

Success in the New Economy: How prospective college students can gain a competitive advantage

Kevin Fleming, 2013

Education is core to our economy. But, in order to guide our educational systems and maximize future income, we must understand the misalignment between education and our workforce.

In my pursuit of higher education, I have earned two bachelor's degrees, two master's degrees, and am working on a Ph.D. In total, this has cost me over one hundred and fifty thousand dollars. I've done all of this, because I believe formal education is important. Part of this belief came from seeing charts like this presenting a correlation between higher degrees and higher income; showing on average that a person with a college degree earns far more money than the average person without a high school diploma.¹

This perceived higher earnings for having a 4-year degree has fueled a "college for all" philosophy; causing educators and parents to encourage going to the university – any university – to major in anything – in pursuit of future job security, social mobility, and financial prosperity.² This philosophy has increased college enrollment, resulting in 66 percent of high school graduates in this country enrolling in higher education right after high school.³ That's two out of three. Initially, they are deemed the successful ones. But, what you won't see advertised is the reality that most drop out and only a quarter of those that enroll will finish a bachelor's degree.⁴

Only after these few graduate do many of them start exploring careers.⁵ It is here that they discover that their degree may not have prepared them for the world of work.⁶ You may be well

¹ The College Board, *Education Pays 2010*, citing U.S. Census Bureau wage data.

² The Conference Board. (2006). *Are they Really ready to Work?: Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce*. And: Bosworth, B. (2010). *Certificates Count: An Analysis of Sub-baccalaureate Certificates*. Washington, DC: Complete College America. And: Deil-Amen & DeLuca. (2010). *The Underserved Third: How our Educational Structures Populate an Educational Underclass*. Routledge. And: Gray, K. & Herr, E. (2006). *Other Ways to Win: Creating Alternatives for High School Graduates. Third Edition*. Thousand Oaks: Corwin Press. And: Symonds, W., Schwartz, R., & Ferguson, R. (February 2011). *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education.

³ The rate of college enrollment immediately after high school completion increased from 49 percent in 1972 to 67 percent by 1997, but since 2002 has fluctuated between 62 and 69 percent. Source: US Dept of Education, National Center for Education Statistics.

⁴ Horn & Berger. (2005). *College persistence on the rise? Changes in 5-year degree completion and postsecondary persistence rates between 1994 and 2000*. Washington DC: National Center for Educational Statistics. And: Symonds, W., Schwartz, R., & Ferguson, R. (February 2011). *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education, And: Gray, K. & Herr, E. (2006). *Other Ways to Win: Creating Alternatives for High School Graduates. Third Edition*. Thousand Oaks: Corwin Press.

⁵ CA Postsecondary Education Commission. And: Deil-Amen & DeLuca. (2010). *The Underserved Third: How our Educational Structures Populate an Educational Underclass*. Routledge.

educated, but not every degree is direct preparation for employment.⁷ This misalignment between degrees and job skills causes half of university graduates to be under-employed in what are called gray-collar jobs.⁸ Taking positions that do not require the education they have received, at a cost that is more than they can afford.⁹

Conventional wisdom suggests that a university degree guarantees a higher salary. But with rising education costs, a shrinking job market, and the oversaturation of some academic majors in the workforce, this old advice is now a myth for a majority of students.¹⁰ The economy and the world have dramatically changed. Over the last 3 generations we've gone from 13% of the population stepping into a college classroom, to 60% attending some form of higher education.¹¹

In 1960, when taking into account all jobs in the American economy, 20% required a 4-year degree or higher. 20% were technical jobs requiring skilled training, and 60% were classified as unskilled.¹² But what's the right percentage to meet the labor market demand for tomorrow? In 2018, Harvard University predicts only 33% of all jobs will require a 4-year degree or more, while the overwhelming majority will be middle-skilled jobs requiring technical skills and training at the credential or Associates Degree level.¹³

⁶ Bureau of Labor Statistics. (Winter 2007-08). *What can I do with my Liberal Arts Degree?* Occupational Outlook Quarterly. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC.

