Selected Research

Short Summaries of Selected Research Related to College and Career Ready

Including -

ACT, Inc.

Educational Policy Improvement Center (EPIC)

Educational Testing Services (ETS)

Georgetown University Center on Education and the Workforce

Harvard Graduate School of Education

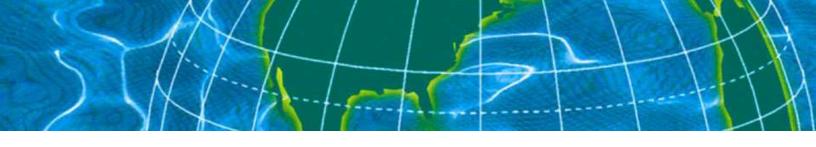
McGraw-Hill Research Foundation

Utah Women and Education Project

University of Utah, Bureau of Economic and Business Research

Washington Post





ACT, Inc.

About the Condition of College & Career Readiness

- Who: ACT (formerly "American College Testing")
- What: A 35-page report that uses the ACT College Readiness Benchmarks and ACT™ test scores to
 provide national and state snapshots of college readiness of the graduating senior of the class of
 2011 who took the ACT in high school. (Easy-to-read charts and graphs on every page.)
- **Published:** August 2011
- Takeaway: ACT's College Readiness Benchmarks are the minimum scores needed on the ACT subject area tests to indicate a 50% chance of obtaining a B or higher or about a 75% chance of obtaining a C or high in corresponding first year, credit-bearing course. This report is organized into six sections, highlighting key findings regarding the percentage of students meeting the ACT College Readiness Benchmarks in each subject area (College Readiness); the extent to which student aspirations match workforce demands (Educational/Career Aspirations & Economic Development). In addition, ACT suggests policies and practices to increase college and career readiness.
- Full story: About the Condition of College & Career Readiness PDF; web version
- **Selected Highlight:** The report includes selected state-specific data:
 - Utah was among the 11 states that had just 40-49% of their high school graduates meeting at least three of the four College Readiness Benchmarks defined by ACT.
 - o **Utah** was among the 26 states that had 60-79% of their 2011 graduates taking the ACT.



Educational Policy Improvement Center (EPIC)

A Complete Definition of College and Career Readiness

- Who: David T. Conley, Ph.D.
- What: This four-panel document a great handout format offers a definition of college and career readiness and presents the case that although readiness attributes for college are not exactly the same as those for career, the overlaps allow for a common foundation of preparation in high school. The author also notes some additional factors important for career and college readiness that do *not* translate into reasonable expectations in terms of school programs.
- Published: May 2012
- **Takeaway:** The definition presented by this author is based on over 18 years of research on the topic of college and career readiness by Dr. Conley and his colleagues. The resulting model of college and career readiness is organized into "Four Keys," and offers insight into the strategies, knowledge, and skill mastery required for college and career success.
- Full story: A Complete Definition of College and Career Readiness PDF
 - o <u>Educational Policy Improvement Center (EPIC) website</u>

Defining College and Career Readiness: Take Action Now

- Who: Beth Smith, Vice President, Academic Senate for California Community Colleges
- **What:** An article published in *Senate Rostrum: Senate for California Community Colleges Newsletter.*
- **Published:** April 2012
- Takeaway: The author argues that what students learn in school as they grow from children to
 young adults will make a significant difference in their ability to find employment directly out
 of high school or succeed in college and later find a job. She encourages community college
 faculty and senates to lay the foundation for defining college and career readiness, and to get
 involved in the process for determining how K-12 students will learn and be assessed on
 readiness.
- Full story: Senate Rostrum: Academic Senate for California Community Colleges PDF

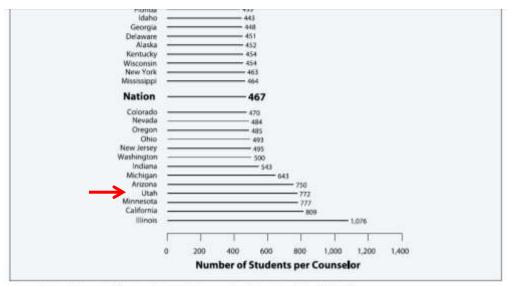


Educational Testing Services (ETS)

