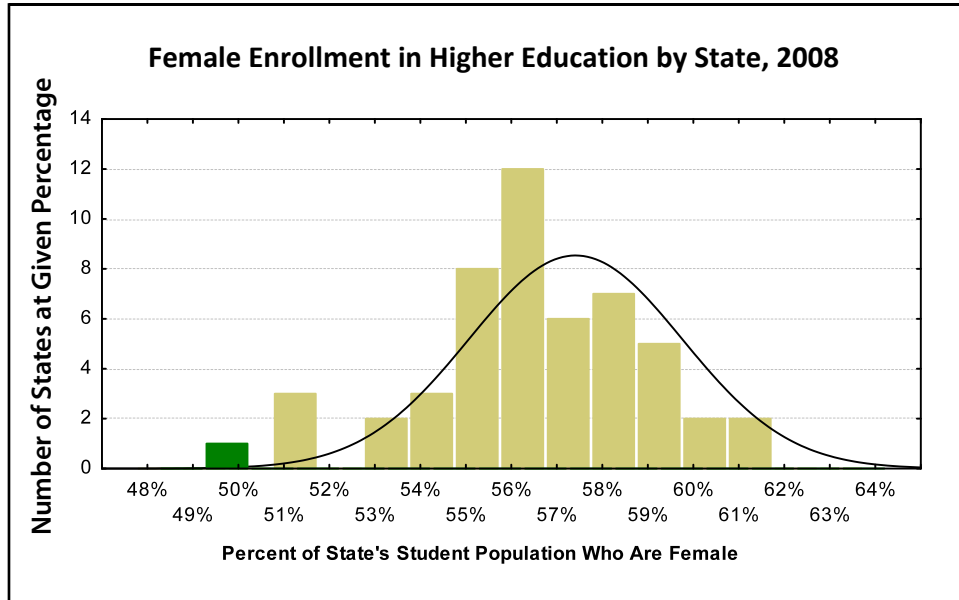
Unless Utah's children succeed in K-12 education, they will not enroll in higher education. Thus, Utah must help its growing minority population advance from elementary and intermediate schools ready to succeed in and graduate from high school so that they are well-prepared for college. As discussed earlier, the gap between Hispanic and White students in higher education is one of the highest in the nation. This makes community support and K-12/higher education partnerships vitally important to close the enrollment gap and make higher education a reality for minority Utahns.

Women in Higher Education

The number of Utah women attending college is well below the national average with only 49% enrolled as compared to 57% nationally.⁵⁵ According to a recent report of the Utah Women and Education Project (UWEP), “Utah has the largest gap between the share of men and women with college educations of any state.” While the educational attainment of women in Utah exceeded the national average for many decades, Utah

is now below the national average in both the number of young women initially going to college after high school and the number of women completing degrees. (The decline in Utah’s ranking is not because fewer Utah women are enrolled in college, but because the percentage of women enrolled in the state has declined.) The UWEP task force is currently researching the causes and potential solutions of this problem.

FIGURE 14



Source: Utah Women and Education Project, IPEDS Enrollment & Graduation Data Report, 2010.

Points of Discussion:

- **Women comprise 44% of the labor force in Utah.**
- **Almost 61% of females aged 16 and older were employed in 2008.**
- **Women in Utah are more likely to be poor than men.**
- **Women in Utah receive the larger percentage of associate's degrees (55%) while men receive the larger percentage of bachelor's and professional degrees (53% and 59%).**
- **A higher percentage of women participate in certificate trade programs (such as cosmetology, massage, and culinary arts) that are focused on short-term training. These certificates do not generally lead to a livable family wage.**

Current completion rates for women are a concern for many reasons. For instance, the number of single mothers supporting children and living in poverty is increasing in Utah as it is nationwide. In addition, higher education of women has been clearly linked to a variety of economic and social benefits, including healthier babies and improved early childhood education.

While Utah women are doing well in many aspects of the postsecondary experience, more women in Utah need to consider livable-wage careers when making educational choices. Women who want to maximize their employability and increase their wages, as well as mothers who want flexible working schedules in desirable jobs, need to consider more advanced education in high-demand professions.

Strategic Priority 2: Increase the Rate of Student Completion

It takes three to five times as much money to recruit a new student as it does to retain an already enrolled student.

- Noel, Levitz, & Saluri, 1985



Retain and Graduate More Students

We need to retain and graduate more of the students who enroll at our institutions. Too many Utah students leave college before completing a degree. According to the College Board's 2010 Progress report, only 49% of Utah's first-time, full-time freshmen complete a bachelor's degree within six years of starting their program of study. Additionally, only 40% of first-time, full-time students pursuing an associate's degree complete within three years of beginning their program.⁵⁶

A formative measure of progress toward completion is the year-to-year retention of students in higher education. Utah's retention rates are well below the national average. According to ACT, the 2007 national collegiate first-to-second-year retention rate was 64% for two-year colleges and 72% for four-year public colleges. **USHE institutions' average retention rates are 54% and 63% for two-year and four-year institutions respectively.** Some are much lower than this. Given the economic consequences of foregoing higher education, this continuing exodus is concerning.



Financial Perspective

Student recruitment efforts require substantial institutional expenditures (including hiring of staff, travel funding, and public information costs). In contrast, retention initiatives designed to foster student success and manage enrollment are estimated to be 3-5 times more cost-effective than recruitment efforts. That is, it takes 3-5 times more money to recruit a new student than it does to retain an already enrolled student.⁵⁷ Thus, for every student who does not complete a degree, the state loses a substantial financial investment.

Institutional Perspective

Our institutions of higher education can best fulfill their mission statements when they are able to retain and graduate the maximum number of their students. Institutions can do a lot to set a climate of success. USHE will commit its leadership and resources to assisting them in this endeavor. Further, it may be useful to shift the assessment of progress from the number of students enrolled to the number of students completing degrees and certificates.

Individual Perspective

There are many reasons a person leaves college, including financial concerns, family responsibilities, poor academic performance, and lack of direction. These decisions, however, are often made with short-term solutions in mind, rather than the long-term perspective. Over a lifetime, this decision will have far-reaching ramifications. Based on current U.S. Census Bureau data, lifetime earnings estimates over a 40-year working span indicate that an individual with a bachelor's degree will accumulate approximately \$1.7 million dollars (\$55,700 a year) as opposed to \$1.0 million (\$33,800 a year) for a high school graduate (national averages).⁵⁸ Additionally, workers with more education are more likely to enjoy the benefits of good health care and retirement programs and avoid layoffs in times of economic downturn. The timely intervention of counselors and advisors could play a key role helping students resolve issues that might otherwise keep them from completing their degrees.

An incomplete 4-year degree doesn't have as much earning power as a completed 2-year degree.

Leveraging Resources

Utah's institutions of higher education have many resources available to assist with student retention and persistence to graduation—advising, tutoring, financial aid, developmental and success classes, and support for targeted populations, to name a few. Some of these student services are excellent; still, there is room for improvement. And even the best of services are of little value if the students for whom they are intended don't use them. Institution by institution, and as a collective whole, we need to ensure that student services are aligned with the needs of the student population and include effective intervention programs.



Improving Student Outcomes

While graduating more students is critical, the quality of the students that Utah institutions graduate is even more critical. Thus, an increased focus on improving student outcomes will be essential. One approach to raising student outcomes is through education that engages students as active participants in the learning process.

Extensive research conducted on students at postsecondary institutions has shown that *engaged learning* activities improve student success and retention. Curriculum-based, engaged learning activities include (but are not limited to):

- Undergraduate and graduate research
- Faculty-mentored projects (individual and collaborative)
- Internships and cooperative education opportunities
- Study abroad and international field work
- Community-based service learning.

These types of activities improve understanding and retention of course material and increase student interest and commitment. They provide students with opportunities to apply and expand discipline-specific knowledge in a real-world context. They also provide students with professional experience, training, and networking opportunities for expanding career opportunities.

We call upon members of the business community to provide more internships and similar opportunities, and upon members of the civic community to provide more service learning and related opportunities.



Complete College America

The *Complete College America* movement, of which Utah is a part, shares a similar goal of having 6 out of 10 young adults in the U.S. obtain a college degree or certificate of value by 2020. Supported by an extensive body of research, Complete College America sets forth essential steps for states and explains how states can implement systemic reforms and innovative policies to significantly increase college completion. Several key points are presented here (the complete discussion can be found on the Complete College America web site).⁵⁹



Ways to Reduce Time and Accelerate Success:

- **Require all students to have graduation plans and declare majors early.** Establishing formal completion plans for every student upon enrollment, including those who attend part time, makes it clear from day one: Graduation is the goal.
- **Reduce unnecessary course-taking.** Campuses should scrutinize degree programs to make sure they do not require extraneous credits that can slow down students or force them to take courses that are not relevant to their degrees. Campuses should offer *managed choices* of course options that lead to degrees in as short a time as possible.
- **Improve transfer policies.** Student success at any and all accredited state institutions should be honored—and counted. Nearly a third of students at four-year colleges will change schools; 60% of those at community colleges will do the same. With so many students on the move, statewide legislation and policies must ensure they can carry their credits with them so valuable effort and time are not lost — and precious financial resources and need-based aid are not squandered.
- **Use summer.** Students should be encouraged to make better use of summer semester to keep on track to graduate. Institutions can assist by planning summer semester offerings well in advance and taking summer offerings into consideration when advising students who are able to attend school in the summer.
- **Provide incentives for full-time enrollment and other strategies that enable acceleration.** Full-time students are far more likely to complete degrees. While many part-time students believe they can't afford to attend full-time, with the help of comprehensive academic advising, financial aid, and tuition policies, more can consider full-time enrollment.





Complete College America, Essential Step #4:

Reduce Time to Degree Completion

Significantly increasing college completion is possible only when states and institutions get serious about the problem of time.

Faster progress matters because:

- When students have to extend their course-taking over too many semesters and too many years, their chances of ever completing college significantly diminish. The longer it takes to graduate, the more likely it is that they will tire of their rigorous schedules, run out of tuition money, get discouraged, or need to put other responsibilities before school.
- Most often, the longer it takes students to complete their degrees, the more those degrees cost; the delays can add up to millions of wasted dollars for students, institutions, and the state.

STUDENT SUCCESS STORY



Tuition-assistance Program Gives Student New Hope

Weber State University launched its new Dream Weber program in January to help students turn their dreams of a university education into reality. Dream Weber provides full tuition for Utah residents whose annual household income is \$25,000 or less and who are also eligible for federal Pell Grants.

Psychology major **Belia Alvarado** is one of those students. She enrolled at WSU at age 34. She was excited, but extremely nervous because she felt she'd done poorly in high school and wanted to change her life. "When Weber State accepted me I was so ecstatic," Alvarado said. "To me it was my second chance to do everything right because I had done everything wrong when I was younger. I was really excited to come back."

