Utah FOUNDATION Research Report

Report Number 716, October 2013

INSPIRATIONS AND ASPIRATIONS

A SURVEY OF 2013 UTAH HIGH SCHOOL GRADUATES

HIGHLIGHTS

- Of over 500 Utah high school graduates surveyed in 2013, more female (82%) and non-White (80%) respondents expressed that they would be going on to college or job training the following autumn than male (55%) and White (69%) graduates. The difference is driven by missionary/service plans.
- Respondents indicated that more of their counselors (71%) and teachers (70%) believe that the respondents should go to college than do their mothers (60%) and fathers (54%).
- A majority of graduates believe they will earn a bachelor's degree (53%) and over a third believe they will earn advanced degrees (38%). Approximately 84% of respondents indicated that most or all of their friends are planning to pursue college or job training after graduation.
- Over 95% of respondents indicated that they are pursing college or job training because they need it for their careers, to learn new skills that they need for their jobs, and to learn about subjects that are interesting and challenging.
- When they think about their future, 43% of graduates definitely know what kind of career or job they want; 45% maybe know.
- The survey results indicate that family income and race were related to the most significant response differences, with gender and ethnicity somewhat less so. Mothers' educational attainment levels seem to have a greater effect on responder differences than fathers' educational attainment.

Educational attainment has been on the rise for more than 50 years. More people are graduating from high school and more people are getting college degrees. Utah has historically enjoyed a higher degree of educational attainment than the rest of the nation, but the U.S. is gaining ground. That said, the main purpose is of this research report is not to compare Utah with the rest of the country. This report will primarily focus on what Utah must do to raise the number of post-secondary degrees or certificates among Utah's workforce to 66% by 2020. This was a goal set by the Utah Governor's Education Excellence Commission.[1] Based upon calculations by Utah's business-led Prosperity 2020, the state is currently at 43%, which shows that Utah has a long way to go.[2]

With the assistance of Salt Lake Community College (SLCC), Utah Foundation surveyed high school students graduating in 2013 to determine their post-high school intentions. The survey was designed to query their attitudes, knowledge, and motivation about attending higher education, their influences towards pursuing higher education, and their understanding of financial feasibility.

A vast majority of respondents expect to obtain post-secondary degrees or trade certificates. More non-White graduates and female graduates indicated that they would be in college or job training within six months of completing high school than White graduates and male graduates; this is mainly due to the latter graduates performing church missions and service work. Respondents seem to believe that their own personal motivation is the most important factor in their post-secondary plans. However, there were numerous other important factors like financial aspects of higher education, readiness, and parental encouragement. Interestingly, counselors and teachers seem to play a more important role in lower-income graduates' decisions as well as in the decisions of students whose parents have lower educational attainment.

Respondents strongly indicated that they were pursing education to get a job later, learn new skills that they need for jobs, and learn about subjects that are interesting and challenging. A

majority of graduates indicated that most of their friends were planning to pursue college or job training after graduation. Over half of the graduates themselves expected to receive a bachelor's degree and over one-third expected to go even further into graduate school. However, Utah's greatest percent increase in post-secondary education over the past ten years is from the completion of trade certificates.

There is a continuing trend toward higher education both nationally and in Utah. Women have more education than men; this post-secondary gender gap is smaller in Utah than in the U.S. Utah men are outperforming U.S. men and Utah women are underperforming U.S. women due to a blend of demographic and cultural reasons.

Nearly 90% of graduate are at least somewhat sure about the kind of career they want. When thinking about future plans, the respondents were focused on getting a good education, doing interesting work, having steady work, and having strong family connections.

SURVEY METHODOLOGY

Utah Foundation partnered with Dr. Joseph Diaz, Director of Instutional Research at SLCC to perform the survey. High school graduates from schools across the state participated. In April, 2013, SLCC provided Utah Foundation with institutional review board approval for the high school graduate survey and on June 14, 2013, sent over 15,000 post cards to 2013 Utah graduates. This equates to over one third of Utah's 40,574 high school seniors (in October 2012).[3] The survey targeted graduates from the state's 116 district high schools, 19 charter high schools, 5 district K-12 schools, and 8 charter K-12 schools, as well as private schools and home-schooled graduates.[4] Only 18-year-olds who had completed their high school diplomas in 2013 at the end of their senior year were contacted. The postcards introduced the survey as exploring factors that influence their decision about post-secondary work, training and education, and the postcards invited the graduates' participation in the survey by accessing a link on SLCC's Institutional Research website. The college sent a reminder email to the graduates on June 25 to complete the survey. The survey closed on July 5.

Respondents that took fewer than three minutes to complete the survey were not included in the analysis. Duplicate responses (based upon IP address) were not included. This resulted in 531 responses used for analysis from at least 62 different high schools. Approximately 79% of the students – or 421 of 531 respondents – indicated which school they had most recently attended. The remainder may have either simply not answered or were home-schooled, though no respondents explicitly indicated the latter.

More females took the survey than males, at a rate of about 59% to 41%. Utah Foundation considered weighting the responses to better reflect the population of students in Utah schools, which consists roughly of half girls and half boys.[5] However, since a test of weighting the genders did not produce significant changes in survey results analysis and this report details all statistically significant gender differences, Utah Foundation determined that it would allow the survey to stand without being weighted. For similar reasons, Utah Foundation did not weight the responses for other demographic factors.

Figure 1: Highest Level of Parents' Education

	Mother	Father
Less than high school	8%	8%
High school or GED	15%	16%
Some college	27%	23%
Associate's	17%	8%
Bachelor's	25%	25%
Master's	8%	17%
Doctorate/ MD/ JD	1%	4%

Question: "Please mark the highest level of education earned by your mother/female guardian and father/male guardian."

This report includes details about the differences in key demographic factors only when the differences are more than 95% statistically significant, which measure indicates that the difference is reliable. A matrix of the graduate survey responses by the key demographic factors is detailed in the appendix by both 95% and 99% significances using T-tests and analysis of variance tests.

RESPONDENT DEMOGRAPHICS AND CHARACTERISTICS

Utah Foundation included several questions for the graduates related to graduate demographics and other characteristics. Certain demographics like socioeconomic status, academic attainment of parents, race and ethnicity, and limited English proficiency are important indicators for predicting student outcomes.[6]

A common measure of socioeconomic status is whether a student receives free or reduced-price school lunch. The survey asked respondents to detail whether they had received free or reduced-price school lunch at any time since middle school or junior high. Utah Foundation utilized these responses for the analysis herein. About one-third of survey respondents indicated that they had received free or reduced-price school lunch, which is lower than that rate for the whole state (42%).[7] This report utilizes the phrases "low-income" and "higher-income" to refer to whether or not students responded that they received free or reduced-price school lunch.

As shown in Figure 1, a quarter of all respondents indicated that their parents had bachelor's degrees. About one-sixth of parents only had high school diplomas or their equivalent and less than one tenth had not received their high school diplomas. Higher-income graduates were more likely than low-income graduates to have mothers who had received bachelor's degrees or higher (39% to 20%), as well as fathers who had received bachelor's degrees or higher (56% to 24%).

For analysis in this report Utah Foundation combined all non-White races – even though such groups are disparate among themselves – because the sample sizes of such races were small. About three-quarters of the respondents were White. Approximately 9% were either Hispanic or Latino and 8% were "mixed race."

English language learners are represented in the high school graduate survey as a subset of certain racial and ethnic groups.