The Mission of the High School

- Who: ETS Policy & Research Report by Paul E. Barton and Richard J. Coley
- What: A 42-page report regarding issues related to preparing all students for college and career.
- Published: 2011
- Takeaway: The full title ("The Mission of the High School: A New Consensus of the Purposes of Public Education?") is a question, and the report is organized around whether there is a consensus, and provides information, asks related questions, and identifies issues to be addressed in order to better define the role of high school for individual students and for society as a whole. (Chapters include such topics as "Readiness for College," Readiness for Work," "Different Pathways to Life Destinations," "Guidance and Counseling," and "Stagnant High School Completion Rates.")
- Full story: <u>The Mission of the High School</u> free download of PDF
- Selected Highlight: "A principal objective of this report is to point out that adequate
 support for the counseling and guidance function should be part of the agenda for
 increasing college access and enrollment; that the goal of getting students "ready for
 college" in terms of credit courses will not, by itself, have the desired result of increasing
 college opportunity; and that the practice of diverting the staff trained to provide
 necessary counseling services to routine administrative functions needs to be stopped"
 (page 36).

Utah has one of the highest counselor-student ratios in the United States.



Source: National Center for Educational Statistics, Common Core Data: School Year 2007-2008.

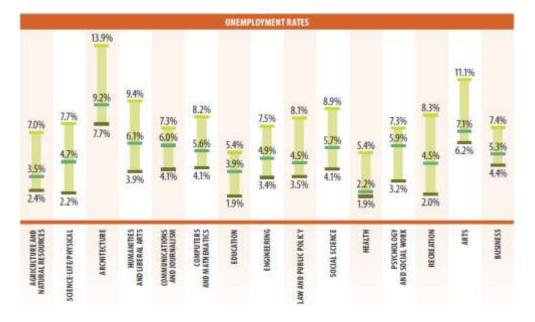


Georgetown University Center on Education and the Workforce

Hard Times: College Majors, Unemployment and Earnings

- Who: Georgetown University Center on Education and the Workforce
- What: This 20-page report proposes key factors to be considered in the selection of a college major by today's post-recession students.
- **Published:** January 2012
- Takeaway: As the title suggests, the two main factors suggested to students contemplating their
 choice of college major include the risk of unemployment (unemployment is generally higher for
 graduates with non-technical majors), and their potential earnings (majors with high technical,
 business and healthcare content tend to earn the most). There are employment rates and earnings
 information included for selected college majors.
- Full Story: Not All College Degrees Are Created Equal
- **Selected Highlight:** This graph reflects the change in unemployment rates as a function of experience or earning a graduate degree.







Career Clusters: Forecasting Demand for High School Through College Jobs 2008-18

- Who: Georgetown University Center on Education and the Workforce
- What: A report that presents data on job opportunities and required skills for employment success organized by the 16 career and technical education (CTE) clusters defined in the Carl D. Perkins Act.
- **Published:** November 2011
- Takeaway: This report was developed to assist program planners to design and deliver CTE programs that will meet workforce needs. Authors identify promising clusters by education level, considering job demand (new job creation, replacement jobs, and rate of growth) and earnings potential. The authors conclude that, "...while high school graduates should not despair if they cannot go on to college, neither should they be satisfied with their diploma alone if they can further their education."
- Full Story: Full Report Executive Summary
- **Selected Highlight:** Table 1 shows the career clusters that offer the best opportunities for high school graduates to earn a living wage:

	JOB VAC 2008	PLACEMENT CANCIES -2018 SANDS)				
CAREER CLUSTER	Less than high school	High school diploma	High school diploma or less (%)	Males per cluster (%)	Rate of growth (% change in employment)	Fastest rate of growth (rank
Manufacturing	420	1,250	9	71	-1	16
Architecture and Construction	760	1,200	11	98	7	11
Transportation, Distribution, and Logistics	560	1,800	13	85	4	14
Hospitality and Tourism	1,670	3,190	27	50	12	6
All other clusters	1,230	5.670	40			

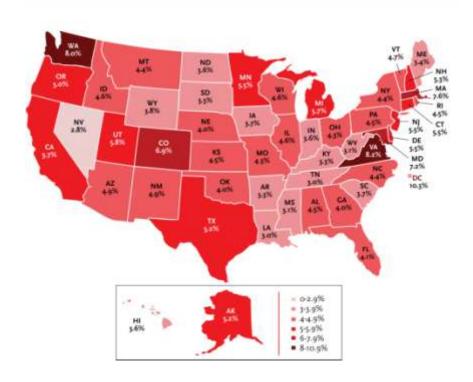
SOURCE: The Georgetown University Center on Education and the Workforce forecast of educational demand through 2018.



