

Utah's Higher Education Graduates

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The 2000 Census provided an opportunity to examine Utah's college graduates as a portion of the population relative to other states. According to Census figures, Utah ranks 32nd in the nation for the percent of 25-34 year olds with at least a bachelor's degree. Just over a quarter of Utah residents in this age group received a bachelor's degree by 2000. This places Utah below the national average of 27.5 percent and third in the intermountain region. Colorado and Montana had greater percentages of degreed residents in this age group. Colorado ranked fourth in the nation. The District of Columbia ranked first as over half of its residents had at least a bachelor's degree. Massachusetts, Connecticut and New Jersey rounded out the top five, with at least 34% of their residents age 25-34 with a bachelor's degree. Figure 1 details the percentage and rank for Utah and the rest of the Intermountain West. The region also has the widest disparity between its component states, with Colorado ranking 4th in the nation and Nevada ranking 51st.

Figure 1: Rank & Percent Population Age 25-34 with at Least a Bachelor's Degree, 2000

Mountain States	Percent of Population	National Rank
United States	27.5	
Arizona	22.9	38
Colorado	34.8	4
Idaho	22.0	41
Montana	26.6	25
Nevada	17.3	51
New Mexico	20.1	47
Utah	25.4	32
Wyoming	23.1	36

Source: Bureau of the Census (Census)

The traditional view has been that Utah higher education students take longer to complete their degree due to the large portions of the male population between 19-21 exiting the higher education system to perform religious service. This two-year gap in the education process might play a part in the low percentage of students finished with a bachelor's degree by the age of 25. However, further analysis of Census data proves contrary to this conventional wisdom. Figure 2 breaks down by gender the percentage of Utah residents with at least a bachelor's degree. It further compares these figures to the percentage for the United States as a whole. As the data show, the percentage of Utah males age 25-34 shows little difference from the national average. On the other hand, only 25.3% of Utah women in this age group have a bachelor's degree or better, compared to 29.4% nationwide. Examining older age groups shows that Utah has a higher proportion than the U.S. of degreed males while Utah women only surpass their national counterparts significantly in the oldest bracket, those over the age of 65.

Figure 2: Percent of Utah & US Residents by Gender with at Least a Bachelor's Degree, 2000

Age Group	Both Sexes		Male		Female	
	Utah	U.S.	Utah	U.S.	Utah	U.S.
25 to 34 years	25.4	27.5	25.6	25.7	25.3	29.4
35 to 44 years	26.3	25.9	29.8	25.8	22.7	26.0
45 to 64 years	30.1	26.4	35.6	29.3	24.7	23.7
65 years and over	19.2	15.4	26.8	20.5	13.3	11.8