Figure 2: Race and Ethnicity of Utah Students and Respondents

	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian or Other Pacific	Mixed Race	White	Other	Preferred Not to Say
Students	1%	2%	1%	16%	2%	2%	77%	n/a	n/a
Survey respondents self-described	<1%	4%	2%	9%	1%	8%	74%	<1%	1%

Question: "How would you describe your race or ethnicity?"
Source: USOE, "Fall School Enrollment by Grade/Gender/Race," Utah Foundation calculations.

Figure 3: Geography of Utah Students and Respondents

	Utah Students	Survey Respondents
Suburb	54%	78%
City	17%	8%
Town	13%	8%
Rural	15%	6%

Source: "Utah Students" percentages from the National Center for Education Statistics and the Utah State Office of Education. Utah Foundation calculations.

Typically, English language learners are immigrants or refugees. Over 25,000 refugees have resettled in Utah, with approximately 11,000 refugees since 2000.[8] The number of non-refugee immigrants is much higher. According to U.S. Census data from 2011, 6% of Utah families do not speak English "very well" at home.[9] While the survey asked no questions specifically about whether graduates were English language learners, it did inquire as to whether they had taken any English as a second language classes. Only 25 graduates, 5% of the sample, indicated that they had. Approximately 44% of these were White, 32% were Hispanic or Latino, 24% were Asian and 4% were Black.

A previous Utah Foundation report of Utah high school seniors showed differences in responses by geography. Such geographic differences were taken into account when analyzing the response from this graduates survey. Of the respondents who detailed which school they had most recently attended 78% were from suburban schools, 8% from city schools, 8% from town schools, and 6% were from rural schools. Figure 3 details these response rates next to Utah's actual geographic makeup. This report utilizes the phrases "metropolitan" and "rural" to generally refer to whether or not students were from suburbs or cities as compared to towns and rural areas.

Since all of the survey respondents were high school graduates, it would be inaccurate to claim that the sample represents all of Utah's 2012-2013 high school seniors since only between 75% and 80% of the state's students graduate each year with their four-year cohort.[10] This fact alone might suggest that the respondents are more ready than the general population in terms of post-secondary readiness. Furthermore, as seen by Figure 4 , the respondents seem to have been high achievers. The survey asked respondents to indicate their grade point average (GPAs). A majority (63%) of the respondents indicated that they had current GPAs of 3.5 or above while very few (2%) were below 2.5.

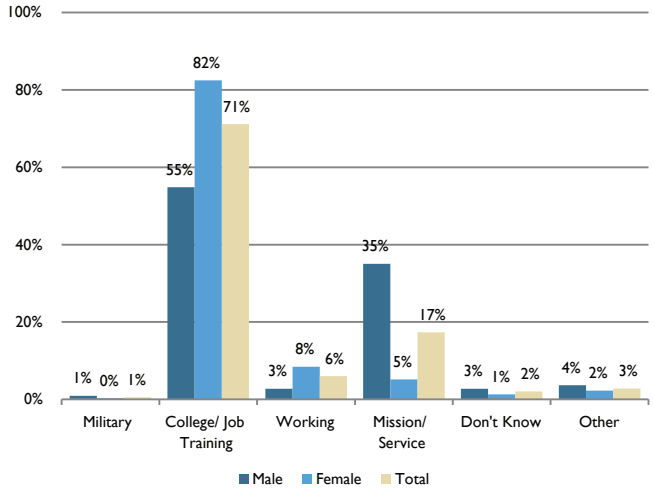
The survey results indicate that family income and race were related to the most significant response differences, with gender and ethnicity somewhat less so. Whether a graduate was from a rural or metropolitan school was not as important. Mothers' educational attainment levels seem to have a greater effect on responder differences than fathers' educational attainment. Self-reported grade point averages were also important in terms of responder differences. Overall, low-income graduates' responses tracked fairly closely with Hispanic/Latino graduates and non-White graduates,

Figure 4: Grade Point Average

	Respondents
<2.5	2%
2.5-2.99	10%
3.0-3.49	21%
3.5-4.0	63%
Don't know	2%

Question: "What is your current GPA?"

Figure 5: Plans Six Months After High School, By Gender



Question: "Where do you see yourself six months after graduating from high school?"

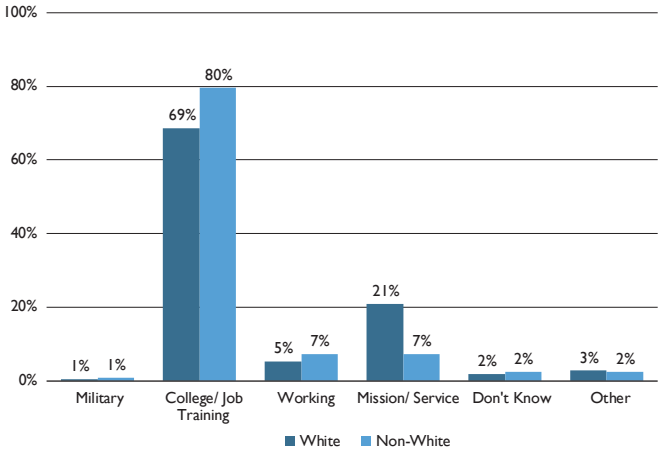
POST-HIGH SCHOOL PLANS

The Utah Foundation survey asked the high school graduates to describe their plans at six months after completing high school. The key differences were between genders, races, and graduates with high and low GPAs. Approximately 71% of respondents indicated that they were planning to go to college or job training, with females outpacing males by 82% to 55%. This large difference is due primarily to the fact that males are more likely than females (35% to 5%) to go on a church mission (likely for the LDS Church) or perform service work (possibly organizations like Americorps) within six months of completing high school.

Interestingly, race also played a factor in responses about post-high school plans. Non-White respondents were more likely than White respondents to indicate they intended to go to college or job training (80% to 69%) while White students were more likely to indicate they were going to go on a church mission or perform service work.

GPA analysis of plans within six months of completing high school proved interesting. The lowest level of job training or college in the four tiers was in the 3 to 3.5 grade point average range, due primarily to the increased level of respondents in that GPA range who indicated

Figure 6: Plans Six Months After High School, By Race



Question: "Where do you see yourself six months after graduating from high school?"

Figure 7: Plans Six Months After High School, by Grade Point Average

	<2.5	2.5 to 3	3 to 3.5	3.5 to 4
In the military	0%	2%	0%	1%
In a job training program or college	73%	71%	58%	75%
Working without pursuing college or job training	18%	4%	12%	5%
On a mission or participating in other service	0%	18%	26%	16%
Don't know	9%	2%	2%	2%
Doing something else that is not listed	0%	4%	3%	2%

Question: "Where do you see yourself six months after graduating from high school?" cross-tabulated with "What is your current GPA?"

that they would be going on a church mission or other service project. Students with below a 2.5 GPA were different than the other three GPA ranges in that there were no respondents who intended to go on a mission or participate in other service work. This range also had the highest level of respondents who indicated they planned to work without pursuing college or job training.

Of the graduates not planning to go to college or job training right after school, a vast majority planned to pursue additional education at a later date. More people responded that they "don't know" than responded that they would not pursue additional education. Accordingly, Utah Foundation did not receive an adequate number of responses as to why this segment of responders would not pursue additional education to analyze for this report.

Figure 8: Future Post-Secondary Plans of Respondents Who are Not Going into a Job Training Program or College within Six Months of Graduating

	Planning to Pursue Additional Education
Yes	90%
No	2%
Don't know	8%

Question: "Do you plan to pursue additional education at a later date?"