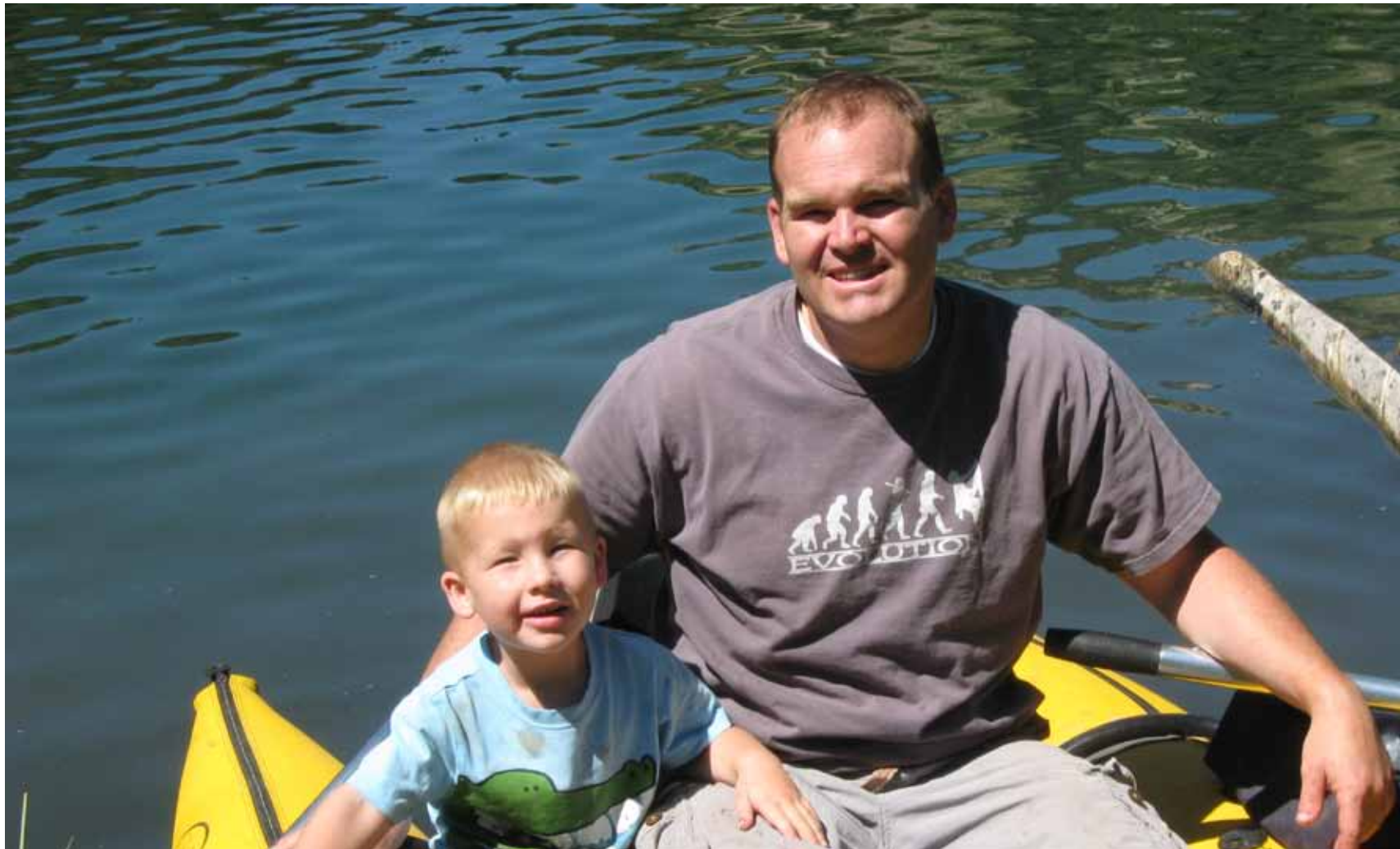
Alvarado said the tuition assistance will allow her to concentrate on her studies and her many university activities. She is trying to say thanks for all the help she's

received by helping others. At the university she's been a peer mentor and part of the Pinnacle Honor Society, Hispanic Area Council, and the student services advisory board.

Dream Weber, which is the first tuition-assistance program of its kind in Utah, is possible because of generous donations. Donor money fills the gap between federal and state financial aid and the cost of a student's tuition. The program is especially important in a time of economic challenge and has sparked tremendous response. In 2010, 1,947 students from homes with a household income of \$25,000 or less applied for admission. That was an 88% increase from 2009.

WSU will make Dream Weber an ongoing program of help and hope for citizens who dream of a future with an education.

STUDENT SUCCESS STORY



Returning Student Earns Engineering Degree

Andrew Fry dropped out of high school in his senior year, but later received his high school diploma through home study. After graduation, Fry worked at various jobs, including waiting tables at several pizza places, doing custodial work at a power plant, running a cement crew, and working with an HVAC company. He moved to Price and was roofing houses when he realized that he needed a career and not just a job to care for his young family. Having worked with and around engineers, he decided that engineering might be a satisfying career. Fry decided to begin working towards a degree in Engineering at Utah State University-College of Eastern Utah (USU-CEU).

His education at USU-CEU was filled with General Education and pre-requisites for engineering, including two math courses each semester in order to catch up to his peers in mathematics. He paid for his first semester himself and did well enough to qualify for a scholarship for the next year. After completing his associate's degree, Fry transferred to the University of Utah where he was able to complete his bachelor's degree in two additional years, graduating with a 3.87 grade point average.

He then chose to continue his education at the University of Utah to do graduate studies and to work with the combustion research group. Fry was admitted directly into the University's Ph.D. program where he was awarded the prestigious Wayne Brown fellowship. He graduated four years later with an almost perfect 3.94 grade point average.

Currently, Fry is a Senior Engineer for Reaction Engineering International and the lead researcher on a \$3,000,000 Department of Energy grant. His team is working on a project that investigates the possibilities of burning coal using pure oxygen instead of air to create a pure CO₂ by-product, which then could be compressed and sequestered or injected into old oil fields, enhancing oil recovery.

According to Fry, he owes his current situation to the rigorous training at USU-CEU and the solid foundation in math which made it all possible.

STUDENT SUCCESS STORY



The Daring Journey of a Valedictorian

Southern Utah University's 2010 valedictorian, **Robyn LaLumia** had a dream to pursue. She left a good job and enrolled at SUU in the hotel, resort and hospitality management program at the same time her teenage daughter began her freshman year of high school.

On her path to graduation, LaLumia faced a number of challenges—balancing work and home, family and school. Mid-way through her schooling, she lost her husband to cancer and faced the difficulties of grief and life as a single parent.

On her path to graduation, LaLumia successfully navigated personal hardships that could have easily derailed her education—choosing instead to work harder, focus more, and rely on the relationships she had developed with professors and advisors to help her persevere. Although LaLumia's college experience was fraught with more hardship than most, she is confident when she says she would most certainly do it all again.

In fact, LaLumia welcomed the rigors of academia, explaining, "School kept me looking forward and thinking about the future rather than remaining in the sadness of losing my husband. It helped me realize that life moves forward whether we want it to or not."

And move forward she did. Believing in Helen Keller's axiom that "Life is either a daring adventure or nothing at all," LaLumia graduated with perfect marks as a nontraditional, widowed, first generation student. Of this experience, she explains, "I always knew I wanted a college degree; once I finally got started, I just couldn't let myself quit—no matter the hardship."

LaLumia credits much of her academic accomplishment to the support network she had in friends and professors who worked with her and bolstered her through a few very challenging semesters. She explains, "My success was not resting on my shoulders alone—I had teachers and advisors standing behind me."

Her degree complete, LaLumia plans to continue the adventure by pursuing a career in four-star resort management and marketing.

Strategic Priority 3: Increase the Level of Economic Innovation

According to the University of Utah, every public dollar invested in higher education yields a \$7 return into Utah's economy.



Growing the State's Economy

As Utah increases its participation and completion rates, it must also grow meaningful employment opportunities for its graduates. These opportunities are created as students graduate with the requisite talent aligned with the needs of companies to grow their business. Whether it is by training the technician, improving existing operations for increased profitability, or coaching start-up companies, colleges and universities nurture individuals and companies that grow the state's economy. Additionally, they create new knowledge by supporting research endeavors that generate ideas and technology that can be profitably transferred to the marketplace.

Colleges and universities are by nature clusters of creative, innovative individuals engaged in a collective effort to develop new ideas and apply them to mankind's most vexing problems. *At its best, higher education challenges students to apply what they are learning in*

the world around them—to develop approaches that can potentially become new companies that generate jobs for Utahns. For instance, much of the research being done at the University of Utah is spun out into newfound companies, resulting in ongoing revenue for the school. For the past two years, the University of Utah has created the second highest number of start-up companies of any U.S. university, second only to the Massachusetts Institute of Technology.

The Utah State Board of Regents' priority to increase the level of economic innovation will be accomplished through talent-force development, research, technology transfer, and by nurturing individuals and companies that create new knowledge, businesses, and jobs. To foster economic innovation, we must: 1) align education to meet future talent-force needs, and 2) establish a climate where partnerships among government, education, and industry flourish.