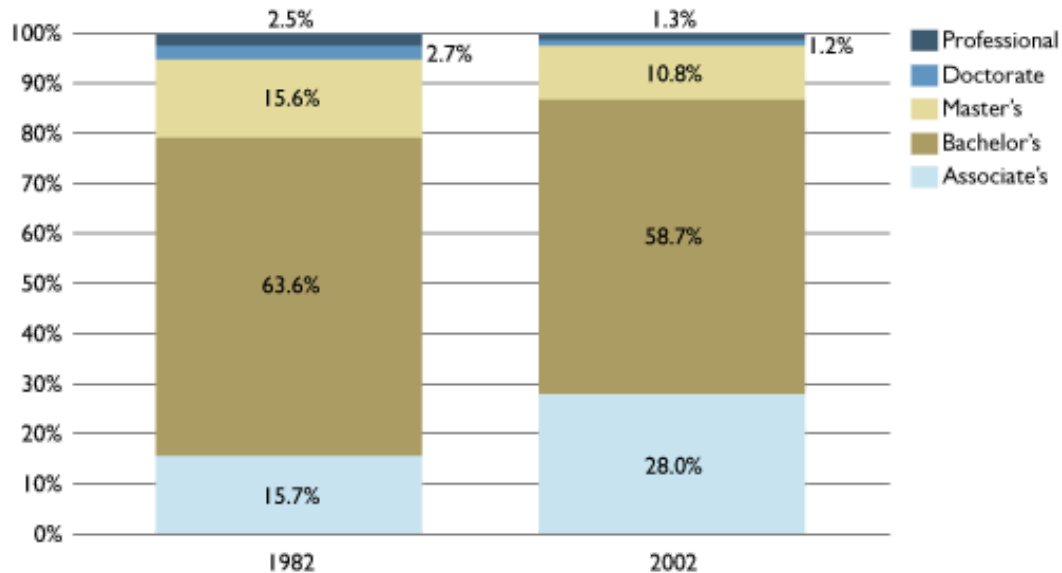
Source: Census

No one explanation can be made for the disparity between Utah women and those nationally. Many could be cultural, with young women in the state leaving school prior to graduation to raise families or support a spouse completing his education. It may be that degreed women from Utah's colleges and universities find out-of-state employment more attractive or choose to go out of state for schooling and then do not return back. Further analysis of the gender gap is needed to point to the factors behind these figures.

Degrees Awarded and Field of Study

Data examining the percentage of degrees awarded by level shows an interesting trend that may account for the relatively low percentage of Utahns with a bachelor's degree. In 1982, approximately 16% of all degrees awarded by Utah schools were associates degrees. By 2002, that percentage had climbed to 28%. The percentage of bachelor's degrees declined in proportion as Figure 3 shows. Advanced degrees also declined, however, this may be due to the elimination of many post-graduate programs at BYU, which is included in this data set.

Figure 3: Utah Higher Education-Level of Degree Awarded Public and Private Institutions



Source: Utah System of Higher Education, 2003-04 Databook

The fields of study in which students earn their degrees have also changed over time. During the 1989-90 school year, the largest percentage of degrees awarded at all levels from Utah's public institutions was in the field of business and marketing, 16.9%. During 2002-03, the percentage of business degrees awarded was essentially the same, 17%. However, business degrees now come in second to liberal arts/general studies degrees which comprise 17.3% of all awarded. This increase of 5.0% by liberal arts was the largest of any field. Figure 4 details the percentages for Utah's public institutions by field. Since these are for public schools only, they exclude BYU, Westminster and other private colleges and universities. Following liberal arts/general studies, the largest gains were made by computer and information sciences and the "other" category, which includes library science, military technologies, multidisciplinary studies and recreation sciences. Although home economics ranks 3rd, there is some question that the growth in this category is nothing more than reclassification of the major as there is an almost equivalent decline in the category of other vocational studies, which includes home economics.

Figure 4: Degrees Awarded by Field of Study at Utah's Public Universities & Colleges

Mountain States	Percent of Degrees Awarded		
	1989-90	2001-02	Change
Liberal Arts & Sciences / General Studies	12.3%	17.3%	5.0%
Computer & Information Sciences	2.1%	3.7%	1.5%
Home Economics	1.3%	2.7%	1.4%
Other*	1.0%	2.0%	1.0%
Visual & Performing Arts	2.4%	3.3%	1.0%
French & Canadian Language and Literature	0.0%	0.8%	0.8%
Psychology	3.2%	3.9%	0.7%
Communications	2.8%	3.3%	0.5%
Biological Sciences / Life Sciences	1.8%	2.2%	0.4%
Foreign Languages	0.9%	1.0%	0.1%
Area, Ethnic & Cultural Studies	0.2%	0.3%	0.0%
Busines & Marketing	16.9%	17.0%	0.0%
Philosophy	0.2%	0.2%	0.0%
Architecture & Related Studies	0.5%	0.4%	-0.1%
Health Professions	11.2%	10.9%	-0.2%
Agriculture & Natural Resources	1.4%	1.0%	-0.4%
Law & Legal Services	1.3%	0.9%	-0.4%
Mathematics	1.0%	0.5%	-0.5%
English Language & Literature	2.3%	1.8%	-0.5%
Physical Sciences & Science Technology	1.8%	1.3%	-0.5%
Other Vocational Studies**	7.5%	5.6%	-1.9%
Education	10.0%	7.9%	-2.1%
Social Sciences & Public Administration	9.6%	7.2%	-2.4%
Engineering & Related Technologies	8.3%	4.8%	-3.5%

* Includes Library Science, Military Technologies, Multi/Interdisciplinary Studies, and Parks & Recreation

** Includes Personal Services, Vocational Home Economics, Protective Services, Construction Trades, Mechan Transportation & Materials Moving.