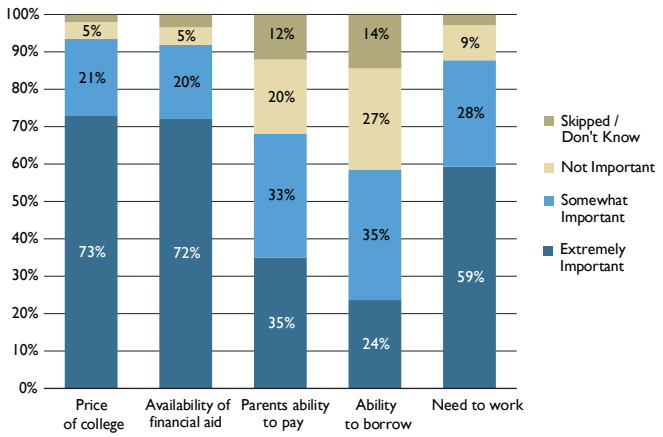
INFLUENCES FOR POST-HIGH SCHOOL PLANS

The high school graduates were asked to rank the importance of certain factors which influenced their post-high school plans. Their options were "very important," "somewhat important" and "not important." Personal motivation topped the list. Approximately 90% of students deemed this as very important and another 9% indicated that it was somewhat important. Slightly less important but clustered together were (a) academic readiness, (b) the price of college, (c) the availability of grants, scholarships and/or financial aid, (d) the availability of academic programs which the students are interested in, and (e) encouragement from parents.

With respect to the financial factors shown in Figure 9, the price of college and the availability of grants, scholarships and/or financial aid were extremely important to over 70% of respondents and somewhat important to about 20%. The need to work was also a significant factor, with 87% of graduates deeming it extremely or somewhat important. While parents' ability to pay and graduates' ability to borrow were not as important, they were still seen as important to between half and two-thirds of respondents. The key differences by demographic group for the importance of certain financial factors were as follows:

- The price of college was more important to Hispanic/Latino graduates and metropolitan graduates than to non-Hispanic/Latino graduates and rural graduates.

Figure 9: Importance of Financial Factors Which Influenced Post-High School Plan



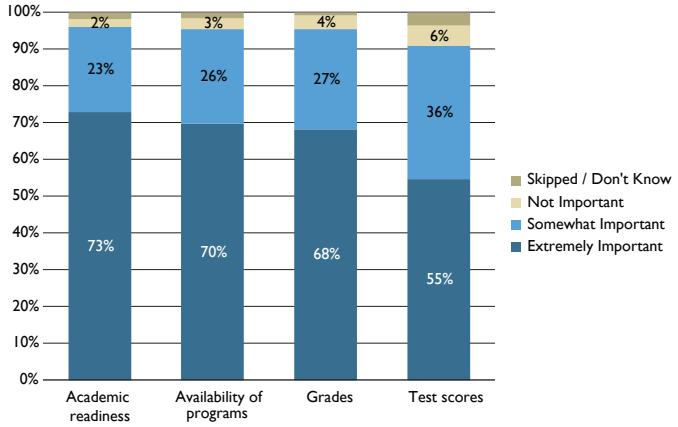
Question: "How important were the following *financial* factors in influencing your post-high school plans?"

- The availability of financial aid was more important to females, Hispanic/Latino graduates, White graduates, metropolitan graduates and low-income graduates.
- The ability of parents to help pay for college was more important to females and higher-income graduates.
- The need to begin working was more important to Hispanic/Latino graduates and low-income graduates.

When it came to academic factors there was not much disparity. All four academic factors listed in the survey were important to the respondents. Over 90% of respondents deemed academic readiness, the availability of academic programs the students were interested in, and grades as extremely or somewhat important. The key differences by demographic group for the importance of certain academic factors were as follows:

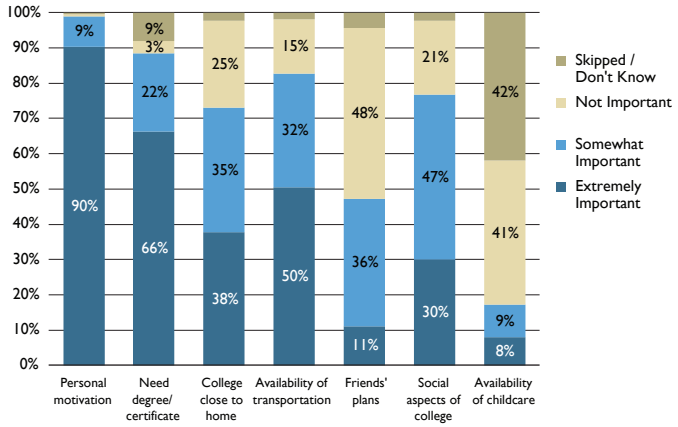
- Academic readiness was more important to females and higher-income graduates than to males and low-income graduates.
- Availability of specific academic programs were more important to females, White graduates and rural graduates than to males, non-White graduates and metropolitan graduates.

Figure 10: Importance of Academic Factors Which Influenced Post-High School Plan



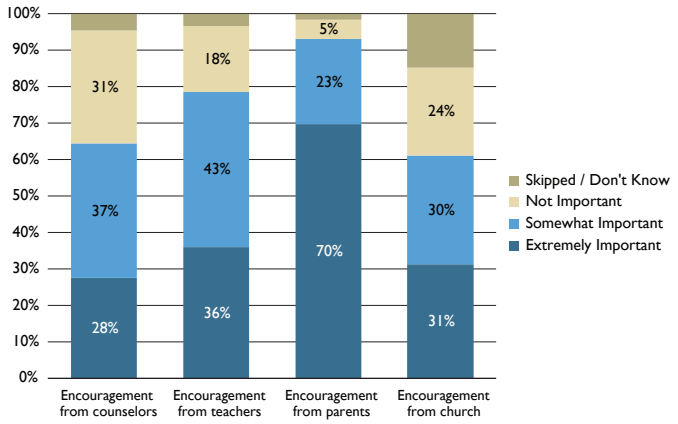
Question: "How important were the following *academic* factors in influencing your post-high school plans?"

Figure 11: Importance of Other Factors Which Influenced Post-High School Plan



Question: "How important were the following *general* factors in influencing your post-high school plans?"

Figure 12: Importance of Encouragement in Influencing Post-High School Plan



Question: "How important were the following *general* factors in influencing your post-high school plans?"

- High school grades were deemed more important by females, non-Hispanic/Latino graduates, non-White graduates, and higher-income graduates than by their counterparts. Graduates with higher GPAs were much more likely to believe that grades were extremely important than were graduates with lower GPAs (81% compared to less than 50%).

There were a host of other factors about which graduates were questioned which did not fit as neatly into categories. Again, almost all respondents deemed personal motivation important. The only factors which came in at under 50% were friends' plans and the availability of childcare. The key differences by demographic group for the importance of the remaining factors are as follows:

- Personal motivation was more important to females than to males.
- Needing a degree or certificate to achieve respondent's chosen career paths was more important to White graduates than non-White ones and more important to Hispanic/Latino graduates than non-Hispanic/Latino ones.
- Finding a college close to home was more important to metropolitan graduates than to rural ones and tended to be more important to graduates whose parents had lower education attainment.
- Availability of transportation was more important to low-income graduates than to higher income graduates.
- Availability of childcare was more important to Hispanic/Latino and non-White graduates than to their counterparts.