⁷ Jacobson, L., et al. (2009). *Pathways to Boosting the Earnings of Low-Income students by Increasing their Educational Attainment*, Gates Foundation/Hudson Institute. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC.

⁸ Industry Workforce Needs Council (www.iwnc.org). And: Gray, K. & Herr, E. (2006). *Other Ways to Win: Creating Alternatives for High School Graduates. Third Edition*. Thousand Oaks: Corwin Press.

⁹ Greene, K. (Oct 27, 2012). A New Peril for Older Parents: Student Loans They Co-Signed. *The Wall Street Journal*. p.A1&A12. And: Deming, D., Claudia, G., & Lawrence, F. (2012). "The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?," *Journal of Economic Perspectives*, American Economic Association, 26(1): 139-164. And: Carnevale, A., Rose, S., & Hanson, A. (2012). *Certificates: Gateway to Gainful Employment and College Degrees*. Center on Education and the Workforce, Georgetown University.

¹⁰ Epperson, S. (August 28, 2012). No College Degree Required for these \$100,000 jobs. *USA Today*. And: Godofsky, J., Zudin, C., & Van Horn, C. (2011). *Unfulfilled Expectations: Recent College Graduates Struggle in a Troubled Economy*. John J. Heldrich Center for Workforce Development, Rutgers. And: Jacobson, L., et al. (2009). *Pathways to Boosting the Earnings of Low-Income students by Increasing their Educational Attainment*, Gates Foundation/Hudson Institute.

¹¹ The College Board, *Education Pays 2010*, Figure 2.7; U.S. Census Bureau, 2009b, Table A-1.

¹² Project Lead the Way (www.pltw.org). And: GetReal (www.getrealca.com).

¹³ 90% of all jobs in the future will require some education and training beyond high school according to: The National Science Foundation (2012) PI Conference keynote by Jane Oates, Assistant Secretary ETA, Department of Labor. And: Symonds, W., Schwartz, R., & Ferguson, R. (February 2011). *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education. And: Deil-Amen & DeLuca. (2010). *The Underserved Third: How our Educational Structures Populate an Educational Underclass*. Routledge. And: The Bureau of Labor Statistics, Occupational Outlook Handbook, 2010-2011 Edition. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC.

A 4-year degree may have many benefits, but think about people you may know who, from an economic perspective, inefficiently spent time and money to get a degree that perhaps they didn't really need for the career they are in.¹⁴

The true ratio of jobs in our economy is 1:2:7.¹⁵ For every occupation that requires a master's degree or more, two professional jobs require a university degree, and there are over half a dozen jobs requiring a 1-year certificate or 2-year degree; and each of these technicians are in very high-skilled areas that are in great demand.¹⁶ This ratio is a fundamental to all industries. It was the same in 1950, the same in 1990, and will be the same in 2030.¹⁷

The hope for encouraging university education is that as the number of university-trained workers increases, the demand for their services in the workplace will increase as well. Unfortunately, this is not so. The whole pie may get bigger as the labor force and the economy grows, but the ratio will not change.¹⁸ The reality is there will not be more professional jobs available within the labor market.¹⁹ And some professional jobs have been replaced by technology, or are being outsourced.²⁰

Well intentioned attempts to send more and more students straight to the university will not change the types of jobs that dominate our economy, nor will a "college-for-all" mentality mask these labor market realities.²¹ The "college for all" rhetoric that has been so much a part of the current education reform movement is often interpreted as "university for all." This message needs to be significantly broadened to, "a post-high school credential for all."²² Students at various educational levels have left school without employable skills; setting up our children for failure, costing them

¹⁴ Recent publications all raise this question in different ways, For example, Forbes' August 2012 article, "Do you Really need to go to College?," or the New York Times' May, 2010 piece "Plan B: Skip College," or The Washington Post's September, 2010 story, "Some say bypassing higher education is smarter than paying for a degree," or The Chronicle of Higher Education's October 2010 story, "Here's Your Diploma. Now Here's Your Mop," and even viral videos from Mike Rowe, the host of 'Dirty Jobs' promoting CTE education (<http://www.mikeroweworks.com/>) and Sir Ken Robinson's speech, "Changing Education Paradigms" advocating for the reform of education.