Aligning Education to Meet Future Talent-Force Needs

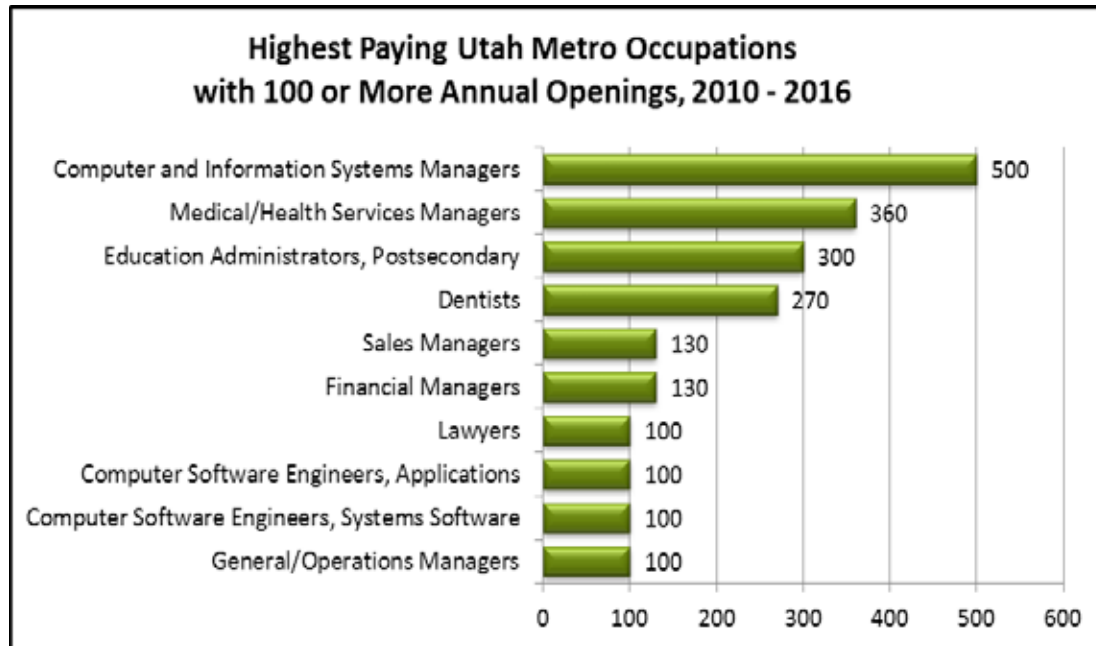
Economic innovation doesn't happen in a vacuum. As leaders, we must be alert to the national and international trends that are shaping workforce needs and shape our educational solutions accordingly. For instance, today's workforce pathways are in occupations rather than in careers. According to the Center on Workforce and Education, workers will tend to be more attached to the occupations they will be filling than to the specialized industries in which they work.⁶⁰ Not only will we need to train an innovative talent-force with broad-based skills, we will need to be savvy about where we deploy scarce development resources.

For example, it is expected that by the year 2018, there will be a 44% increase in job openings in computer engineering, a 10% increase in electrical/electronic technology jobs, and a 41% increase in registered nursing jobs in Utah.⁶¹ It is incumbent upon the higher education and technical training institutions to align course curricula and educational programs with business opportunities and industry needs. Utah must do a better job at developing a talent-force ready to take advantage of the opportunities and meet the needs of the knowledge-based economy if it is to be prosperous in the future.

“We owe it to our students, and to the future of our state, to provide an education that prepares our youth to compete in the global marketplace. This will not happen, however, without renewed and sustained emphasis in the areas of science, technology, engineering and math. Indeed, many of the jobs available today—and those our students will seek in the future—already require these skills.”¹

Governor Gary R. Herbert

FIGURE 15



Source: Utah Department of Workforce Services, Occupational Outlook – Statewide, 2009

The alignment of education and employment needs is essential but challenging. One challenge is predicting workforce needs in a globally changing landscape. Another challenge is communication of workforce needs and employment opportunities among stakeholders—higher education, the business community, government (including the Governor’s Office of Economic Development and the Utah Department of Workforce Services), and the public. Technology that facilitates mass collaboration and open source technology, such as wikis, could be used to share information, ideas, and decision making concerning the alignment of education and employment needs. In this way, the dialog could be widened and made more productive.

Another challenge in aligning education and employment needs is that students’ selection of degree programs may not align with current or projected needs and opportunities. Utah higher education and workforce data could be better leveraged to educate students on career and occupational opportunities. Equipped with such information, faculty and career counselors could actively engage students in identifying the training and degree programs that lead them to meaningful and sustainable employment in Utah.



Employers Say Colleges Should Place More Emphasis on the Following Learning Outcomes

- Ability to communicate effectively both orally and in writing (89%)
- Critical thinking and analytical reasoning skills (81%)
- Ability to apply knowledge and skills to real-world settings through internships or hands-on experiences (79%)
- Ability to analyze and solve complex problems (75%)
- Ability to connect choices and actions to ethical decisions (75%)
- Teamwork skills and the ability to collaborate with others in diverse group settings (71%)
- Ability to innovate and be creative (70%)
- Concepts and new developments in science and technology (70%)
- Ability to locate, organize, and evaluate information from multiple sources (68%)
- Ability to understand the global context of situations and decisions (67%)
- Global issues and developments and their implications for the future (65%)
- Ability to work with numbers and understand statistics (65%)
- Role of the United States in the world (57%)
- Cultural diversity in America and other countries (57%)
- Civic knowledge, civic participation, and community engagement (52%)
- Proficiency in a foreign language (45%)

Source: Hart Research Associates, Raising the Bar Employers' Views on College Learning in the Wake of the Economic Downturn, 2010.

Establishing a Climate Where Partnerships among Government, Education, and Industry Flourish

An increasing number of model partnerships, both in Utah and nationwide, can inform our efforts to foster collaborative innovation among Utah's stakeholders. Initiatives like the Utah Cluster Acceleration Project (UCAP) that unite colleges and universities with state agencies (e.g., the Department of Workforce Services and the Governor's Office of Economic Development) along with state and local business leaders are examples of how the private and public sectors best work together to grow jobs and increase wages. UCAP also helps to align career tracks in business and industry with the course offerings in higher education, which in turn grows our economy.

Utah is at the forefront in demonstrating that higher education can be a trusted partner in a state's long-term economic development endeavors. Utah's universities lead the nation in creating new businesses based on university inventions. Utah's higher education students are already succeeding in the nation's largest university business plan competition, the Utah Entrepreneur Challenge. With programs like UCAP and USTAR's

(Utah Science, Technology & Research Initiative) Technology Outreach Program (TOP), Utah's research universities, regional teaching colleges and universities, and community colleges are demonstrating a capacity to support companies in their communities.

The funding for programs like USTAR is quite modest given the scale of the overall state budget. Yet it has demonstrated that economic outcomes are enhanced when funding is directly targeted to economic development initiatives. In addition, USTAR has demonstrated that the highest levels of workforce development occur naturally when graduate students' studies are integrated with translational research focused on commercialization in support of Utah's industrial clusters.

USTAR has created a number of research teams at the University of Utah and Utah State University. Spearheading these teams are world-class innovators hungry to collaborate with industry to develop and commercialize new technologies. Innovation Focus Areas include Nanotechnology, Energy, BioDevice/BioPharma, Imaging Technology, Medical Imaging & Brain Medicine.



Higher Education in Utah is a Great Investment

The Utah System of Higher Education is the most efficient higher education system in the U.S. It produces more college graduates per allocated state dollar than any other state.⁶² If higher education is looked at as an economic cluster, it is a \$4.8 billion industry in Utah, which is a sound return on the state's estimated annual tax dollar investment of \$674 million (see Table 9).⁶³

Of the nearly \$5 billion in revenues generated by public postsecondary institutions in Utah, only \$674 million (13%) comes from state tax appropriations. These appropriations support teaching, capital facilities, and state initiatives (state grants). The balance of revenues comes from other resources such as tuition, gifts, federal grants, investment returns and enterprise funds.

Postsecondary education by itself employs over 35,359 workers, not including the employment opportunities it creates for students working on their campuses. The existence of a campus in a community also provides the economic engine for many other industries and services.

Yet, these figures don't account for the profitability of tangential businesses that depend upon or are created from the operation of Utah's colleges and universities. Postsecondary education plays a key role in attracting, creating, and supporting businesses in the state of Utah. The total financial impact is simply incalculable; but nonetheless, an investment in higher education is a wise economic investment that directly impacts every community and region of the state.

Table 9: Utah's Education Sector

Postsecondary Institutions

Institution Sector	Employees*	Total Revenues**
Public Institutions	25,859	\$4,068,352,802
Private, Not-for-profit	7,785	\$ 550,303,349
Private, For-profit	1,715	\$ 182,786,977
Total	35,359	\$4,801,443,128

* Full and part-time employees in all job categories (includes graduate assistants, excludes all other student employment)

** Revenues from all sources including investments, enterprise funds, grants, gifts, sale of services, tuition, and state appropriations

Source: 2009 National Center for Educational Statistics (NCES) IPEDS Employees by Assigned Position and Finance Surveys.

“Education is the single most critical investment to raise the long-run growth potential of countries. In the global economy, the performance of education systems is the yardstick for success, particularly in light of the fundamental technological and demographic challenges that are re-shaping our economies.”

Secretary-General Angel Gurría, Organisation for Economic Co-operation and Development

Education is an asset synonymous with economic development. Investment today in education will yield rewards for Utah with prosperity and a vibrant economy. A significant variable in attracting, retaining, and growing business is the quality of a state's educational system—elementary through higher education.

The educational benefits to each individual are significant. The collective benefit of higher education to society as a whole is even greater. In simple economic terms, increased education means an increased standard of living for every person in the state of Utah.



Impact of Degree Attainment on Utah's Economy

Each college graduating class adds hundreds of million into Utah's economy in earned wages annually. To illustrate, the 2007-08 USHE graduating class is estimated to have contributed 650 million dollars to the state's economy in its first year of employment. 30% of this graduating class is estimated to have continued their education pursuing additional degrees or skills. Thus, as these individuals attain additional credentials, their contribution to the work-force and overall economic impact will become even more significant.

Table 10: Total Wages for the First 9 Months of 2008 for Those Completing Degrees in 2007-08

Award Type	Count	Wages
< 1 Yr Cert	971	\$1,349,083
1 & < 2 year Cert	386	\$871,311
Associate	8,078	\$121,835,435
Bachelor	11,302	\$222,526,783
Post Bacc. Cert	296	\$7,592,298
Master's	2,894	\$110,846,542
Post Master's Cert	32	\$1,538,389
Doctoral	493	\$11,362,882
1st Professional	270	\$4,848,143
Total	24,722	\$482,770,866

Source: USHE, Office of Institutional Research and Analysis, as reported to DWS.

ACTION PLAN: IMPLEMENTATION STRATEGIES AND IDEAS



Action Plan Overview

Utah's model of higher education has served its people well in past years, but current and future workforce and economic demands require the higher education community to build upon these successes to become even more efficient, more dynamic, and more productive than ever before while protecting and enhancing the qualities and strengths of each institution. To do so, we as shareholders need to expand the vision of higher education. Whereas traditional higher education has historically operated as somewhat of a self-contained system of preparing students in a fixed number of years for a lifelong career, we need to accelerate the shift to a more integrated model where educational entities are connected vertically (from pre-school to lifelong learning) and horizontally (across institutions, job providers, and support organizations).


To achieve this integrated approach, there needs to be increased coordination between K-12 education, higher education, and the workforce needs of our dynamic economy. Critically, the pipeline leading from K-12 into

higher education needs to prepare and accommodate more students and increase the number of degree or certificate completions. Further, institutions need to develop more innovative, sophisticated approaches and increase student support. Academic training needs to be even more portable than it is now so that students are able to move more freely from one institution (or type of institution) to another, as well as from the workforce into higher education, without losing progress towards their degree or certificate. Students should have a clearer understanding of the purposes of education, and educational outcomes should be more strongly tied to career success.