Lastly, the importance of encouragement factors fluctuated widely, though each of the graduates' potential influencers were deemed important by a majority of graduates. Parents are by far the most important, followed by teachers. Counselors and church leaders took up the back. Key differences by demographic group for the importance of encouragement were as follows:

- Encouragement from counselors was more important to Hispanic/Latino graduates, White graduates and low-income graduates than their counterparts. It was also more important for those with GPAs between 2.5 and 2.99 (nearly 50%) than all other GPA groups. Furthermore, graduates whose parents had lower educational attainment tended to deem encouragement from counselors as more important.
- Encouragement from teachers was more important to low-income graduates than higher-income ones. Lower parental education attainment was also related to deeming teacher encouragement as important.
- Encouragement from parents was more important to females than to males.
- Church and community encouragement was more important to metropolitan graduates than their rural counterparts. Furthermore, higher-GPA graduates indicated that church and community encouragement was somewhat more important that lower-GPA graduates.

WHO INFLUENCES WHICH PLANS?

The previous questions measured the importance of encouragement from certain people in the lives of graduates. The survey also asked *what* people were encouraged to do. "What do the following people think is the most important thing for you to do right after high school?" Going to college topped the list for all potential influencers. It was supported most highly by counselors (71%) and teachers (70%). Serving a church mission was a very close second to going to college for church leaders (27% compared to 28%). Additionally, 17% of mothers, 16% of fathers, and 16% of other relatives found serving a mission most important. A large portion of respondents' friends (28%) were believed to think that the graduates should do what they want, though this was still second to going to college (38%). Another notable finding was that the largest percentage of influencers who said that respondents should get a full-time job were fathers (9%).

In general, non-college-bound graduates do not comprise one cohesive group. However, they have been lumped together for the purpose of this survey and – as can be gleaned from the graphs below – the respondents to this survey are mainly skipping college to serve a church mission.

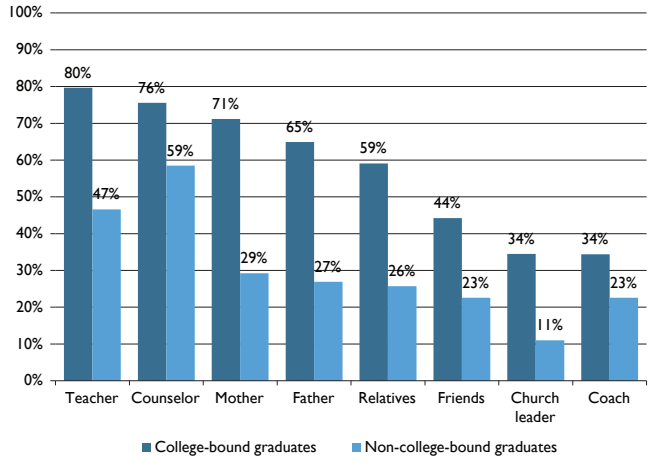
Figure 13: What Certain People Say is the Most Important Thing for Respondents to do Right After High School

Influencer	Go to College	Get a Full-time Job	Enter a Trade School or Apprenticeship	Enter Military Service	Serve a Mission for My Church	Get Married	They Think I Should Do What I Want	They Don't Care	I Don't Know
Counselor	71%	0%	1%	0%	0%	2%	6%	5%	13%
Teacher	70%	0%	1%	0%	5%	0%	11%	1%	9%
Mother	60%	6%	1%	0%	17%	1%	13%	0%	2%
Father	54%	9%	0%	1%	16%	0%	11%	2%	3%
Other relatives	50%	2%	1%	0%	16%	1%	16%	4%	10%
Friends	38%	5%	0%	0%	11%	0%	28%	8%	8%
Coach	31%	1%	0%	0%	2%	0%	6%	4%	9%
Church leaders	28%	1%	0%	0%	27%	3%	9%	2%	10%

Question: "What do the following people think is the most important thing for you to do right after high school?"

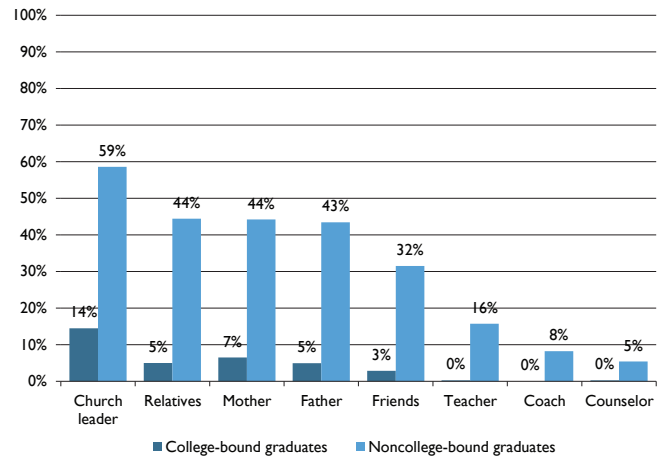
A useful way to look at the results of Figure 13 is by separating out graduates who plan on going to college from those who do not. Figure 14 suggests how great a role those who surround the graduates play in whether they will be attending college or not. The respondents indicated that over half of college-bound graduates' teachers, counselors, mothers, fathers and relatives would put going to college as the most important thing for the graduates to do after high school. Conversely, for non-college-bound graduates, only counselors would place college as most important. Similarly, the ratio for those graduates who indicated they would be going on missions is shown in Figure 15. This shows the strong influence of graduates' social network on their choice to delay college, which in the case of this survey is a proxy for serving a mission.

Figure 14: Going to College is Most Important



Question: "What do the following people think is the ***most*** important thing for you to do right after high school?" Proportion of those who selected "Go to college."

Figure 15: Going on a Mission is Most Important



Question: "What do the following people think is the ***most*** important thing for you to do right after high school?" Proportion of those who selected "Serve a mission for my church."

The survey also asked respondents to indicate what portion of their friends planned to pursue college or job training after high school. A majority of respondents indicated that most of their friends were going on to post-secondary education. No respondents indicated that none of their friends would be pursuing post-secondary education. Non-Hispanic/Latino graduates, White graduates, and higher-income graduates had a larger portion of their friends who were pursing college or job training after high school. Furthermore, the higher respondents' GPAs and levels of educational attainment for each of their parents, the more likely students were to have a larger portion of their friends pursing job training or college after high school.

POST-SECONDARY READINESS

The survey included a set of questions used to glean post-secondary education readiness based upon course completion. Being ready for a post-secondary education certainly does not mean the students will attend, but it is an indicator of such possibility. Readiness can be difficult to measure. According to the ACT, about 64% of Utah's test takers were ready for college based upon their English scores, 40% based on mathematics, 54% based on reading and 29% based on science (these percentages are slightly below the national average except for reading).[11] A proxy for readiness could be GPAs and whether students had taken advanced or remedial courses. About 60% of graduates indicated that they had taken Advanced Placement courses, 71% had taken concurrent enrollment courses for college credit, and about 70% had taken honors classes. Alternately, only about 8% of graduates had taken remedial classes and only 6% had taken special-education classes. The key differences by demographic group for classes and programs taken in high school were as follows:

- Advanced Placement classes: 64% for metropolitan graduates and 52% for rural graduates; 66% for higher-income graduates and 51% for low-income graduates; graduates with higher GPAs were also more likely than lower GPA graduates to indicate they had taken AP classes.

Figure 16: Portion of Respondents' Friends Who Plan to Pursue College or Job Training After High School

	Total
None	0%
A few	13%
Most	55%
All	29%
Don't Know	3%

Question: "How many of your friends plan to pursue college or job training after high school?"