¹⁵ Gray, K. & Herr, E. (2006). *Other Ways to Win: Creating Alternatives for High School Graduates. Third Edition.* Thousand Oaks: Corwin Press.

¹⁶ U.S. Bureau of Labor Statistics. *Occupational Outlook Handbook 2012-13.* Office of Occupational Statistics and Employment Projections.

¹⁷ Gray, K. & Herr, E. (2006). *Other Ways to Win: Creating Alternatives for High School Graduates. Third Edition.* Thousand Oaks: Corwin Press.

¹⁸ Bureau of Labor Statistics (2010). *Occupational Outlook Handbook 2010-11 Edition.* U.S. Department of Labor.

¹⁹ Department of Labor (December 8, 2010), *Table 1.3 Fastest Growing Occupations, 2008 and projected 2018.* Employment Projections Program, U.S. Bureau of Labor Statistics.

²⁰ Friedman, T. (2005). *The World is Flat: A Brief History of the Twenty-First Century.* New York: Farrar, Straus, and Giroux.

²¹ Deil-Amen & DeLuca. (2010). *The Underserved Third: How our Educational Structures Populate an Educational Underclass.* Routledge.

²² Symonds, W., Schwartz, R., & Ferguson, R. (February 2011). *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century.* Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education.

and taxpayers millions.²³ All while the labor market is desperate for highly-trained, skilled technicians.²⁴ So, how do you position yourself for high-wage, in-demand jobs?

Let's say you were considering a career as either an electrician or a business manager. You would find that the average annual income for electricians is \$51,000, only about half of the \$105,000 average wage for management occupations.²⁵ So, at first glance it looks as if getting a bachelor's degree in business is a no-brainer, but adding skills and ability into the picture adds a whole new dynamic. What if you have the potential to become an excellent electrician, but lack the skills and ability to be an excellent manager? Then you should be looking at projected incomes towards the bottom of the pay scale for managers and towards the top for electricians.²⁶ You would then discover that electricians near the top of the pay scale make around \$86,000; far higher than the income of a manager near the bottom of the pay scale at \$52,000.²⁷

Now, this is just one example, but the concept is true throughout all industries.²⁸ The claim that you will make more money with an increased amount of education is not necessarily inaccurate, it's just incomplete.²⁹ That advice is based just on the averages. But no one is perfectly average. Everyone has unique skills, talents, and interests. In fact, the income for the top individuals in a

²³ Fleming, K. (April 2012), *The Inland Empire's Neglected Majority: By the Numbers*. Paper presented at California Community College Association for Occupational Educational. Costa Mesa, CA. And: Symonds, W., Schwartz, R., & Ferguson, R. (February 2011). *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC. And: Scott, J., and Sarkees-Wircenski, M. (2004). *Overview of Career and Technical Education: Third Edition*. Homewood, Illinois: American Technical Publishers, Inc.

²⁴ Carnevale, A., Jayasundera, T., & Hanson, A. (2012). *Career & Technical Education: Five Ways that Pay along the Way to the B.A.* Center on Education and the Workforce, Georgetown University. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC. And: Gray, K. & Herr, E. (2006). *Other Ways to Win: Creating Alternatives for High School Graduates. Third Edition*. Thousand Oaks: Corwin Press.

²⁵ California Labor Market Information Division, Employment Development Department data.

²⁶ Example adapted from Charles Murray's *Real Education: Four Simple Truths for Bringing America's Schools Back to Reality*, as well as W.N. Grubb's research on postsecondary education and the sub-baccalaureate labor market.

²⁷ California Labor Market Information Division, Employment Development Department data, 10 and 90 percentile excluding sole proprietorships.

²⁸ Carnevale, A., Strohl, J., & Melton, M. (2011). *What's It Worth?: The Economic Value of College Majors*. Center on Education and the Workforce, Georgetown University.