The Action Plan, presented in this section, includes a list of recommendations to be explored, developed, or implemented to help Utah reach its **big goal**. Some of the recommendations have been noted as priorities for 2011, which include those recommendations already being implemented, those requiring timely attention, or those supported as first steps toward larger recommendations.

The Regents expect that each USHE institution will work according to its distinctive mission to implement these recommendations as well as their own plans to meet the strategic priorities of increasing levels of participation, completion, and economic innovation. As these institutional strategies are developed or refined they will be added to future annual reports of the **HigherEdUtah2020** plan.

Appreciating that this is a Utah plan for higher education, the State Board of Regents and Commissioner of Higher Education invite the other higher education institutions (UCAT and private institutions) to similarly explore, develop, and implement strategies and share their plans. It is hoped that all higher education institutions in the state—public and private—will do their part and be committed to helping Utah attain its **big goal**.

Within each of these five areas, the State Board of Regents and the Commissioner of Higher Education recommend actions to be explored, developed or implemented to help Utah attain its **big goal** and align its higher education network with the current and future demands of its workforce. Recommendations that should receive priority in the coming year (2011) are marked with the following symbol: 


The Action Plan focuses on five areas:

1. Expand the pipeline of college / career-ready and college-inclined high school graduates.
2. Stop leakages in the higher education pipeline by increasing the number who persist and complete their education once they enter college.
3. Expand the ability of colleges and universities to provide quality opportunities for more students.
4. Transform the way higher education meets the needs of the 21st-century student through effective and efficient use of technology, while sustaining academic quality.
5. Better leverage higher education in growing Utah's economy as a way to extend prosperity and grow the tax base of the state.

1. Expand the pipeline of college/career-ready and college inclined high school graduates


A. Establish clear college and career-readiness standards.

High school graduation requirements, college admission standards, and college readiness standards are all different and need to be aligned. Thus, using the newly adopted Common Core Standards, the State Board of Regents should make a clear statement about what the higher education sector of this integrated system expects of entering students.

 **Recommendation 1.** The State Board of Regents should adopt clearly written standards defining college/career readiness and admission policies so parents and students know what is expected to succeed in postsecondary education (this includes, for example, taking math through the senior year).

- **Recommendation 2.** The State Board of Regents should define the specific admission requirements for each higher education institution based on its role and mission. These admission requirements should be communicated early and often to parents and students about what is expected in college so that time in high school will be used well to prepare adequately for college.

- **Recommendation 3.** The Utah System of Higher Education should employ the Essential Learning Outcomes throughout General Education and the academic majors in order to prepare college graduates with skills identified by business as critical to being successful employees.


 **Recommendation 4.** Each USHE institution is required to submit and present to the State Board of Regents an Access Inventory Report by June 2011. This report is an effort to identify policies, programs, services, and resources currently in place to support increased student participation. A template will be developed to standardize data collection. The information submitted will be used to inform the creation of a statewide Access Network and an online database. The network and online database will be critical in identifying gaps in services, determining potential program best practices, and encouraging increased collaboration and resource sharing.

The Utah State Board of Education has adopted the K-12 Common Core State Standards advocated by many national business, civic, and educational groups. The K-12

Common Core State Standards eliminate the dual track approach of vocational compared to academic education in the K-16 System. The State Board of Regents is strongly supportive of implementation of the K-12 Common Core State Standards. Higher education's task is now to provide a seamless alignment of the new standards with higher education's first-year mathematics and English composition curricula within General Education.

The K-12 Common Core State Standards lead to changes in expectations: students will enter higher education prepared to succeed in college-level mathematics and English composition. The most significant change is to rely on learning outcomes and competencies and to assess student mastery of competencies in new ways, specifically artifacts that demonstrate competence. In addition, the Smarter Balanced Assessment Consortium (of which Utah is a part) has received federal funding to develop new methods of assessment of the Common Core State Standards. The following recommendations provide an agenda for higher education in coming years.

- **Recommendation 5.** Higher education should align mathematics and English composition within General Education with the K-12 Common Core State Standards that focus on student learning outcomes and competencies.

 **Recommendation 6.** Concurrent Enrollment should be changed by (a) aligning the courses available to help students complete one of the pathways to a postsecondary certificate or degree; (b) using online and mixed-delivery classes as much as possible; and (c) increasing access to materials and reducing costs by using open courseware material instead of textbooks whenever these are used by the higher education faculty who approve and give syllabi and assessments to high school teachers.

Moving to learning outcomes and competencies as the assessment measure will require a more robust system of testing and evaluation. A national consortium of states is presently working on reconstructing the testing program in K-12. Higher education needs to align what it does with their efforts, particularly in determining college admission and placement.


- **Recommendation 7.** Assessment programs for higher education admission and placement in Utah should be outcome based and compatible with the K-12 Common Core State Standards assessment as determined by the Smarter Balanced Assessment Consortium. Campuses should use the K-12 Common Core State Standards as the basis for full admission. Colleges of education should prepare

new teachers to teach to the Common Core State Standards and provide professional development to practicing teachers.

- **Recommendation 8.** While the national testing program is reconstructed, higher education should work with K-12 partners to implement the EXPLORE tests in the 8th grade, the PLAN test in the 10th grade, and the ACT test for all students in the 11th grade. The data collected should be used to trigger necessary intervention support as well as to inform students of courses to take—especially in the senior year—to best prepare them academically for their career(s) of interest.

B. Strengthen and expand collaboration between K-12 and higher education.

If the goal is to create an integrated seamless system of education in Utah, strong mechanisms need to be built that facilitate collaboration and partnership. The basics of this system are in place: unity on the K-12 Common Core State Standards, use of learning outcomes and competencies in General Education, and combining academic and vocational preparation.

 **Recommendation 9.** Strengthen and expand the Utah K-16 Alliance and create regional alliances throughout the state. The agenda for state and regional alliances should be to work on (a) seamless articulation for CTE among USHE institutions, UCAT, and the high schools, based on competencies and industry-based certification standards and accredited higher education programs; (b) electronic high school transcripts, SEOP (Student Education/Occupation Plan) information, and electronic portfolios for counseling and admission to Utah colleges and universities; (c) feedback to school districts on higher education success of their graduates; and (d) more robust development of career pathways.

C. Increase Participation Rates.

Utah is decreasing the share of its population that is attending and graduating from postsecondary education institutions. The numbers are particularly low among the Hispanic population, women, and low-income residents. Utah also must attract many adults who have some postsecondary education, but are without degrees or certificates for high paying jobs.


A challenge in Utah is the current structure and funding of USHE's community college network. Only one institution, Salt Lake Community College, bears the name community college; yet, six of the remaining seven USHE institutions also have an embedded community college mission and function. Public awareness of this structure is confusing to some prospective students who are only interested in a community college experience and who are unaware that the function is offered within the local regional state university.

Funding challenges include a lack of a locally funded property tax to support community colleges that some states have employed to help keep tuition low and education accessible through their community colleges. Additionally, affordability of a community college degree at four USHE institutions is compounded by higher tuition rates consistent with the baccalaureate mission at those institutions.

College recruiters, student affairs officers, and civic leaders alike agree that the rising cost of higher education is a barrier to participation for many students. Tuition costs have increased significantly over recent years as state appropriations per student have decreased. While tuition is significantly lower

than other states and federal aid has increased, Utah students have considerable unmet financial need. One reason for this unmet need is that Utah provides very little state-supported need-based aid. Debt levels are also significant (\$13,000 per graduating student). Utah presently provides an average of \$51 per undergraduate FTE (full-time equivalent) student in need-based financial aid, which is among the lowest amounts of all the states. By comparison, the median amount is \$334 and the highest amount is \$1,021 in New Jersey.

The first set of recommendations addresses the financial access issue.

 **Recommendation 10.** Increase financial support for low-income students who would not otherwise be able to attend college by adequately financing, re-purposing, re-energizing, and re-naming the Utah Centennial Opportunity Program for Education (UCOPE) to Success Stipends, providing greater student support through need-based financial aid (including work study).

- **Recommendation 11.** Expand outreach and marketing of the Utah Educational Savings Plan (UESP) to encourage Utahns to save for higher education.

- **Recommendation 12.** Establish a student loan program for part-time students through UHEAA to help adults who can enroll in only one or two classes a semester.

🏞️ **Recommendation 13.** Expand the Utah Council Senior Tour to include regional scholarship and financial aid evenings in the fall. These evenings will consist of training that focus on resources available to financially support postsecondary education. In the spring, open houses will be held at each college and university in the state and will provide admission counseling and FAFSA completion activities targeted at high school seniors, with other aspects of the event targeting college-ready activities for sophomores and juniors.

🏞️ **Recommendation 14.** The Office of the Commissioner will develop a competitive sub-grant process to assist low-income and underrepresented students in preparing for and succeeding in college. This competitive sub-grant process will be made possible by the federal College Access Challenge Grant, and encourages institutions to partner, establish, strengthen, or expand outreach and access programs. Activities might include FAFSA

completion, academic tutoring, mentoring, financial literacy awareness, summer bridge offerings, and professional development for counselors.

Recruiting and retaining non-traditional students (adults) is a critical element of meeting Utah’s workforce needs. Over the past year, a robust online system for advising students about career options has been built by a coalition of state groups, led by the Utah Higher Education Assistance Authority (UHEAA). Moving ahead, increased partnering with the Department of Workforce Services (DWS) will be important in urging more people to return to postsecondary education. We recommend the following actions be taken to assist in helping more adults earn their degrees.

- **Recommendation 15.** Strengthen the recruitment, outreach, advising and career planning activities of USHE institutions, targeted at adult students, by integrating UtahFutures.org into their services. Require a graduation plan (tracked through UtahFutures.org) for each student, which is reviewed at least annually by an advisor with the student.

- **Recommendation 16.** Urge USHE colleges and universities to enhance their specialized advisory services to help working adults by offering classes and full programs during evenings and weekends and by creating specific curriculum for non-traditional students that builds practical skills.
- **Recommendation 17.** Increase opportunities for adults to translate life skills and experiences into college credit through CLEP tests, the CAEL process, or other substantiated ways of gaining experiential credit.

Expanding participation levels will require the growth and success of alternatives to traditional college experiences. Thus, USHE schools will need to partner with private colleges, applied technology colleges, and early college high schools.

- **Recommendation 18.** Increase the number of early college high schools sponsored by higher educational institutions by creating a funding stream to support the supervision of early college high schools.
- **Recommendation 19.** Strengthen articulation agreements between public and private colleges that meet regional accreditation and industry certification standards.



2. Stop leakages in the higher education pipeline by increasing the number who persist and complete their education once they enter college.