- International Baccalaureate classes: 8% for males and 4% for females; 12% for non-White and 4% for White graduates.
- Concurrent enrollment classes: 73% for metropolitan and 65% for rural graduates; also, graduates with higher GPAs were more likely than lower GPA graduates to indicate they had taken concurrent enrollment classes.
- ESL classes: 13% for Hispanic/Latino graduates and 4% for non-Hispanic/Latino graduates; 13% for non-White and 3% for White graduates; 8% for low-income and 3% for higher-income graduates; on a side note, one-third of graduates who had taken ESL classes had mothers who had not completed high school, compared to only one-eighteenth of graduates who had not taken ESL classes.
- Honors classes: 74% for higher-income and 64% for low-income graduates.
- Remedial English and math: 10% for males and 5% for females.
- Special education classes: 9% for non-White and 5% for White graduates; 10% for low-income and 4% for higher-income graduates.

About 7% of high school graduates took distance-learning classes. These classes can be particularly useful to students in smaller, remote high schools. As detailed in a Utah Foundation report last year, rural students have fewer course options than non-rural students, primarily foreign languages, Advanced Placement classes, electives, and in-school instructor delivered concurrent enrollment.[12] This likely accounts for the differences between metropolitan and rural graduates' responses about AP courses and concurrent enrollment noted above.

Additional questions were posed to determine readiness based upon having taken certain tests. Approximately 91% of graduates indicated they had taken the SAT or ACT college entrance test; this number seems low since the ACT is purportedly taken by almost all Utah students before they graduate.[13] Just over half of graduates had taken Advanced Placement or International Baccalaureate tests. The key differences by demographic group for certain tests taken in high school were as follows:

- SAT or ACT tests: non-Hispanic/Latino graduates and White graduates were more likely to have taken the tests as high school juniors while Hispanic/Latino graduates and non-White graduates were more likely to have taken the tests as seniors.
- AP and International Baccalaureate tests: metropolitan graduates and higher-income graduates were more likely to have taken the tests (or planned to) than rural graduates and low-income graduates. Also, AP and IB test takers tended to have had mothers with higher educational attainment and they had higher GPAs.

Figure 17: Certain Courses and Programs Taken in High School

	Total
Advanced Placement Courses	58%
International Baccalaureate Courses	5%
Concurrent Enrollment	68%
Honors	67%
Remedial English	6%
Remedial Math	7%
Special Education	6%

Question: "Have you taken any of the following kinds of courses or programs in high school?"

Figure 18: Certain Tests Taken in High School

	Total
SAT or ACT	91%
AP or International Baccalaureate Test	51%
Armed Services Vocational Aptitude Battery	12%

Question: "Have you taken or are you planning to take any of the following tests?"

- Armed Services Vocational Aptitude Battery: males, Hispanic/Latino graduates, non-White graduates, and metropolitan graduates were more likely to have taken the test (or planned to) than females, non-Hispanic/Latino graduates, White graduates, and rural graduates.

In a 2001 nationwide report of high school seniors, approximately 87% of Utah's students graduated from high school but only about 31% were college-ready when they did.[14] There were significant differences in both these rates across racial and ethnic groups. However, the study found that relative to their portion of college-ready students, non-White and Hispanic/Latino populations were not under-represented in college freshman classes nationally, suggesting that non-White and Hispanic/Latino populations were simply not getting adequate preparation for college in their K-12 years.

The implications of college readiness affect not only school enrollment but also retention. In a study of students in online courses at a community college, students who were less academically prepared and/or enrolled in fewer hours were less likely to complete their courses.[15] If academic preparation is influencing completion rates, then high school academic performance is an important factor in college readiness. It would follow then that the graduates who took the Utah Foundation survey seem ready for post-secondary education.

However, some researchers propose a more comprehensive definition of college readiness than has been used previously, moving beyond simply looking at test scores, GPAs, and coursework. The model instead focuses on contextual skills and awareness, academic behaviors, key content, and key cognitive strategies.[16] Utah State Office of Education and Utah State University have taken this a step further in focusing only on the non-cognitive facets of student success with their Student Strengths Inventory, which is being used by secondary and post-secondary institutions in the U.S. and abroad. These facets include a 48-item low stakes self-report inventory measuring six critical non-cognitive variables: academic engagement, academic self-efficacy, educational commitment, campus engagement, social comfort, and resiliency. Such facets can then be used to predict academic success and retention.

POST-SECONDARY EDUCATION

The survey asked how much post-secondary education the graduates expected to receive. Bachelor's degrees topped the list. Utah males expected to go further in school than females. Within this group, the largest difference was those who intended to get a master's degree, 39% of males compared to 35% of females. The other statistically significant differences were that students with higher GPAs and fathers with more education were more likely to indicate they were going to go further in school.

Why are high school graduates looking toward additional education? Over 95% of respondents indicated that they believe getting an

Figure 19: Highest Expected Educational Attainment

	Total
Attend some college but not earn a degree	0%
Earn a certificate (approximately 1 year)	1%
Earn an Associate's degree (approximately 2 years)	6%
Earn a Bachelor's degree (approximately 4 years)	53%
Earn a Master's, doctorate, medical or law degree (approximately 6-12 years)	38%
Don't know	2%

Question: "How far in school do you think you will go?"

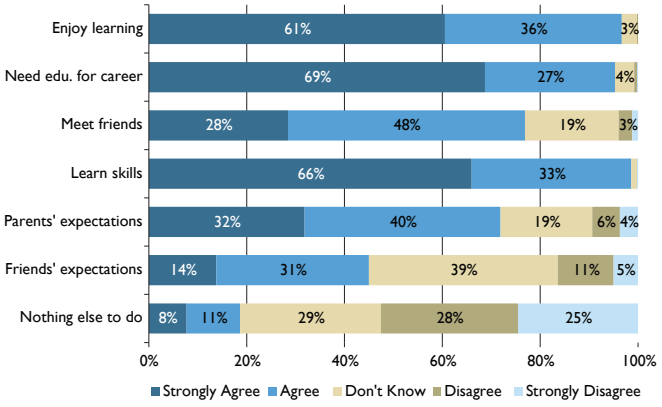
education is important for getting a job later, that they will learn new skills that they need for a job, and that they want to learn about subjects that are interesting and challenging. Meeting friends was quite important as well, as was the fact that parents and other relatives expected the graduates to pursue additional education. Less than half of the respondents felt that their friends' expectations were important, and less than one fifth indicated they had "nothing better to do" but pursue additional schooling. Key differences by demographic group for the reasons that graduates indicated they were pursuing additional education were as follows:

- Rural graduates agreed more than metropolitan graduates that they would like to study subjects that are interesting and/or challenging.
- The higher the respondents' mothers' educational attainment, the more likely that respondents strongly agreed they were pursuing additional education because of their parents and relatives and because their friends expect them to; however friends were not as influential as graduates' parents and relatives.
- Interestingly, graduates with moderately good GPAs (between 2.5 and 3.5) more strongly agreed that they wanted to learn skills they would need for a job than did graduates with GPAs of less than 2.5 and more than 3.5.

JOB TRAINING AND COLLEGE

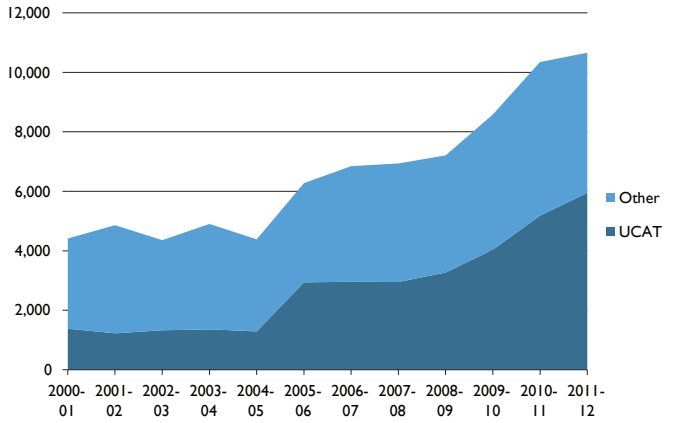
A vast majority of the state's 85 licensed post-secondary institutions offer trade certificates. Almost all of these are Title IV schools, meaning that enrollees are eligible for United States federal student financial aid programs. Many of these institutions are barbershops, hairstyling colleges, massage schools and aesthetics institutes. But by numbers of certificate recipients, there are a much broader range of career and technical options. As part of the Utah Governor's Education Excellence Commission's goal of

Figure 20: Reasons for Pursuing Education



Question: "How much to you agree or disagree with the following statements on why you are pursuing additional education?"

Figure 21: Post-Secondary Certificate Completions, Utah



Source: National Center for Education Statistics' Integrated Postsecondary Education Data System.

reaching 66% educational attainment, this range of certificates is expected to play a big role. Utah College of Applied Technology plans to triple the number of certificate holders in Utah by 2020 and is responsible for much of the increase in annual post-secondary trade certificate completions in the past number of years (see Figure 21).[17]

The survey asked whether graduates had applied to college, and if they had, to what schools? A large majority (82% of graduates) responded that they had applied. Females, graduates in metropolitan areas, and higher-income graduates were more likely to have applied than their counterparts.

Applying to two to three colleges was the most common response (43% of graduates). A quarter applied to one college, and the rest applied to four or more. Females, graduates in rural areas, and higher-income graduates were more likely to have applied to more colleges than their counterparts. Of those respondents who applied to college, 92% had been accepted by one or more colleges as full-time students, 2% were not accepted, and 6% responded that they did not know.

WHO ATTENDS COLLEGE?

A tangle of factors influence college attendance, many of which have been noted earlier as influencing K-12 success: academic ability, parental occupation, race and ethnicity, family size and structure, income, and geographic region.[18] Parental education levels have been found to be very important.[19] Some researchers have found that friends' and parents' expectations are important, though other researchers are not as certain.[20]

Those who take the necessary steps to get into college tend to go; two important steps toward entering college are having taken a college entrance exam and filling out college applications.[21] One of those hurdles has been passed in Utah as the ACT is now taken by almost all Utah students before they graduate.[22] Among students who have

Figure 22: Number of Colleges To Which Students Applied

Number of Colleges	Percent
0	18%
1	25%
2 to 3	43%
4 to 6	11%
6+	3%

Questions: "Did you apply to any colleges?" and "How many colleges did you apply to?"

taken the right steps toward enrollment, racial and socioeconomic disparities tend to disappear.[23]

It is interesting to note that college-goers are getting older, meaning that people are beginning school later or stopping and then returning to school.[24] In Utah this is in part due to LDS Church missions. Nonetheless, according to the Utah Data Alliance, 62% of high school graduates enroll in a post-secondary institution within 16 months of graduation.[25]

There have been rising college enrollment rates. In the recent past this trend nationally has been toward two-year institutions and community colleges.[26] These two-year institutions have helped non-White students gain access to college, but this option is still underutilized in some instances.[27]

BARRIERS TO COLLEGE ENROLLMENT

There are numerous barriers to entering college. Some students and their families lack information about college options, admissions criteria, how to prepare academically, and college costs.[28] Surveys of high school students and guidance counselors indicate the five greatest barriers to college enrollment for academically qualified students were (a) cost, (b) the steps involved in applying to college, (c) opportunity costs, (d) student attitudes about economic mobility, and (e) transparency about financial aid.[29]

Persisting disparities exist based upon socioeconomic status.[30] In the past there have been racial disparities in the more selective institutions, but not overall.[31] This disparity is relative to the group of "college-qualified" high school graduates, not in the applicant pools.[32] The gender gap has been reversed nationally, with more women completing college than men, but childcare requirements still present a challenge to some women, though there could be an interaction with socioeconomic status, race and ethnicity.[33]

Despite their high educational expectations, middle-income families often have difficulties sending their children to college because of increasing college costs their own financial insecurities.[34] Most graduates indicated that they would be paying for college – at least in some part – by working (80%). Most would also be using scholarships (66%) and financial aid (59%). Less than half (47%) were going to rely in part on their parents. Key differences by demographic group for the way that graduates expected to pay for their education were as follows:

- Utilize scholarships: respondents whose fathers had higher educational attainment were more likely to indicate they would use scholarships than did their counterparts.
- Depend upon financial aid to pay for school: 69% for Hispanic/Latino graduates and 58% for non-Hispanic/Latino graduates; 70% for non-White graduates and 56% for White graduates; 79% for low-income graduates and 51% for higher income graduates; further, those with fathers who had lower educational attainment were more likely to depend upon financial aid than their counterparts.
- Parents will help pay for college: 58% for higher-income graduates and 28% for low-income graduates; graduates whose mothers and fathers had higher educational attainment were more likely to indicate their parents would help pay for college.
- Student grants: 37% of low-income graduates compared to 18% of higher-income graduates.
- Do not know how they were going to pay: 10% for males compared to 6% for females; 16% for Hispanic/Latino graduates compared to 6% for non-Hispanic/Latino graduates; 14% for non-White graduates compared to 5% for White graduates; 14% for low-income graduates and 4% for higher-income graduates; furthermore, graduates with lower GPAs were more likely than higher GPA graduates to indicate they did not know how they were going to pay.

There is aid available to those interested in college, but enrollment has been sensitive to changes in Federal student aid policies.[35] Middle class families may also struggle because of a lack of need-based aid.[36] More importantly, low-income students may not be aware of the types of financial aid available and have trouble getting the appropriate help and information to apply for it.[37]

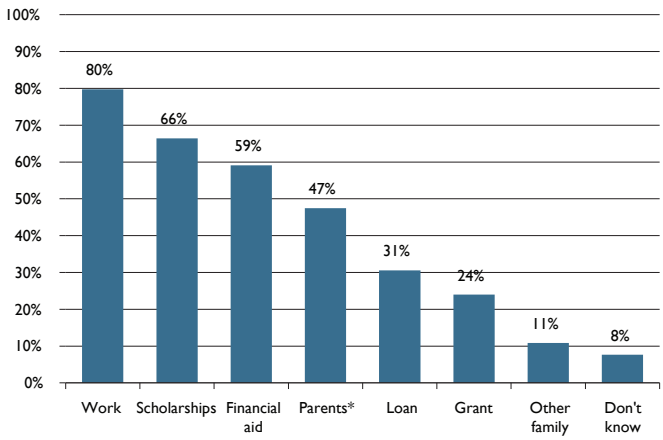
When asked if they had applied for financial aid, scholarships, or grants for the upcoming school year, 64% of low income graduates had, compared to 73% of higher income graduates. While fewer low-income students had applied, more indicated they expected to pay for college with financial aid than higher income students, 37% to 18%.

When asked if they had college savings accounts, 38% of graduates indicated that they did. The key differences were between low-income graduates and higher-income graduates (21% compared to 47%), Hispanic/Latino graduates and their counterparts (18% compared to 47%), and White graduates and non-White graduates (50% compared to 25%).