Executive Summary on STEM

- Who: Georgetown University Center on Education and the Workforce
- What: Executive Summary on importance of STEM in the global economy
- **Published:** Fall 2011 (Full Report published earlier)
- **Takeaway:** STEM occupations are critical to economic competitiveness because they represent a major source of innovation, economic growth and productivity, in spite of the fact that STEM occupations will only account for 5 percent of all jobs in the U S economy by 2018.
- Full Story (and selected related resources): http://cew.georgetown.edu/stem/
 Webinar
 Slides from the Webinar
 Utah-Specific STEM Report
- Selected Highlight:

THE DISTRICT OF COLUMBIA, VIRGINIA, AND WASHINGTON WILL LEAD THE NATION IN THEIR SHARE OF ALL JOBS THAT WILL BE STEM JOBS.





The College Payoff: Education, Occupations, Lifetime Earnings

- Who: Georgetown University Center on Education and the Workforce
- What: Authors' in-depth analyses of data contained in the 2007-2009 American Community Survey.
- **Published:** August 2011
- **Takeaway:** The authors acknowledge that "education and earnings interact in complex and often unexpected ways" (including age, gender and race/ethnicity), but conclude that higher education opens up the highest-paying jobs and that the difference in earnings between those who go to college and those who don't is growing.
- Full Story (and selected related resources): The College Payoff
- **Selected Highlight:** The report breaks out the "Top Ten Occupations" for each of the education levels identified. For example, this one is the "Top Ten Occupations, Associate's Degrees:"

	Share of all Occupations Associate's Degree	Lifetime Earnings (2009 dollars	
All Occupations, Associate's Degree		\$1,728,000	
Registered Nurses	9.1%	2,267,000	
Secretaries and Administrative Assistants	4.3%	1,385,000	
Other Managers	2.6%	2,292,000	
Supervisors/Managers of Retail Sales Workers	2.5%	1,531,000	
Accountants and Auditors	2.0%	1,636,000	
Supervisors/Managers of Administrative Support Workers	1.7%	1,736,000	
Customer Service Representatives	1.6%	1,379,000	
Retail Salespersons	1.5%	1,312,000	
Medical Technologists and Technicians	1.2%	2,187,000	
Accounting, and Auditing Clerks	1.2%	1,327,000	

The report also includes an appendix detailing lifetime earnings, educational attainment and more for workers in 300 occupations. The Executive Summary presents four "rules" that apply to the interactions between education and occupations.



What's It Worth: The Economic Value of College Majors

- Who: Georgetown University Center on Education and the Workforce
- What: This report details the economic value of 171 specific undergraduate majors.
- **Published:** May 2011
- **Takeaway:** The authors concede that earning potential is not the only criterion by which students should determine a college major, but especially post-recession it is an important one. This report offers information about the significant differences between median earnings for full-time, full-year workers with Bachelor's degrees (but no graduate diplomas).
- Full Story: Full Report
- **Selected Highlight:** Here are two tables (there are many), detailing highest median and lowest median earnings by major.

12: TOP 10 MAJORS WITH THE HIGHEST MEDIAN EARNINGS**

	Median	Earnings at 25th Percentile	Earnings at 75th Percentile
Petroleum Engineering	120,000	82,000	189,000
Pharmacy Pharmaceutical Sciences and Administration	105,000	83,000	120,000
Mathematics and Computer Science	98,000	75,000	134,000
Aerospace Engineering	87,000	60,000	115,000
Chemical Engineering	86,000	60,000	120,000
Electrical Engineering	85,000	60,000	110,000
Naval Architecture and Marine Engineering	82,000	44,000	120,000
Mechanical Engineering	80,000	59,000	105,000
Metallurgical Engineering	80,000	50,000	106,000
Mining and Mineral Engineering	80,000	52,000	125,000

^{*} Full-time, full-year workers with a terminal Bachelor's.

13: TOP 10 MAJORS WITH THE LOWEST MEDIAN EARNINGS**

	Median	Earnings at 25th Percentile	Earnings at 75th Percentile
Counseling Psychology	29,000	21,000	42,000
Early Childhood Education	36,000	29,000	45,000
Theology and Religious Vocations	38,000	27,000	52,000
Human Services and Community Organization	38,000	27,000	53,000
Social Work	39,000	30,000	52,000
Drama and Theater Arts	40,000	29,000	60,000
Stu <mark>d</mark> io Arts	40,000	26,000	60,000
Communication Disorders Sciences and Service	40,000	31,000	59,000
Visual and Performing Arts	40,000	26,000	60,000
Health and Medical Preparatory Programs	40,000	24,000	71,000

^{*} Full-time, full-year workers with a terminal Bachelor's.