Utah's **big goal** is to improve the education level of its citizens as measured by having 66% of Utahns age 25 to 60 with postsecondary degree or certificate by the year 2020. Our estimates are that it will require approximately 109,000 new students to enroll if the present rate of college retention does not improve; however, if it were to improve by as much as 8%, only 71,000 new students would be required. Currently, about 20% of Utah citizens have some college education but have stopped short of a degree. The most efficient way to meet Utah's goal is to improve college completion rates.


The focus on retention is receiving national attention. Utah has joined Complete College America, which is a coalition of 23 states working collaboratively to improve retention. The National Governors Association, the Gates Foundation and the Lumina Foundation for Education have initiatives underway to improve retention. It is estimated that the low retention rates cost Utah tax payers nearly \$24.5 million a year.

Measuring retention and persistence toward a degree is a particular challenge in Utah. The average Utah student attends 1.8 colleges before receiving an associate's

degree. At some campuses, nearly 20% of the students leave after one year to fulfill a church mission. How many of them return and what institutions they return to is unclear. Given the general fluidity of student movement, improved tracking of students will be critical in measuring their success rates. Improved means of measuring student success is a high priority.

Improving retention has been a major issue for the Regents and for each campus over the past decade, with many notable accomplishments. However, the following recommendations will improve retention by aligning funding with completion, improving developmental/remedial education, using better measurement and goal setting, and improving the college experience.

A. Support new funding mechanisms that tie institutional funding to educational outcomes.

 **Recommendation 20.** Support a mission-based funding mechanism for USHE institutions that focuses new dollars specifically for measurable products. New accountability measures would connect funding to institutions' missions based on growth in

course and degree completion, as well as research that contributes to the economy, quality and regional economic development activities, and job placement, rather than on third-week census numbers.

- **Recommendation 21.** Create an innovation fund, focusing on collaboration, consisting of state and private money (foundations) to encourage creative ways to retain and complete students. For example, establish a student loan program that incentivizes students to study in a particular discipline that is aligned with a particular workforce need within the state (e.g., STEM degrees). If the student graduates and becomes employed in the designated field, that loan becomes a grant with no obligation to repay.

B. Set statewide completion goals and uniformly measure and report progress and success.

🏡 **Recommendation 22.** Using data from the Utah Data Alliance, USHE should require each institution to report its retention and completion performance and goals to the Regents annually (with particular focus on prioritized degrees aligned with the areas of greatest economic opportunity in Utah). These reports would then be compiled and distributed to the Regents, Governor, and Legislature by the Commissioner's Office.

C. Transform remedial and developmental education by reducing need and focusing efforts and resources.

🏡 **Recommendation 23.** Institutions should support new curriculum and individualized advising, mentoring, and delivery options (including online tools and courses) for developmental and remedial education that builds practical skills. USHE schools should work with high schools, applied technology centers, and applied technology colleges to provide multiple options for students seeking remediation and developmental assistance.

🏡 **Recommendation 24.** Using robust remediation-specific data, the Board of Regents and State Board of Education should establish mutual goals for reducing the number of students requiring remedial education and report progress annually (disaggregated from a system and state level to the institution, district, and school levels). The report will provide policy makers with more specific remedial education data regarding the classification of remedial students (i.e., subject matter, year in college, high school, etc.), cost, and institutional strategies to provide flexible remediation.

Recommendation 25. Institutions should provide annual reports to K-12 schools as to the level of remediation needed by students enrolling in college within the same year they graduate from high school. The annual report should also show measurable outcomes based upon each institution's remediation plan that includes goals and benchmarks for improved student success per institution.

D. Improve retention through on-campus policies and programs for traditional students.

Recommendation 26. Regents should challenge each institution to adopt or enhance policies such as mandatory attendance for freshman-level classes, mid-term grading feedback, and first-year college experience classes, all of which are proven methods of improving traditional college student retention.

3. Expand the ability of colleges and universities to provide quality opportunities for more students.

In order to meet Utah's **big goal** in the next ten years, both the physical and virtual capacity of Utah's higher education system will need to be increased significantly. The exact size of this expansion depends on numerous variables including the percentage of students taking online classes, the rate of students who persist from one year to the next, the flexibility of schools in changing the time of course offerings, and the adoption of innovative delivery systems, all aimed at improving both student learning and completion.

Growing the system of higher education appears at the onset to be a very challenging task. Utah is faced with little or no growth in the state budget. The state has

not funded enrollment growth in many years. Recent enrollments have surged 23% over the past three years. Many schools are near capacity.

Simply put, Utah must facilitate an expansion of its higher education system. Its economy will be increasing the demand for highly trained professionals; if we do not deliver the needed talent-force, Utah will lose out to other states. Thus, the recommendations in this section begin with how to achieve greater efficiencies, but also how to grow the enterprise to meet state needs. The issue of the impact of technology on higher education is discussed in the transformation section.

A. Improve efficiency while maintaining academic quality and operational effectiveness. (See transformation section for technology discussion.)

— **Recommendation 27.** Increase use of mixed delivery courses (internet combined with face-to-face faculty interaction) to make the best use of limited college and university classroom space.

— **Recommendation 28.** Urge USHE institutions to develop new strategies to encourage more efficient time to graduation with the goal of completing a bachelor's degree in 4 years or less by having more evening, weekend, summer, block scheduling, cohort-based programs, and online classes.

- **Recommendation 29.** The state should provide an option whereby prepared students may choose to use the 12th grade as their first year of college through early college programs funded by the state.

B. Expand capacity while maintaining academic quality and operational effectiveness.


Efficiencies alone will not be sufficient to meet the demands for higher education services over the coming decade. Assuming a 20% increase in efficiencies, Utah will still need to provide the infrastructure for an additional 50,000 to 70,000 or more students.

- **Recommendation 30.** The Board of Regents approves a clear statement of the role to be played by each USHE institution in meeting the goal of 66%. A concise statement of how each USHE institution will meet the purpose of this recommendation according to its distinctive mission is in the next section of this document.

— **Recommendation 31.** Seek legislative approval of monies for land acquisition and buildings for branch campus development in underserved and high growth parts of the state, per a more detailed state plan approved by the Board of Regents. Land banking should be done in the near future to benefit from present land prices.

C. Expand the community college function throughout Utah.

Utah does not have a state system of community colleges. Presently, we ask Weber State University, Utah Valley University, Dixie State College, and Utah State University to also provide community college services and academic programs. The Georgetown University data suggests that Utah needs to increase the number of citizens possessing an associate's degree or certification in a specific area. Thus, building out a community network covering the state is critical to Utah's future.

 **Recommendation 32.** Expand the number of students accessing community colleges through the creation of community colleges or community college centers (branches) within regional state universities in order to ensure state-wide coverage and public awareness of community college services including:

- Open access
- Enhanced advising and student support services
- More flexible scheduling
- Managed choice scheduling
- CTE and workforce training certificates and associate's degree offerings
- Developmental, adult, and continuing education programs
- Clear articulation of 2 + 2 seamless degree pathways
- Articulation support with applied technology colleges.

D. Fund Enrollment Growth.

Utah has not been able to fund recent increases in enrollment in higher education. Enrollment has grown by 23% over the past three years while funds have been reduced by 12%. USHE institutions need to see an increase in per-student funding in order to meet future needs.


- **Recommendation 33.** Seek legislative funding of enrollment growth. Funding should be based on completion of courses rather than third week enrollment numbers. Funding should also be directly tied to the mission of the institution (see Recommendation 20). Funding could be used to incentivize enrollments in degree programs (funding degrees rather than courses) of high workforce need within the state (e.g., STEM degrees) by double counting or double funding per student in such programs.
- **Recommendation 34.** Increase funding for more faculty positions and faculty salaries in order to retain key faculty and expand the number of sections and students served. This will prevent soft or hard enrollment caps and course bottle necks, and will help open admissions to programs that supply Utah workforce needs.

E. Clarify the Utah College of Applied Technology interaction with Utah System of Higher Education and non-credit to credit courses within and among USHE institutions.

The effort required to meet Utah's **big goal** presents an opportunity for USHE and UCAT institutions to strengthen and clarify their working relationships. The legislative action that established UCAT clearly defined the difference between and roles of credit-granting (USHE) and non-credit (UCAT), certificate-awarding institutions. Both USHE and UCAT institutions will play a significant role in equipping Utah's workforce with the technical training and skills requisite for success in the new economy.

In order to meet the goal of 66%, both Career and Technology Education (CTE) in the schools and Applied Technology Education (ATE) programs in the USHE and UCAT institutions will need to grow significantly. Thus, the Regents support UCAT's current role and encourage

increased collaboration between USHE and UCAT institutions. The collaboration will need to include high schools, the Governor's Office of Economic Development (GOED), and the Department of Workforce Services (DWS) as the state identifies the unmet need for and definition of certificates for purposes of federal and state reporting.

 **Recommendation 35.** A state-level system of translating competencies into college credit should be created to enhance articulation efforts between UCAT campuses and USHE institutions, as well as within and among USHE institutions.


- **Recommendation 36.** In the future, an application process should be developed that enables UCAT campuses, at their option, to petition the Board of Regents to affiliate more closely or even join the system to provide for-credit programs and associate's degrees.

4. Transform the way higher education meets the needs of the 21st Century student through effective and efficient use of technology, while sustaining academic quality.

Information technology is radically changing students' learning styles, as well as institutions' ability to deliver education differently, while sustaining academic quality and potentially reducing costs. It is also clear that technology does not replace the essential skills that business is looking for in their future employees.

Policy leaders throughout the country foresee that higher education will be dramatically changed by technology. For example, the role of teacher is shifting from a provider of information to a facilitator of connected learning. Additionally, technology may be the means of reducing the cost of education by using open source instructional materials or reducing demand for more buildings through leveraging its capabilities. We are in the midst of a major information technology revolution. Whether this technology is largely disruptive, as some believe it may be, or advantageous depends to great measure on our foresight, planning, and choices.

To explore various technology options, the Regents have asked a group of instructional information technology experts from the campuses to share their thoughts and to provide recommendations. Their deliberations are included in the following recommendations.

 **Recommendation 37.** USHE institutions, with state funding, should collaborate to expand online course and degree offerings that could be made available from a host institution at a low cost to the students. Partnering with other low-cost providers throughout the state should be considered with the goal of reducing the cost of a college degree. Emphasis should be placed on General Education and STEM-related courses and on employing Essential Learning Outcomes. Emphasis could also be placed on career and technical education pathway courses needed to train students to fill jobs needed in key areas of the economy. Institutions should continue to encourage the use of open courseware assets and eBooks in these classes, as appropriate to the curriculum at the determination of faculty.