EDUCATIONAL ATTAINMENT

As shown in Figure 24, an obvious trend over the past 50 years has been toward higher educational attainment. The proportion of the U.S. population that has not completed ninth grade has decreased from one third to one twentieth. The population with less than a high school degree has dropped nearly 40 percentage points. The proportion with college degrees has tripled over this time period, as has the proportion with at least some college experience. The increase

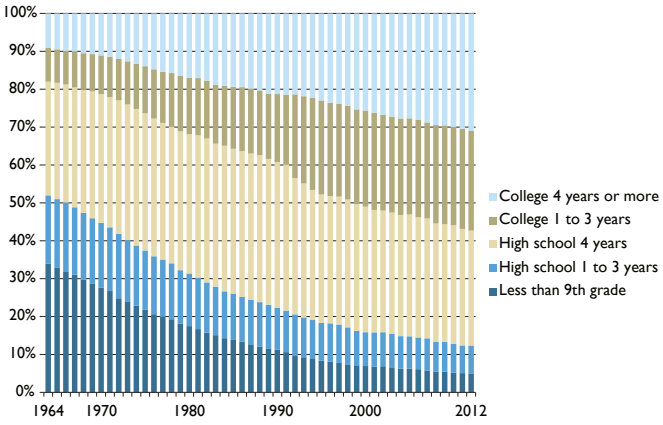
Figure 23: How Respondents Intend to Pay for Their Education



*38% of noncollege-goers and 51% of college-goers; difference is significant.

Question: "How do you plan to pay for your education?"

Figure 24: Year of School Completed by People 25 Years and Older, U.S.



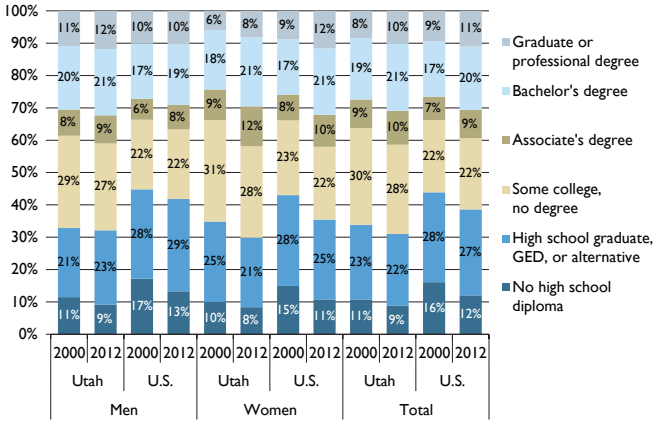
Source: U.S. Census, 1964 to 2002 March Current Population Survey, 2003 to 2012 Annual Social and Economic Supplement to the Current Population Survey.

in educational attainment is due to many factors including the idea that post-secondary education has become a social norm and that students themselves need to receive additional schooling to meet occupational expectations.[38]

Utah has higher educational attainment than the U.S. average, placing it 14th for percentage of the population 25 and over with high school diplomas and 17th with bachelor's degrees or higher.[39] Disconcertingly, Utah's national ranking for the percent of adults with a bachelor's degrees or higher was 3rd in 1960 but has been declining since.[40] Much of this decline is due to the precipitous decrease in ranking for women. They boasted 9th in the nation between 1940 and 1960 dropping down to 29th in 2011. Utah men peaked at 2nd in the nation in 1970 dropping down to 11th in 2011.[41] Utah's rankings have fallen not because Utahns are getting less education but simply because education levels have been increasing more slowly than numerous other states.

For 25- to 64-year-olds – which account for the lion's share of the workforce – Utah also fares well. In 2012, only 8.8% of Utahns had failed to receive high school diplomas compared to 12.0% nationally. Furthermore, 10.5% of Utahns had associate's degrees and 20.9%

Figure 25: Educational Attainment, Utah and U.S., 25- to 64-Year-Olds, 2000 and 2012



Source: US Census (2000) and American Community Survey (2012).

Figure 26: Percent Change in Educational Attainment, 25- to 64-Year-Olds, Utah and U.S., 2000 and 2012

	Utah	United States
Men		
No high school diploma	-2.3%	-3.9%
High school graduate, GED, etc.	1.5%	0.9%
Some college, no degree	-1.6%	0.0%
Associate's degree	0.5%	1.1%
Bachelor's degree	0.8%	1.5%
Graduate or professional degree	1.0%	0.3%
Women		
No high school diploma	-1.6%	-4.2%
High school graduate, GED, etc.	-3.4%	-3.3%
Some college, no degree	-3.1%	-0.6%
Associate's degree	2.9%	1.9%
Bachelor's degree	3.0%	3.4%
Graduate or professional degree	2.2%	2.9%
Total		
No high school diploma	-2.0%	-4.1%
High school graduate, GED, etc.	-0.9%	-1.2%
Some college, no degree	-2.3%	-0.3%
Associate's degree	1.7%	1.5%
Bachelor's degree	1.9%	2.5%
Graduate or professional degree	1.6%	1.6%

Source: US Census (2000) and American Community Survey (2012).

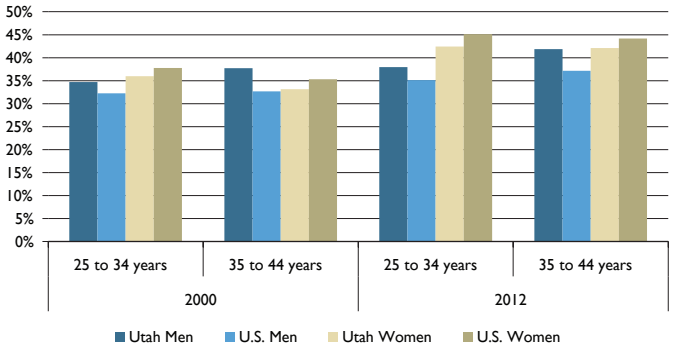
had bachelor's degrees compared to 8.8% and 19.6% nationally. The only category of higher education where the national average exceeds Utah's is with the attainment of graduate or professional degrees; 11.1% nationwide compared to 10.0% of Utahns. As shown in Figure 25, men and women both in Utah and nationally have reached higher levels of educational attainment since 2000. Utah and U.S. men and women have larger percentages of associate's, bachelor's and graduate degrees in 2012. To varying extents all of them have decreasing percentages of people with some college but no degree. Furthermore, the percentage of men and women without high school diplomas is decreasing. This is all good news. However, the greatest cause for concern is the increase in men, both in Utah and nationally, with only a high school degree or equivalent.

While Utah has favorable attainment comparisons, since 2000 the U.S. has increased its educational attainment at a faster rate in terms of associate's, bachelor's and graduate degrees. As shown in Figure 26, Utah men are surpassing the national average in growth of graduate or professional degrees (1.0% to 0.3%) and Utah women are ahead of the U.S. in associate's degree growth (2.9% to 1.9%), but both genders are behind in other post-secondary educational attainment categories.

When comparing the change in educational attainment by gender between 2000 and 2011, Utah's women made strong gains compared to Utah's men. Women saw increases in associate's degrees, bachelor's degrees and graduate degrees of 2.9%, 3.0%, and 2.2% respectively, compared to 0.5%, 0.8% and 1.0% for men.