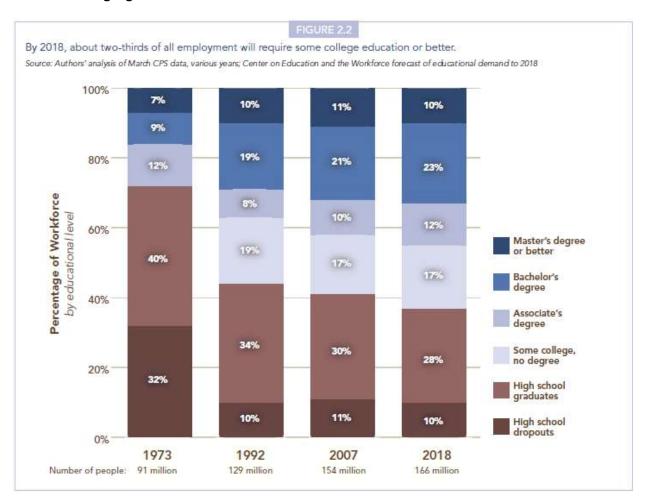


^{*} There was a tie for last place, and we are representing some, but not all, of those majors that tied.

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Help Wanted: Projections of Jobs and Education Requirements Through 2018

- Who: Georgetown University Center on Education and the Workforce
- What: Based on analyses of the 2008-18 employment projections for occupations by education level, this report sounded the initial alarm regarding a shortage of workers with college degrees including postsecondary certificates, Associate degrees and beyond.
- **Published:** June 2010
- **Takeaway:** In order to meaningfully participate (that is, to have access to well-paying jobs across the economy) in the U. S. labor market in the next decade will require 1, 2, 4 or more years of education beyond high school.
- Full Story: Full Report <u>Executive Summary</u> <u>Summary for Utah</u>
- Selected Highlight:



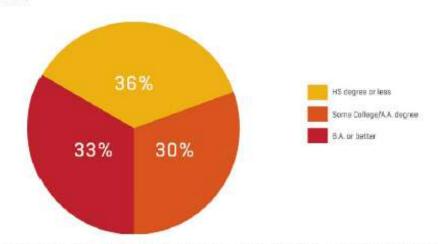


Harvard Graduate School of Education

Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century

- Who: Harvard Graduate School of Education
- What: A paper reflecting key findings of the Pathways to Prosperity Project. Initially known as "The Forgotten Half Project" and launched in October 2008, authors make the case that more robust career pathways that lead to relevant programs in community colleges, vocational training and apprenticeships can play a critical role in preparing today's students for the jobs of tomorrow.
- **Published:** February 2011
- **Takeaway:** As we appeal to today's students to aspire to college and complete a credential, we need to make certain that they understand college to mean "1, 2, 4 or more."
- Full Story: Full Report
- Selected Highlight: The authors acknowledge that students drop out of high school and college for a variety of reasons (e.g., financial pressures, ill-prepared to compete academically), but propose that a major reason is that students see no connection between their programs of study and opportunities in the world of work. Their solution is to build better articulated pathways that align with the needs and interests of today's youth and are designed to meet the needs of the 21st century economy. They argue that the 30% of the jobs in our economy that require some college or A. A. degrees offer the best opportunity for expanding the number of well-articulated pathways

FIGURE 4 College for All does not mean everyone needs a B.A. Even in this decade most jobs do not require a B.A.



Source: March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018.



McGraw-Hill Research Foundation

Developing Human Capital: Meeting the Growing Global Need for a Skilled and Education Workforce

- Who: Janet Bray (ACTE), Ron Painter (NAWB), Mitch Rosin (McGraw-Hill)
- What: A 20-page policy paper that includes a conversation between Ran Painter, CEO for the National Association of Workforce Boards (NAWB), and Janet Bray, Executive Director of the Association for Career and Technical Education (ACTE), moderated by Mitch Rosin, Director of Adult Education and Workforce Initiatives for McGraw-Hill.
- Published: December 2011
- Takeaway: Though there are differences between the business people who create jobs and the education professionals who provide students with the knowledge and skills they need to be successful employees, the two worlds of business and education are increasingly interconnected. The authors agree that education and workforce systems must overcome current barriers to work more efficiently together, and to coordinate efforts with the business community.
- Full Story: Full Report
- **Selected Highlight:** This paper was the basis of a <u>blog featured on UtahCTE.org</u> that included this list of implications for CTE programs in Utah:
 - Continue to **work with business and industry** partners to ensure alignment of our programs with their needs;
 - Communicate the value of CTE to **policy makers** to ensure adequate resources;
 - Assure that students and their parents understand the value of participating in CTE
 Pathways to achieve the associated marketable skills that will help them achieve success in the 21st century workplace.