- **Recommendation 38.** Utah should explore the possibility of collaborating with private, nonprofit, and for-profit institutions in order to address the needs of the adult population returning for further education.
- **Recommendation 39.** Working with chief academic officers and faculty leaders, in consultation with the faculty, the Board of Regents should develop

new faculty workload and RPT (review, promotion, and tenure) policies that reward the development of quality courses that combine the use of teaching assistants (in research universities), technology, and online offerings.

🏡 **Recommendation 40.** The Utah Education Network (UEN) should provide a portal so students and faculty can easily access quality online courses at little or no cost for the course content. We should strive to have all concurrent enrollment classes offered with open access material when learning outcomes can be achieved using those materials. Additionally, we should negotiate state contracts for electronic text books to reduce cost for students.

🏡 **Recommendation 41.** Institutions should achieve better classroom utilization by developing mixed-delivery courses where students come to class fewer times each week.

- **Recommendation 42.** Institutions should build on the course management experiences of other campuses that have been successful in reducing failure rates, particularly in gateway courses. These efforts should be based on data derived from student success or failure rates in achieving learning outcomes.

- **Recommendation 43.** Institutions should expand online student services to help students monitor and plan for degree completion. Use online courses to address bottleneck courses, particularly where classroom availability is an issue.


🏡 **Recommendation 44.** Strategic plans should address how colleges and universities are using technology to improve student outcomes, decrease the cost of instruction, increase the efficiency of campus services and facilitate research and communication. Most administrative and student processes, operations, and services should be moved online with the help of increased technology investment through the Higher Education Technology Initiative.


🏡 **Recommendation 45.** In addition to typical course and grade information, transcripts should include work place certifications and links to portfolios of a student's work, based on demonstrations of mastery of skills. These records would be transportable with students and provide a more complete representation of student accomplishments and achievements in workplace skills and technologies.

5. Better leverage higher education in growing Utah's economy as a way to extend prosperity and grow the tax base of the state.

Personal income, educational attainment, and economic development are highly correlated in attracting and creating high-paying jobs that require higher education degrees and skills. Further, higher education attainment reduces the need for social services, as graduates are much more likely to be self-sustaining adults. These facts should be recognized by fostering even closer ties between Utah's economic growth and its higher education system.

- **Recommendation 46.** The state should create and market the Mountain Research Corridor partnership among U of U, USU, and BYU (where appropriate) to leverage the research done at the Utah's research institutions to promote economic growth in Utah.
- **Recommendation 47.** The state should dramatically increase the funding for the successful USTAR program to facilitate research and entrepreneurship on college campuses. Part of the funds would go to expand USTAR throughout the state and to expand entrepreneurial education programs at USHE institutions.

 **Recommendation 48.** The state should expand and replicate the Utah Cluster Acceleration Partnership (UCAP) initiative among all USHE institutions—especially the regional (WSU, UVU, SUU, and DSC) and community college (SLCC and Snow) institutions—and to all major economic clusters as well as those with a significant regional economic impact. Talent clusters should also be created among education institutions (i.e. digital media production, performing arts, medical technology, etc.).


 **Recommendation 49.** The state should provide tuition assistance (via block grants) for students enrolled in critical degree/career pathways for the state's economic growth as identified by DWS and GOED. This action would clarify degrees of most importance and align degree production goals with areas of greatest economic opportunity.

Funding Issues


We have not attempted to put a price tag on the various recommendations being made at the present time. The price clearly varies depending on which recommendations are adopted and which recommendations, if adopted, would be phased in over time.

To meet the **big goal** of 66% by 2020, Utah will need to invest in its human capital. If not, Utah will not attain the quality of life most people desire for themselves and their families. USHE institutions estimate that if the coming decade is similar to the previous decade, they will be able to sustain growth of somewhere between 33% and 49% of the total needed.

Additional funds will be needed to cover the gap. However, we know that we can pick up some of the difference by greater efficiencies, greater use of online education, and asking the private colleges to partner with us. In the long run, these additional costs will be paid for by economic growth. However, over the next decade, the state will need to find additional revenue. The following recommendations highlight three approaches to securing additional revenue.

 **Recommendation 50.** Begin the discussion with legislators toward eventually seeking legislative approval for a local voter-approved tax to provide tuition credit for students within a county (or taxing district) to underwrite and dramatically lower the price of their tuition for the first two years of college.

- **Recommendation 51.** Seek funding in support of targeted strategies at an institutional and statewide level from foundations and corporations and from state and federal grants.

 **Recommendation 52.** Through the Friends of Utah Higher Education Coalition and partners in the business community and elsewhere, collaboratively advocate for and work with the Governor and legislature to increase funding for higher education initiatives over time as state revenues increase.

USHE INSTITUTIONAL FIT INTO THE 2020 PLAN



UTAH SYSTEM OF
HIGHER EDUCATION

*Building a Stronger State of Minds*SM

USHE Institutional Fit Into the 2020 Plan

If Utah is to meet the economic need for more highly educated individuals by the year 2020, higher education will need to significantly increase the number of graduates with degrees and certificates that align with workforce demands and opportunities. In addition, the state will need to adequately support a robust research and technology transfer system at its research institutions to continue to create high-paying jobs. These

goals can only be accomplished by maintaining quality. The Utah System of Higher Education and each higher education institution in Utah will play a major role in attaining this positive future. The following is a brief summary highlighting institutional roles in meeting the goal established by the State Board of Regents during the coming decade.



Fall 2010 Headcount Enrollment: 173,016

Fall 2010 FTE Enrollment: 118,338

Utah System of Higher Education

Established 1969

The Utah System of Higher Education (USHE) provides the state with oversight of its public institutions, student loan program, and college savings plan as well as administering a limited set of programs and initiatives. Development and implementation of a living Master Plan and a coherent set of state policies to achieve the goal of a better-educated population will be one of USHE's most important tasks over the coming years.



Utah is fortunate to have eight quality higher education institutions. USHE values the diverse options and opportunities to be found in its institutions. Students may choose where they wish to study, from research and regional universities to comprehensive community colleges, based on their individual learning styles, needs, expectations, and circumstances.

Together, Utah Higher Education Assistance Authority (UHEAA) and Utah Educational Savings Plan (UESP), both with top national rankings, provide the opportunity for all Utahns to save, plan, and pay for college. We expect UHEAA to be a major servicer of student loans for the federal government and to explore loan and other

financial aid options for part-time students. We expect UESP to continue to reach out to families and employers to save for college.

In support of the Regents' master-planning role, and to facilitate enrollment growth and statewide access, USHE will move to meet its goals of increasing participation (access), completion (retention), and economic development. Additionally, the Regents look to expand economic development initiatives such as Utah Science Technology and Research (USTAR) and Utah Cluster Acceleration Partnership (UCAP).

The Commissioner's office will need to be given the necessary tools to provide a coordinated approach to meeting the state's plan for a more highly educated citizenry. These tools include funding for innovation grants, increasing online educational opportunities, formula funding changes, resources to incentivize and hold institutions accountable, and money to fund enrollment and research changes.

University of Utah

Established 1850

The University of Utah is the state's flagship university serving as a premier research institution enhancing the state's reputation for quality in higher education instruction, research, and innovation; especially at the graduate level. The focus of the institution is to enhance its distinctive mission based funding that enhances its ability to produce quality instruction and research. Enrollment growth at the university will be modest and primarily in its graduate programs.

The Regents look to the University of Utah to be a major research institution that contributes to the economic base of Utah through innovation, technology transfer and commercialization. It is expected to be a leader in the success and expansion of the USTAR initiative. State needs will drive the limited number of targeted academic areas that contribute to the research, innovation and commercialization goals. As a research university the University of Utah not only teaches knowledge, creates new knowledge, but also nurtures those who will be the creators of new knowledge and companies.



The University of Utah will also be the primary deliverer of trained professionals in medicine, pharmacy, law, and engineering. The medical school, hospital and clinics will provide leadership in promoting the health of Utah citizens.

University of Utah Mission Statement

The mission of the University of Utah is to serve the people of Utah and the world through the discovery, creation and application of knowledge; through the dissemination of knowledge by teaching, publication, artistic presentation and technology transfer; and through community engagement. As a preeminent research and teaching university with national and global reach, the University cultivates an academic environment in which the highest standards of intellectual integrity and scholarship are practiced. Students at the University learn from and collaborate with faculty who are at the forefront of their disciplines. The University faculty and staff are committed to helping students excel. We zealously preserve academic freedom, promote diversity and equal opportunity, and respect individual beliefs. We advance rigorous interdisciplinary inquiry, international involvement, and social responsibility. (Approved 2006)

Fall 2010 Headcount Enrollment: 28,401
Fall 2010 FTE Enrollment: 20,461

Utah State University

Established 1888

As the state's land grant university, Utah State University is a leader in providing research, public service and education to meet needs in all corners of Utah. In addition to its extension services, the University also plays a vital role in providing access to higher education opportunities through its community college role at its regional campuses and in areas of the state without easy access to higher education. The public service mission is exemplified by the University's land grant history and cooperative extension services which provide the latest practical research results to every county of the state and adapt to serve urban as well as rural communities.

Enrollments are expected to increase at a moderate rate at USU overall but at a higher rate in currently underserved regions of the state. Regents support an aggressive growth strategy at regional campuses of USU—Brigham City, College of Eastern Utah, Tooele and the Uintah basin. The growth in regional service is likely to be augmented by expanded distance education capability.



USU is expected to build upon its research capability with an emphasis on aerospace, agriculture, life sciences, energy and engineering. Partnering with the University of Utah, USU should continue to be a major player in the USTAR initiative and technology transfer endeavors.

Utah State University Mission Statement

The mission of Utah State University is to be one of the nation's premier student-centered land grant and space grant universities by fostering the principle that academics come first; by cultivating diversity of thought and culture; and by serving the public through learning, discovery, and engagement.
(Approved 2003)

Snow College

Established 1888

Snow College is the state's premier rural, residential two-year college. It provides traditional college-age students with the opportunity for a higher education experience in a small and personalized residential campus setting. In addition to providing general education courses, the college provides career and technical education, primarily at its Richfield campus.



Snow is expected to grow at a moderate rate over the coming decade. Because of its setting in a more economically challenged, rural location, tuition and residential housing costs should remain low. Student opportunities at the college will be limited by academic degree options. The Regents may consider expanding the number and type of degrees to be offered where the expansion promotes academic quality at the College, serves needs in the College's primary service region, or helps accommodate increased demand throughout the state for access to higher education.

Snow College Mission Statement

The mission of Snow College is to educate students, inspire them to love learning, and lead them to serve others. Snow College achieves this mission through a constant pursuit of excellence in teaching; through a nurturing, positive learning environment; and through people who demonstrate a love for learning and service to humanity. (Approved 2004)

Weber State University

Established 1889

As the state's first comprehensive regional state university that also retains a community college mission, Weber State is a state leader in serving as an educational, cultural and economic center for its region.