Figure 27 shows that both 25- to 34-year-old and 35- to 44-year-old women and men have seen increased attainment in post-secondary degrees between 2000 and 2012. The figure also shows that men in Utah continue to surpass U.S. men in post-secondary degrees, and that the converse is true for women. However, there are continuing significant gains by Utah women relative to Utah men. A closer look at the figure also reveals that there is a greater shortfall between 25 to 34 and 35- to 44-year-old men in 2012 than there was in 2000, and there is a smaller difference between 25 to 34 and 35- to 44-year-old women in 2012 than there was in 2000. Both of these findings suggest that increases in educational attainment are slowing down for both genders. A continuation of this trend could dampen Utah's chance of reaching its 66 percent goal. On a somewhat positive note, Figure 27 reveals that the post-secondary gender gap is smaller in

Figure 27: Percentage of Population with Post-Secondary Degrees by Gender and Age, Utah and U.S., 2000 and 2012



Source: US Census (2000) and American Community Survey (2012).

Utah than in the U.S. This may be attributable both to Utah men outperforming U.S. men and Utah women underperforming U.S. women due to a blend of demographic and cultural reasons.

THE FUTURE

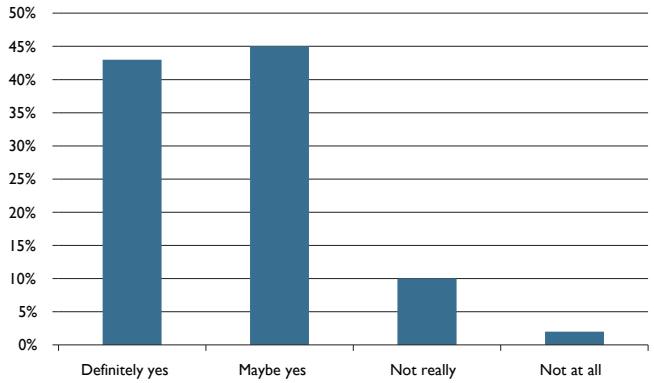
Nearly 90% of graduates are "definitely sure" or "maybe sure" about what kind of career and job they want. There is very little difference between genders. Interestingly, rural students and low-income students indicated that they were more likely to know what kind of career and job they wanted.

When thinking about future plans, the respondents were asked to assign importance to a range of different factors. Doing interesting work topped the list, followed closely by getting a good education and having steady work. Having a family and strong friendships were important, as was living near family. The only answer that fewer than 50% of graduates identified as being "somewhat important or "not important" was moving away from this part of the country.

There was not much difference between college-bound and non-college bound graduates. More non-college bound graduates identified steady work as being "very important" (7% more), and education was more important to college-bound graduates (again, by a factor of 7%). Other than this instance, college-bound vs. non-college bound differences were minor. However, demographics certainly played a role in the responses:

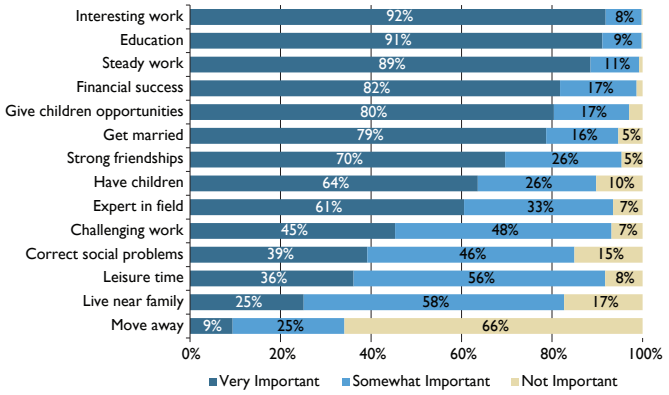
- Steady work was more important to males than females.

Figure 28: Certainty About Future Career Choices



Question: When you think about your future, do you know what kind of career or job you want?

Figure 29: The Importance of Certain Factors in Life



Question: "How important is each of the following in your life?"

- Being financially successful was more important to non-White graduates and low-income graduates than their counterparts.
- Being able to give their children better opportunities than they've had was more important to Hispanic/Latino graduates than to their counterparts.
- Both finding the right person to marry and having children were most important for non-Hispanic/Latino graduates and White graduates than to their counterparts.
- Having strong friendships was most important for non-Hispanic/Latino graduates.
- Being an expert in their fields was more important to Hispanic/Latino and non-White graduates than their counterparts.
- Working to correct social inequalities was more important to females, Hispanic/Latino graduates, non-White graduates, and low-income graduates. Graduates with somewhat less-educated fathers tended to be more interested in working to correct social inequalities. The relationship with mothers' educational attainment is less linear, though similar to fathers' educational attainment. Graduates with higher GPAs tended to indicate that working to correct social inequalities was more important.
- Having leisure time was most important for non-Hispanic/Latino graduates.
- Living close to family was most important to females and metropolitan graduates. Respondents whose mothers had lower educational attainment were more likely to deem living close to their family as important.
- Moving away from this part of the country was most important for non-White and low-income graduates.

LOOKING FORWARD

This report illuminates some of the influencers and influences on high school students' future plans. Personal motivation was key to graduates opting for post-secondary education. Approximately 90% of students deemed this as very important and another 9% indicated that it was somewhat important. However, graduates also indicated that their support networks were important. Since mothers' educational attainment levels seem to have such a large effect on the high school graduates post-secondary decisions, it is reassuring to see

increases in women's education levels. This would potentially provide a multiplier effect on educational attainment levels going forward; as more women complete post-secondary education, they will in turn influence their children to pursue post-secondary education.

Furthermore, the graduate survey and other research show the impact that counselors and teachers have on graduates whose parents have less educational attainment and lower-income. This suggests that ensuring that teachers and counselors discuss post-secondary options with students would lend itself to greater post-secondary enrollment. Students may not always get the face-time they need with counselors. In 2011, Utah had the fourth highest student-load per counselor in the United States; 726 students to one full-time-equivalent counselor compared to the national average of 471 to one.[42] High-school ratios are almost always better, with Utah's grade 10-12 ratio at 292 students to one full-time-equivalent counselor.[43] However, some research suggests that a more ideal ratio would be no fewer than one high-school counselor for each 100 students and that college counseling should begin before high school.[44]

The high percentage of respondents who indicated that they wanted to pursue higher education of some kind is noteworthy. It is also encouraging that those students with lower high school grades still hope to pursue higher education.

However, a meager 54% of students who enroll in public Utah post-secondary institutions complete at least one year's worth of credits within two years.[45] This number is certainly influenced by the proportion of students going on to church missionary work. Nevertheless, a major strategy toward 66% is making sure that a higher portion of students who begin school complete it. Once students enroll in higher education, higher education stakeholders will need to figure out how to keep such students there. This issue of retention can be underscored by the fact that over a quarter of Utahns have some college experience but no degree. This may be an issue of "fit," and there are additional post-secondary options like online courses and for-profit schools,[46] though these types of schools have some negative implications related to persistence and degree completion.[47]

Ultimately, the road to 66% will be difficult. The Governors Education Excellence Commission is recommending numerous measures, like mandatory college preparation exams, completing counseling and career planning tools, providing incentives and resources for returning to complete post-secondary education, and focusing on tripling Utah Career and Technical Education certificate completion.[48] These recommendations align well with many of the observations made from the survey results. This provides some indication that stakeholders are on the right track.

This research report was written by Utah Foundation Senior Research Analyst Shawn Teigen with assistance from Dr. Joseph Diaz and Jessie Winitzky-Stephens with Institutional Research at Salt Lake Community College. Additional assistance was provided by Utah Foundation Research Interns Rebecca Jack, Robert Richards, and Mallory Bateman and Utah Foundation President Stephen Hershey Kroes. Mr. Teigen or Mr. Kroes can be reached for comment at (801) 355-1400, or by email at: shawn@utahfoundation.org or steve@utahfoundation.org.

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