²⁹ Epperson, S. (August 28, 2012). No College Degree Required for these \$100,000 jobs. *USA Today*. And: Center on Education and the Workforce, *Valuing Certificates*. (2009). Presentation. And: Osberg, L. (2001). Needs and Wants: What is Social Progress and how should it be measured. *The Review of Economic Performance and Social Progress* 2001. Vol. I pp23-41. And: Fiedrich, M. and Jellema, A. (2003). Literacy, Gender and Social Agency: Adventures in Empowerment, *DFID Research Report 53*. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC.

wide variety of skilled jobs that require an industry credential or 2-year degree is far higher than the average income for many occupations that require a 4-year degree.³⁰

Nationally, Associate Degree earners range between \$27,000- \$68,000 while Bachelor's recipients earn between \$34,000 - \$97,000.³¹ But this data only accounts for the 25th Percentile to the 75th percentile of full-time, adult workers. This means 25% of Associate Degree holders earn more than \$68,000 annually, and 25% of Bachelor's degree holders earn less than \$34,000!

Our world has changed, and in this new economy, the university degree is no longer the guaranteed path towards financial success as it was for previous generations.³² And even if you do earn one, that education alone may not be enough.³³ In today's highly-technical knowledge based economy, having hands-on skills and perfecting what you're good at can be more valuable than getting a degree in 'something' simply to get one.³⁴ Employers want to know what you can do, and what you can do well; not just what degree hangs on your wall.³⁵ Since new and emerging occupations in every industry now require a combination of academic knowledge and technical ability, we need to ensure that we're also guiding students towards careers and not just to the university.

³⁰ Carnevale, A., Jayasundera, T., & Hanson, A. (2012). *Career & Technical Education: Five Ways that Pay along the Way to the B.A.* Center on Education and the Workforce, Georgetown University. And: Carnevale, A., Rose, S., & Hanson, A. (2012). *Certificates: Gateway to Gainful Employment and College Degrees.* Center on Education and the Workforce, Georgetown University. And: Epperson, S. (August 28, 2012). No College Degree Required for these \$100,000 jobs. *USA Today*. And: Adler, L. (2010). *California Career & Technical Education 2010 Longitudinal Study*, University of California, Riverside; School Improvement Research Group. And: The College Board, *Education Pays 2010*, Figure 1.5; U.S. Census Bureau, 2009. And: Mitchell, D. (2006). *California Regional Occupational Centers and Programs 2006 Longitudinal Study*. University of California, Riverside; School Improvement Research Group. And: Jacobson, L., et al. (2009). *Pathways to Boosting the Earnings of Low-Income students by Increasing their Educational Attainment*, Gates Foundation/Hudson Institute. And: The Workforce Alliance. (2009). *California's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st Century Economy*. Washington DC. And: Deil-Amen & DeLuca. (2010). *The Underserved Third: How our Educational Structures Populate an Educational Underclass*. Routledge.

³¹ The College Board. (2010). *Education Pays 2010*, Figure 1.5; U.S. Census Bureau 2009 data.

³² Jacobson, L., et al. (2009). *Pathways to Boosting the Earnings of Low-Income students by Increasing their Educational Attainment*, Gates Foundation/Hudson Institute. And: Carnevale, A., & Derochers, D. (2003). *Standards for what? The economic roots of K-16 reform*. Princeton, NJ: Educational Testing Service. And: Scott, J., & Sarkees-Wircenski, M. (2004). *Overview of Career and Technical Education: Third Edition*. Homewood, Illinois: American Technical Publishers, Inc.

³³ Carnevale, A., Strohl, J., & Melton, M. (2011). *What's It Worth?: The Economic Value of College Majors*. Center on Education and the Workforce, Georgetown University.

³⁴ Davidson, P. (October 17, 2012). Employment Surges for Community College Grads. *USA Today*. And: Epperson, S. (August 28, 2012). No College Degree Required for these \$100,000 jobs. *USA Today*. And: Coyle, Daniel (2009). *The Talent Code*. New York: Bantam Books. And: Center on Education and the Workforce, *Valuing Certificates*. (2009). Presentation, as sourced in "ACTE Fact Sheet". And: Jacobson, L., et al. (2009). *Pathways to Boosting the Earnings of Low-Income students by Increasing their Educational Attainment*, Gates Foundation/Hudson Institute.