**WEBER STATE
UNIVERSITY**

Weber State is expected to see significant increased demand for educational offerings over the coming decade. To facilitate the growth, expansion of the Davis Campus, greater use of online education, and funding will be required. Additional master's level degrees will be needed to meet a growing population and economic base.

Weber will continue to lead the way in embedding associate degree programs within a regional university. In this role, Regents look to Weber State to provide leadership in defining the model of hosting a community college within a regional state university.

Regents also look to Weber to provide service programs and leadership in assisting regional economic development, particularly as it relates to talent development. Community engagement is viewed as a key element in the future development of WSU.

Weber State University Mission Statement

Weber State University offers associate's, baccalaureate, and master's degree programs in a broad variety of liberal arts, sciences, technical and professional fields. The university provides excellent educational experiences for its students through extensive personal contact among faculty, staff and students in and out of the classroom. To accomplish its mission, the university, in partnership with the broader community, engages in research, artistic expression, public service, economic development, and community based learning experiences in an environment that encourages freedom of expression while valuing diversity. (Approved 2007)

Southern Utah University Established 1897

As the state's designated liberal arts and sciences university, Southern Utah University (SUU) provides a broad-based, engaged college experience for students of high academic achievement, stressing experiential, integrative and personalized learning in a residential setting. The University serves the entire state while maintaining varied programs to meet unique regional needs and concerns.



Regents will continue to value quality education at SUU within its distinctive mission over dramatic enrollment growth; thus funding for SUU should be mission focused in assuring high quality graduates and engaged citizens. A moderate growth rate is expected to be based on SUU maintaining its present share of the Utah population.

As a quality liberal arts and sciences university, SUU will continue to be a prime destination for students interested in educational experiences typical of a private university with the affordability of a public higher educational institution with a particular focus on high quality programs in the arts, sciences, pre-professional, professional and graduate fields.

Southern Utah University Mission Statement

Southern Utah University is a comprehensive regional institution offering graduate, baccalaureate, associate's, and technical programs. SUU is committed to providing an excellent education through a diverse, dynamic and personalized learning environment. The university educates students to be critical thinkers, effective communicators, lifelong learners and individuals who demonstrate integrity and empathy as they pursue their lives' ambitions. (Approved 2005)

Dixie State College of Utah Established 1911

Dixie State College of Utah (DSC) has grown dramatically in the past few years, particularly since adding a number of new baccalaureate degrees and with demographic changes in southwestern Utah and bordering states. It is rapidly changing its mission from a state college with a limited set of baccalaureate degrees to a more comprehensive institution. Regents support this transition from a state college to a comprehensive regional state university over a period of time, based on regional demand, academic readiness, and state funding. To achieve this goal, Dixie will need significant financial support to add the faculty and academic infrastructure necessary to have the quality consistent with other regional state universities.

Dixie is expected to remain the regional community college as it adds baccalaureate degrees to its portfolio. As a regional institution, Dixie is also expected to place a premium on workforce development, allied health professions, and economic partnerships. As Dixie's mission expands, the campus will provide students with a more comprehensive set of college experiences.



Dixie State College of Utah Mission Statement

Dixie State College of Utah strives to help students to define, shape and achieve educational and life goals. It is dedicated to providing personalized and excellent teaching in a learning environment where all students can become passionate about their individual educational endeavors. DSC is a publicly supported institution—authorized by the Utah State Board of Regents—with two independent tiers. DSC offers associate's degrees and certificate programs that meet the needs of students, the community and the state. The College also offers baccalaureate programs in high demand areas and in core or foundational areas consistent with comprehensive four-year colleges. Dixie State College enhances its campus climate by promoting cultural and demographic diversity, and by inviting students to participate in its open-door, post-secondary educational programs. (Approved 2005)

Utah Valley University

Established 1941

As Utah's newest comprehensive regional university, Utah Valley University will offer a wide array of baccalaureate degrees, a targeted number of master's degrees, and a broad set of associate's degrees and certificates for a rapidly increasing number of students with diverse interests and needs. Regents expect UVU to be a leader in providing engaged learning opportunities and innovations in preserving a community college function and profile within a quality state university.

Recognizing the current and projected growth of Utah Valley, the Regents expect and support UVU's move to meet regional educational demands. Along with Salt Lake Community College, Weber State University, and Dixie State College, UVU will be asked to pick up the bulk of state enrollment increases in the years ahead. To accommodate this growth, while still providing university quality programming, UVU will need to continue to adopt efficiencies through more distance education (with a special focus on hybrid—part online, part in class—courses) and year-round, off-peak hour scheduling. It will also need additional facilities for



its Orem campus, several satellite locations, improved tax fund support for existing students, and growth funding for new students.

In its role as a *community engaged* university it will develop and maintain productive partnerships with government, civic associations and private industry. The institution will continue to expand this commitment, as well as provide leadership for regional economic development, supplying, among other things, a well-trained workforce.

Utah Valley University Mission Statement

Utah Valley University is a teaching institution which provides opportunity, promotes student success, and meets regional educational needs. UVU builds on a foundation of substantive scholarly and creative work to foster engaged learning. The university prepares professionally competent people of integrity who, as life-long learners and leaders, serve as stewards of a globally interdependent community. (Approved 2007)

Fall 2010 Headcount Enrollment: 33,983

Fall 2010 FTE Enrollment: 18,326

Salt Lake Community College

Established 1948

As Utah's largest institution of higher education and its only two-year comprehensive community college that offers a full range of academic programs and economic development opportunities for the Salt Lake Valley, Salt Lake Community College (SLCC) must play an increasingly important role in Utah. The institution will need to continue to provide open-access admissions, a comprehensive set of academic programs (associate degrees, certificates, career and technical education, transfer education and workforce development), community-based education programming, and student support services.

SLCC is expected to grow dramatically over the coming years. Growth will take place through increased partnerships with other USHE institutions, with industry and community, and within the college's School of Applied Technology to achieve goals of increased college completion in skill-based education. To facilitate this growth, SLCC will need additional sites for delivering education, expanded use of internet-delivered



instruction, and funding per student.

Educational programming will also increase due to student and industry demand.

Regents expect SLCC to be a leader in the translation of occupational competencies into college credit. The Regents also expect

SLCC to continue to lead efforts in small business innovation, growth, and sustainability through training and access to a business development infrastructure. This leadership will help support and complement technology commercialization efforts throughout Utah.

Key to Salt Lake Community College's success will be adequate state funding to maintain the open access mission of the institution.

Salt Lake Community College Mission Statement

Salt Lake Community College is a public, open-access, comprehensive community college committed to serving the broader community. Its mission is to provide quality higher education and lifelong learning to people of diverse cultures, abilities, and ages, and to serve the needs of community and government agencies, business, industry and other employers. (Approved 2006)

CONCLUSION

To reach this goal in the next ten years,
agressive action must be taken.



Case Statement

- According to Lumina Foundation researchers, “The United States has long been the world’s most prosperous and successful nation, in part because our people have typically been the world’s best educated.” The same can be said historically for the state of Utah. However, in the last two decades Utah and the nation have lost their advantage.
- According to the Georgetown University Center on Education and the Workforce, 66% of all jobs in Utah by 2018 will require postsecondary education. No longer can a person expect to enter into or remain a part of the middle class with only a high school diploma or less.
- Currently, only 39% of Utahns hold an associate’s degree or higher. This will not be sufficient for Utah to develop a robust economy in a global marketplace, nor for Utah’s citizens to prosper individually or collectively. The long term prosperity of our state and nation are at risk if deliberate actions are not taken.
- To meet Utah’s education and workforce needs, the State Board of Regents and Commissioner of Higher Education have set a **big goal for Utah**: to have 66% of Utahns—men and women age 25 to 64—with a postsecondary degree or certificate by the year 2020; specifically, to have 55% of Utah’s workforce with an associate’s degree or higher and 11% with a postsecondary certificate that leads to a livable wage.
- To reach this goal within the next ten years, aggressive action must be taken. The State Board of Regents calls upon all institutions of higher education, public and private, profit and not-for-profit to play a significant role, with the USHE institutions taking the lead. USHE institutions will have to enroll up to 109,000 more students over the next decade.
- The State Board of Regents has identified the following three strategic priorities: to increase the rate of student participation, to increase the rate of student completion, and to increase the level of economic innovation. To this end, they have set forth an action plan as a focus for public dialog among the many stakeholders in Utah’s higher education.
- The attainment of Utah’s **big goal** will require significant investment of effort, collaboration,

and financial resources by the Utah Legislature, the business community, the general public, the Utah System of Higher Education, and all other stakeholders in the state of Utah.

- Investment in education is an asset synonymous with economic development.

Action Plan

- Education in Utah needs to shift to an integrated model where educational entities are connected vertically (from pre-school to lifelong learning) and horizontally (across institutions, job providers and support organizations).
- The pipeline leading from K-12 into higher education institutions needs to be expanded in the number and percentage of students prepared to succeed and to persist in attaining their degrees. Further, institutions need to do a better job in helping students complete their education.
- The Action Plan presents recommendations in five areas that should be considered as proposed strategies to help Utah reach its **big goal**:
 - Expand the pipeline of college / career-ready and college-inclined high school graduates.
 - Stop leakages in the higher education pipeline by increasing the number who persist and complete their education once they enter college.
 - Expand the ability of colleges and universities to provide quality opportunities for more students.
 - Transform the way higher education meets the needs of the 21st-century student through effective and efficient use of technology, while sustaining academic quality.
 - Better leverage higher education in growing Utah's economy as a way to extend prosperity and grow the tax base of the state.
- Each institution within the Utah System of Higher Education will play a major role in carrying out this plan and helping Utah attain a positive future.
- To meet the **big goal** of 66% by 2020, Utah will need to invest in its human capital. If not, Utah will not attain the quality of life most people desire for themselves and their families. Investment in education is an asset synonymous with economic development.