Source: Utah System of Higher Education, 2003-04 Databook

Three fields of study saw significant decline from 1989 to 2003. Degrees awarded in education declined from 10% to 7.9%, those in social sciences and public administration declined from 9.6% to 7.2% and engineering related fields saw the greatest decline from 8.3% to 4.8%. It appears that Utah's higher education students today place equal value as their predecessors on professional degrees, those in business, law and health, while the physical sciences are generally on the decline and social science/liberal arts are on the increase.

Fields of Study and Job Openings in Utah

While the decline in the percentage of students graduating in engineering and education is concerning, it is also directly tied to the labor market in the state. Estimates provided by the Utah Department of Workforce Services indicate there were 10,270 job openings in 2003 that required a degree alone. There are additional job openings that require a degree as well as a certain amount of professional experience but are not included in this analysis. Comparing job openings to degrees, this means there were approximately 2.3 graduates for every opening. Figure 5 provides a review of openings by field. The ratio of graduates per job varies from a high of 13.0 in Communications to a low of 0.4 in Computer Science and Architecture. Despite the decline in the percentage of education degrees awarded between 1989-90 and 2002-03, there were still almost 100 more graduates than job openings. The contrast is even greater in engineering, where there were 450 more degrees than positions. Two important notes are needed when reviewing the data. First, the number of openings is a projection done by DWS based on 2000 data. Since 2000 was the beginning of the dot.com bust, computer job openings may be overstated. Additionally, there is a high degree of subjectivity to the classification of job openings. Openings were sorted by a "best fit" criteria; this is not to say that a liberal arts major would be disqualified from applying for a position in public administration, for example.

Figure 5: Degrees Award at Utah Colleges and Universities Compared to Job Openings by Field of Study

Field of Study	Degrees Awarded		2003 Projected Openings		Openings vs. Degrees	
	2002-03	% Total	Number	% Total	Difference	Over/Under
Agricultural & Natural Resources	243	1.0%	70	0.7%	-173	3.5
Architecture & Related Studies	101	0.4%	240	2.3%	139	0.4
Area, Ethnic & Cultural Studies	59	0.3%	NA	NA	NA	NA
Biological Sciences / Life Sciences	514	2.2%	60	0.6%	-454	8.6
Business & Marketing	3,974	17.0%	1,410	13.7%	-2,564	2.8
Communications	781	3.3%	60	0.6%	-721	13.0
Computer & Info Sciences	856	3.7%	2,260	22.0%	1,404	0.4
Education	1,848	7.9%	1,760	17.1%	-88	1.1
Engineering & Related Technologies	1,128	4.8%	670	6.5%	-458	1.7
English Language & Literature	418	1.8%	200	1.9%	-218	2.1
Foreign Languages	243	1.0%	NA	NA	NA	NA
French & Canadian Language & Lit.	185	0.8%	NA	NA	NA	NA
Health Professions	2,562	10.9%	1,860	18.1%	-702	1.4
Home Economics	638	2.7%	NA	NA	NA	NA
Law & Legal Studies	205	0.9%	230	2.2%	25	0.9
Liberal Arts & Sciences / Gen Studies	4,044	17.3%	NA	NA	NA	NA
Mathematics	111	0.5%	20	0.2%	-91	5.6
Other [*]	473	2.0%	300	2.9%	-173	1.6
Other Vocational Studies ^{**}	1,323	5.6%	NA	NA	NA	NA
Philosophy	41	0.2%	NA	NA	NA	NA
Physical Sciences & Science Tech.	298	1.3%	60	0.6%	-238	5.0
Psychology	911	3.9%	220	2.1%	-691	4.1
Social Sciences & Public Admin.	1,691	7.2%	630	6.1%	-1,061	2.7
Visual & Performing Arts	784	3.3%	220	2.1%	-564	3.6
Total	23,431		10,270		-13,161	2.3

* Includes Library Science, Military Technologies, Multidisciplinary Studies, and Parks & Recreation

** Includes Personal Services, Vocational Home Economics, Protective Services, Construction Trades, Mechanics & Repairers, Precision Trades

Source: Utah System of Higher Education, 2003-04 Databook, Utah Dept. of Workforce Services

Despite these caveats it remains there are more graduates than openings. However, this does not necessarily mean that Utah is exporting 1.3 graduates for every graduate that finds a job within state. A possible suggestion hinted at by the Census data is that some graduates may already have work experience and the degree is something they are seeking for advancement. Another is that many graduates may accept jobs that require a lower level of education. This degree creep can be seen in some fields in Figure 6. The clearest example shown by the data in Figure 6 can be seen in the health professions. In 2003, there was an estimated need for 1,170 new associate level nurses. However, only 970 degrees were awarded. At the bachelor's level there were 587 degrees awarded and only 200 openings. A new graduate with a bachelor's level nursing degree may accept a position only requiring an associate's degree in order to stay in Utah. Counseling and social work have seen this phenomenon as well, as a greater proportion of counseling positions that in the past only needed a bachelor's degree are now requiring an MSW or Master of Social Work. The education field is similar. Although there are few openings that require a master's degree or a doctorate, teachers are rewarded monetarily for continuing their education and receiving their degrees.

Figure 6: Degrees Awarded by Level and Field of Study Compared to Job Openings

Age Group	Associate's Degrees		Bachelor's Degrees		Master's Degrees		Professional Degrees		Doctoral Degrees	
	Awarded	Openings	Awarded	Openings	Awarded	Openings	Awarded	Openings	Awarded	Openings
Agricultural & Natural Resources	30	20	178	30	26	0	0	20	4	0
Architecture & Related Studies	3	0	52	220	46	20			0	0
Area, Ethnic & Cultural Studies	0	NA	44	NA	14	NA			1	NA
Biological Sciences / Life Sciences	98	20	335	0	33	0			48	40
Business & Marketing	942	0	2,248	1,230	693	150			6	30
Communications	63	0	700	60	9	0			5	0
Computer & Info Sciences	236	960	546	1,260	46	0			7	40
Education	240	0	1,168	1,980	376	60			26	20
Engineering & Related Technologies	262	200	583	440	211	0			45	30
English Language & Literature	36	0	353	180	26	0			3	20
Foreign Languages	3	NA	209	NA	27	NA			4	NA
French & Canadian Language & Lit.	13	NA	153	NA	19	NA			0	NA
Health Professions	970	1,170	587	200	245	130	740	300	20	60
Home Economics	49	NA	540	NA	37	NA			12	NA
Law & Legal Studies	44	50	23	20	7	0	131	160	0	0
Liberal Arts & Sciences / Gen Studies	3,920	NA	124	NA	0	NA			0	NA
Mathematics	16	0	68	0	24	0			3	20
Other*	17	0	403	240	31	60			8	0
Other Vocational Studies**	714	NA	315	NA	13	NA			3	NA
Philosophy	0	NA	33	NA	0	NA			0	NA
Physical Sciences & Science Tech.	45	20	169	40	49	0			38	0
Psychology	180	0	634	0	70	220			27	0
Social Sciences & Public Admin.	110	0	1,211	500	212	150			23	0
Visual & Performing Arts	233	0	492	190	53	0			1	30
Total	8,224	2,440	11,168	6,590	2,267	790	871	480	284	290

Source: Utah System of Higher Education, 2003-04 Databook, Utah Dept. of Workforce Services

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