³⁵ Achieve, Inc. (2004). *Ready or Not: Creating a High School Diploma That Counts*. The American Diploma Project. And: Corporate Voices for Working Families. (2011). Why companies invest in "grow your own" talent development models. And: Carnevale, A., Jayasundera, T., & Hanson, A. (2012). *Career & Technical Education: Five Ways that Pay along the Way to the B.A.* Center on Education and the Workforce, Georgetown University.

So, before enrolling in classes or deciding what you're going to do next in your life, step one is self-exploration.³⁶ In addition to your interests, really analyze your talents and strengths. Step two is career-exploration; understand the jobs available, the income ranges they pay, and evaluate the skills they require. Identifying an area that appeals to your interests, skills, and the labor market may be your first career. And then you can develop a tentative career plan complete with multiple training and education options.³⁷ The key is to align your interests and abilities with your first career choice and the education & training you'll need to receive.³⁸ This alignment will help bring your future into focus, and ensure your position at the top of the pay scale in your chosen career

What all this data shows is that success in the new economy is as much about acquiring the knowledge, skills and abilities needed for in-demand occupations as it is to be well educated. Both paths may work for you, but education combined with technical training is how you ultimately secure a competitive advantage in the new economy.³⁹ Community colleges are in the ideal position to provide over 70% of tomorrow's workforce with an education combined with applied technical skills, industry driven credentials, and specific preparation for employment.⁴⁰ Being a skilled craftsman or technician is highly valued. Investments in career education programs in high schools and community colleges will help all students obtain an education which includes technical training and preparation for the workplace. Ultimately, this is how all students can be successful.

In the new economy, both education and technical skills are the new currency. Will you be ready?

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³⁶ Whitfield, Feller, & Wood. (2009). *A Counselor's Guide to Career Assessment Instruments, Fifth Edition*. National Career Development Association. And: California State Board of Equalization's Working Your Way Up campaign. And: Wallace-Broschious, A., Serafica, F. C., & Osipio, S. H. (1994). Adolescent career development: Relationship to self-concept and identity status. *Journal of Research on Adolescence*, 4(1), 127-149.

³⁷ Levine, M. (2005). *Ready or not: Here life comes*. Chapel Hill, NC: University Press.

³⁸ Carnevale, A., & Derochers, D. (2003). *Standards for what? The economic roots of K-16 reform*. Princeton, NJ: Educational Testing Service.

³⁹ Carnevale, A., Jayasundera, T., & Hanson, A. (2012). *Career & Technical Education: Five Ways that Pay along the Way to the B.A.* Center on Education and the Workforce, Georgetown University.

⁴⁰ Castellano, M., Stringfield, S., & Stone III, J.R. (2003). Secondary career and technical education and comprehensive school reform: Implications for research and practice. *Review of Educational Research*, 73, 231-272. And: Cohen & Besharov. (2004). The important role of career & technical education: Implications for federal policy. *Welfare Reform Academy Report*. Washington DC: American Enterprise Institute for Public Policy Research. And: Brown, C. H. (2000). "A Comparison of Selected Outcomes of Secondary Tech Prep Participants and Non-Participants in Texas." *Journal of Vocational Education Research*, 25, no. 3, 273-295. And: Cardon, P. L. (Winter-Spring 2000). "At-Risk Students and Technology Education: A Qualitative Study." *Journal of Technology Studies*, 26, no. 1, 49-57. And: Plank, DeLuca & Estacion (2008). High school dropout and the role of CTE: A survival analysis of surviving high school. *Sociology of Education*, 81, 345-370. And: Deil-Amen & DeLuca. (2010). *The Underserved Third: How our Educational Structures Populate an Educational Underclass*. Routledge. And: Harvey, M. W. (Spring 2001). "The Efficacy of Vocational Education for Students with Disabilities Concerning Post-School Employment Outcomes: A Review of the Literature." *Journal of Industrial Teacher Education* 38, no. 3: 25-44.