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Appendix A

Georgetown University Center Report, Utah Pages

The Georgetown University Center on Education and the Workforce, *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, June 2010, by Anthony P. Carnevale, Nicole Smith, Jeff Strohl; Utah pages

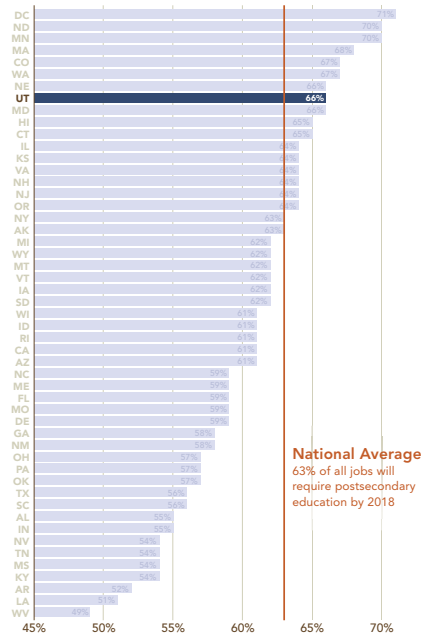


Utah

- Between 2008 and 2018, new jobs in Utah requiring postsecondary education and training will grow by 202,000 while jobs for high school graduates and dropouts will grow by 97,000.
- Between 2008 and 2018, Utah will create 477,000 job vacancies both from new jobs and from job openings due to retirement.
- 308,000 of these job vacancies will be for those with postsecondary credentials, 126,000 for high school graduates and 43,000 for high school dropouts.
- Utah ranks 24th in terms of the proportion of its 2018 jobs that will require a Bachelor's degree, and is 31st in jobs for high school dropouts.
- 66% of all jobs in Utah (1 million jobs) will require some postsecondary training beyond high school in 2018.

Job vacancies arise from two sources: There are brand new positions created as an occupation grows, and there are pre-existing jobs that people leave behind when they retire, or move into other occupations.

Percentage of jobs in 2018 that will require a postsecondary education, by state.



UTAH'S RANK IN JOBS FORECASTED FOR 2018, BY EDUCATION LEVEL.		
Education level	2018 Jobs	Rank
High school dropouts	148,000	31
High school graduates	436,000	44
Some college, no degree	173,000	2
Associate's degree	440,000	14
Bachelor's degree	319,000	24
Graduate degree	131,000	32

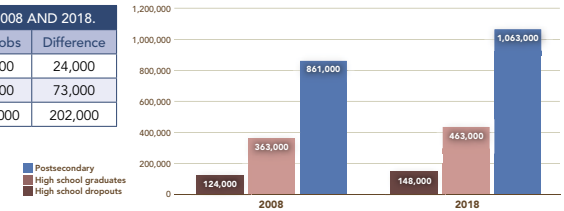
By 2018, **66%** of jobs in Utah will require postsecondary education.

This is **3** percentage points above the national average of **63%**.

Utah ranks **8th** in postsecondary education intensity for 2018.

UTAH

CHANGE IN JOBS BY EDUCATION LEVEL: 2008 AND 2018.			
Education level	2008 Jobs	2018 Jobs	Difference
High school dropouts	124,000	148,000	24,000
High school graduates	363,000	436,000	73,000
Postsecondary	861,000	1,063,000	202,000



WHERE THE JOBS WILL BE IN 2018, BY OCCUPATION AND EDUCATION LEVEL (in thousands of jobs)*								
OCCUPATIONS		High school dropouts	High school graduates	Some college	Associate's degree	Bachelor's degree	Graduate degree	Total
Managerial and Professional Office	Management	3	13	8	23	24	12	84
	Business operations specialty	1	7	5	9	13	5	39
	Financial specialists	0	4	5	7	15	7	39
	Legal	0	1	0	2	1	5	10
STEM	Computer and mathematical science	1	4	5	12	21	6	49
	Architects and technicians	0	0	1	2	2	1	7
	Engineers and technicians	0	2	2	4	11	6	25
	Life and physical scientists	0	1	1	2	6	4	14
	Social scientists	-	-	0	1	2	3	6
Community Services and Arts	Community and social services	0	3	2	5	10	9	28
	Arts, design, entertainment, sports, and media	0	3	3	8	13	3	30
Education	Education	1	7	7	14	43	28	99
	Healthcare practitioners	0	3	19	8	21	20	72
Healthcare	Healthcare support	2	11	7	14	5	1	40
	Food preparation and serving	25	41	6	29	9	2	113
Food and Personal Services	Building and grounds cleaning and maintenance	16	21	4	12	4	1	58
	Personal care	2	12	4	12	6	1	37
	Protective services	1	6	4	10	5	1	27
Sales and Office Support	Sales	13	57	20	60	40	8	198
	Office and administrative support	11	82	36	110	42	5	288
Blue Collar	Farming, fishing and forestry	1	1	0	1	0	0	4
	Construction and extraction	25	42	7	25	4	1	104
	Installation, maintenance, and equipment repair	7	25	10	20	4	0	66
	Production	20	48	7	27	7	1	110
	Transportation and material moving	18	42	7	25	7	1	100
TOTAL**		148	436	173	440	319	131	1,647

*Zero does not necessarily mean no jobs. Since jobs are rounded to the nearest thousand, zero means less than 500 jobs.

**Total jobs are a snapshot of the economy that shows where jobs are located by education type. They differ from job vacancies because total jobs are filled by people currently working in these positions who may not be leaving in the short-term to create a job opening.

Appendix B

Governor's Education Excellence Commission Action Plan Executive Summary

Utah has deliberately succeeded in developing an economic environment that fosters the kind of high-quality, high-paying jobs that require postsecondary training. The best research available suggests that 66% of jobs in Utah will require a postsecondary degree or certificate within the next decade, which ranks Utah 8th in the nation in this category. The test now is whether or not Utahns collectively have the will and ambition to increase education attainment levels sufficiently to take advantage of future employment opportunities. To reach 66% by 2020, Utah must act differently, boldly, and decisively to make strategic investments and incorporate proven strategies to maximize access to, participation in, and completion of postsecondary education.

The Governor's Commission for Education Excellence developed the 2020 Vision to align the work of public and higher education with economic development needs in Utah in order to achieve greater economic prosperity, improved social and cultural vitality, and a higher quality of life for all Utahns. The Action Plan

identifies five imperatives that have surfaced from the dedicated work of the Commission and from the input and recommendations of lawmakers, scholars, business and community organizations, associations, and citizens. The imperatives and accompanying strategies delineated in the Action Plan represent a deliberate and long-term commitment to focusing attention and deploying resources in the most vital areas in a way that promises the greatest returns on investment. Below is a summary of the imperatives and the steps upon which the Committee recommends action during the upcoming legislative session. For more information, including a complete copy of the Action Plan, please visit www.HigherEdUtah2020.org.

Vision Statement: By 2020 and thereafter, at least 66% of Utahns ages 20 to 64 will have a postsecondary degree or certificate, ensuring a well-educated citizenry and workforce that qualitatively and quantitatively meet the needs of Utah employers, which will lead to greater economic prosperity and a better quality of life for all Utahns.

1. **Bolster Early Childhood Education:** Research confirms that students who fail to achieve grade-level literacy and numeracy in the earliest years of school are likely to fall further behind in later years unless intervention is amplified. Augmenting early childhood education that prepares students for college- and career-ready instruction in the upper grades is the single best strategic investment the State can make.
2. **Improve Instructional Quality and Curricular Alignments:** Utah's perpetually expanding student population will be a resource pool that propels Utah's economy if Utah can infuse greater academic rigor and help all students become college- and career-ready. Utah must attract and retain the best educators and counselors, implement the K-12 Common Core, utilize technology for instruction and assessment to drive student achievement, and coordinate public and higher education instruction.
3. **Strengthen Postsecondary Education:** To reach 66% by 2020, Utah colleges and universities must increase retention and attract more adult learners. State schools can increase quality while making higher education more accessible through pursuing greater efficiencies, extending more need-based and scholarship funding, developing mission based funding and accountability, and utilizing technology.
4. **Align Educational Attainment and Vocational Training with Economic Development:** Utah's education system can better align itself with economic development by enhancing and utilizing career pathways, making retraining for adults more efficient, coordinating internal standards and curricular alignments, syncing coursework with key economic clusters, encouraging more STEM-related study, and pursuing greater partnerships with business and industry.
5. **Utilize Technology to Effectively and Efficiently Accomplish Strategic Imperatives:** To fully tap into its potential, Utah must constantly research and aggressively invest in technology and training to help educators rethink instruction, assessment, learning environments, and traditional roles. Technologies such as database development and management, computer based skill development and remediation tools, and computer-based formative assessment are already being pursued in Utah.

Steps to pursue in 2011 based upon cost effectiveness and value that do not impact current per-pupil funding, which the Commission recognizes as the first and highest priority in education.

1. Restore Optional Extended-Day Kindergarten.
2. Support the State Board's plan to augment instruction and assessment, including reinstating Utah's K-3 Literacy Program and/or other result oriented literacy programs, to boost literacy and numeracy and achieve proficiency for at least 90% of students in 3rd grade reading and 6th grade math.
3. Begin the implementation of Common Core Standards and promote quality instruction on the Common Core through increased professional development and training.
4. Expand computer-adaptive, formative assessments based on the Common Core and implement college- and career- ready assessments such as the ACT cadre of tests.
5. Finalize and implement a mission-based funding system for all Utah institutions of higher education.
6. The State Board of Education, the State Board of Regents, the Utah College of Applied Technology Board of Trustees, the Department of Workforce Services, and the Governor's Office of Economic Development will produce a plan to improve internal alignments with the Common Core, student career pathways, and general education requirements and extend alignments to Utah's Economic Clusters and workforce needs, particularly in Science, Technology, Engineering, and Mathematics, and report the plan to the Governor and the Legislature.
7. The State Board of Education, the State Board of Regents, the Utah College of Applied Technology Board of Trustees, the Department of Workforce Services, and the Governor's Office of Economic Development will produce a plan to build upon and expand private industry/public education partnerships such as Utah Cluster Acceleration Program, and report the plan to the Governor and the Legislature.
8. The State Board of Education and Board of Regents will develop a plan to build an online system that will provide high school students the opportunity to complete college general education courses built on Common Core Standards.

Appendix C

Letter of Support

November 22, 2010

Dear Reader:

The Utah Department of Workforce Services (DWS) strongly supports both the conclusions and action plan delineated in the 2010 Report of the Higher Ed Utah 2020 plan as prepared by the Utah System of Higher Education (USHE).

As an ongoing partner in the state's efforts to develop the workforce of tomorrow, the Higher Ed Utah 2020 plan addresses existing workforce needs through educational delivery enhancements which align seamlessly with our department's demand driven and employer approach to workforce development. DWS has confidence in the research and analysis used to draw the current and projected picture of Utah's educational attainment levels and workforce demands.



We look forward to participating in collaborative efforts with USHE in meeting the goal of increasing the number of Utah citizens holding post-secondary education credentials in order to match the needs of Utah employers and the economic environment of 2020. We believe that this innovative plan will not only enhance the knowledge, skills, and abilities of the state's workforce, but will also ensure the future prosperity of Utah's growing economy.

Sincerely,

A handwritten signature in black ink that reads "Kristen Cox".

Kristen Cox
Executive Director



For questions or comments about this document, contact the Planning Department for the Utah System of Higher Education at 801-321-7115 or at HigherEdUtah2020.org