Utah Women and Education Project

Brief #1: Utah Women and Education Research and Policy Brief (January 26, 2010): "The Value of Higher Education for Women in Utah"

- Who: Susan R. Madsen, Cheryl Hanewicz, and Susan Thackeray; Utah Valley University
- What: This brief presents concerns related to the low number of women pursuing and completing degrees at institutions in the Utah System of Higher Education.
- Published: January 2010
- **Takeaway:** There is a wide range of benefits not limited to the financial benefits to be gained by women who complete a college education.
- Full Story: Full Report
- **Selected Highlight:** Here is a list of the effects of college on student attitudes and values as summarized in the Brief:
 - Socio-political dispositions,
 - Civic and community involvement,
 - o Racial-ethnic attitudes,
 - Gender roles,
 - o Religious attitudes and values,
 - Interest in culture and the arts, and
 - Educational and occupational values.

Brief #2: Utah Women and Education Research and Policy Brief (May 25, 2010): "Women and Higher Education in Utah: A Glimpse at the Past and Present"

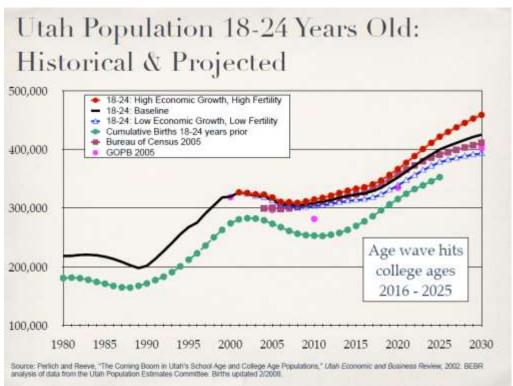
- Who: Susan R. Madsen, Cheryl Hanewicz, and Susan Thackeray, and A. David King; Utah Valley University
- What: Authors note that the rate of college enrollment for Utah citizens is not keeping pace with the national average. They argue that Utah women who complete college degrees offer great potential for ensuring that Utah maintains its competitive edge.
- Published: May 2010
- **Takeaway:** "When compared to all other states, Utah is the last in terms of the percentage of female students enrolled in postsecondary institutions." Utah women trail their national counterparts in graduation rates and in the degrees they pursue, with the exception of Education and the Trades.
- Full Story: Full Report



University of Utah, Bureau of Economic and Business Research

Utah's Demographic Transformation: A View into the Future

- Who: Pam Perlich. Senior Research Economist, for the Utah Economic and Business Review
- What: 12-page paper; Volume 68, Number 3
- Published: 2008
- Takeaway: Utah is in the midst of an unprecedented economic, demographic, and cultural transformation, with two major population trends – record numbers of young, working-age immigrants, and an aging population – driving major changes.
- Full story: Utah Economic and Business Review, Volume 68, Number 3 Presentation
- Selected Highlight: "If we define Utah's echo boom as beginning in 1974, peaking in 1982 and ending in 1989, the youngest in 2008 is 19, the peak is 26, and the oldest is 34. The peak-birth-year individual (born 1982) went through public education (ages 5 through 17) from 1987 through 1999 and through college (ages 18 through 24) from 2000 through 2006. This cohort has been generating the current echo boom, with record births for the past nine years. The resulting age wave is the current school-age population boom, expected to last the next ten years. Growth in Utah's school-age population has surpassed earlier projections because economic growth over the past decade exceeded expectations and brought more young adults, their children, and their new births to the state." (page 8).





Washington Post

Why the Job Hunt is So Hard

- Who: Washington Post with Bloomberg
- What: "Infographic" on gap between jobs wanted vs. help wanted
- Published: September 13, 2011
- **Takeaway:** Clear and concise representation of the jobs gap and why it is growing, despite steady growth of jobs in private sector. ("Infographic" below is offered as an example and is not complete.)
- Full story: Washington Post Jobs Gap
- Selected Highlight:

