Using earnings data to rank colleges: A value-added approach updated with College Scorecard data

By: Jonathan Rothwell

Following up on previous Brookings research measuring the value colleges add to student outcomes irrespective of student characteristics, this study analyzes the Obama administration’s new College Scorecard database to produce value-added rankings for 3,173 colleges (1,507 two-year colleges and 1,666 four-year colleges), based on the earnings of alumni.

Value-added measures attempt to isolate the contribution of the college to student outcomes, as distinct from what one might predict based on student characteristics or the level of degree offered. It is not a measure of return on investment, but rather a way to compare colleges on a more equal footing, by adjusting for the relative advantages or disadvantages faced by diverse students pursuing different levels of study across different local economies.

Using the Scorecard data and other sources, this analysis finds that:

1. Graduates of some colleges enjoy much more economic success than their characteristics at time of admission would suggest. Colleges with high value-added in terms of alumni earnings are often focused on training for high-paying careers in technical subjects. These colleges include the Albany College of Pharmacy and Health Science, the Massachusetts College of Pharmacy and Health Science (MCPHS), The University of Texas Health Science Center at San Antonio, all of which have a
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1. Graduates of some colleges enjoy much more economic success than their characteristics at time of admission would suggest. Colleges with high value-added in terms of alumni earnings are often focused on training for high-paying careers in technical subjects. These colleges include the Albany College of Pharmacy and Health Science, the Massachusetts College of Pharmacy and Health Science (MCPHS), The University of Texas Health Science Center at San Antonio, all of which have a strong medical orientation, and Maine Maritime Academy, SUNY Maritime College, and the California Maritime Academy, which focus on nautical engineering and related subjects. Two-year colleges with high value-added scores include the North Central Institute, ATS Institute of Technology, Lawrence Memorial Hospital School of Nursing, and CUNY Kingsborough Community College.

2. Four college quality factors are strongly associated with higher earnings for alumni:

   *Curriculum value:* The amount earned by people in the workforce who hold degrees in a field of study
offered by the college, averaged across all the degrees the college awards;

*STEM orientation*: The share of graduates prepared to work in STEM occupations;

*Completion rates*: The percentage of students finishing their award within at least 1.5 times the normal time (three years for a two-year college, six years for a four-year college);

*Faculty salaries*: The average monthly compensation of all teaching staff

3. **Value-added measures are fairly reliable over time.** Scores for the cohort entering in 1997–1998 strongly predict value-added for the cohort entering in 2005–2006, using earnings data measured six-years after admission. Nonetheless, some colleges have made large improvements on value-added over that period, including Stanford, Yale, Georgetown, and Emory, as well as Glencive State College and Alaska Pacific University.

No ranking system is perfect, and there are many limitation and caveats with these data. Yet, the value-added measures here help fill an information void and can be used to inform strategies to improve college quality and help identify schools that are contributing the most to student economic advancement. There are many colleges with modest or low admission standards that consistently prepare students for high income careers. The next step in college quality research is to attempt to measure learning gains.

**Explore the new data**

**AUTHORS**

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Fellow, Metropolitan Policy Program  
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The data presented below are derived from data published in the U.S. Department of Education's College Scorecard database using a methodology developed by the report's author in earlier work.
As noted in the study, there were many data limitations and reasons for caution. The earnings data came from an organization called Payscale, which relies on voluntary data entries from users of its salary negotiation website. While Payscale offered the most useful and comprehensive source of earnings available at the time, those data contained little coverage of 2-year colleges, unknown sample sizes, limited age-cohort comparability, a non-random sample of alumni, and no information on non-graduates.

As I've described elsewhere, the Obama administration's new College Scorecard database represents a substantial improvement in data quality and transparency in higher education. Its core earnings measures are highly correlated with Payscale data for those colleges covered by both sources, but it contains a number of advantages: 11.3 million alumni compared to 1.4 million in Payscale; coverage for roughly 5,800 institutions compared to just 1,300 for Payscale, with deeper coverage per college; precisely defined age-cohort metrics to maximize comparability; and detailed data documentation with clearly articulated and well-defended methods. Moreover, the Scorecard contains novel measures of the family incomes and family education levels of entering students and more sophisticated measures of degree completion and loan repayment than those previously available.

The Scorecard's weaknesses, however, are non-trivial. It only reports earnings data for students starting as undergraduates who received federal aid—either loans or grants, which applies to roughly half of all students, and federal aid recipients tend to have lower family incomes than their peers. Moreover, some colleges with multiple campuses report have earnings data only at the system level, not at their specific campuses. This affects roughly 8 percent of students in the Scorecard database.

A larger issue is that alumni salary, when taken alone, is a biased and imprecise measure of the quality of a college, or even its economic value. It is biased because colleges with high earning alumni also tend to have students who are better prepared academically—as measured by test scores—and come from higher-income families. These students would have been well positioned to earn at least moderately high salaries, even if they attended a less prestigious college. In short, many factors contribute to alumni salary outcomes that have nothing to do with the quality of the college, but much to do with the characteristics of the students. This is why a value-added approach is needed.

Of course, salary is not the same as quality. The most relevant qualities of a college will vary by individual. It may include something about the depth and importance of the material taught, insights gained, skills mastered, sense of purpose established, and friendships forged, none of which can be directly measured by earnings. Researchers should strive to collect comparable institutional data on these factors.

Nonetheless, many critics of the College Scorecard and similar attempts to analyze alumni outcomes go too far in rejecting the importance of salary information, as my colleague Beth Akers has argued. Clearly, earnings are substantially relevant to happiness and health, even as there are many other determinants
of those goods. At a social level, the public and its government representatives have a very strong interest in other people earning higher salaries, because those salaries lead to higher tax revenues, elevated investment in research, culture, and the arts, new goods and services, and increased spending that sustains economic growth and prosperity.


After a brief description of the method, the report shows—at the aggregate level—which observable quality factors predict value-added and how they compare using Payscale and College Scorecard data. Then, college level value added results using medium-term 10-year earnings are reported for four- and two-year schools. (In the appendix, these rankings are compared to Payscale in an effort to better understand the strengths and weaknesses of the two sources and identify colleges that do well on both). Next, the analysis turns to changes in value-added over shorter-term horizons, comparing the stability in rankings overall and showing which colleges have improved the most. The final section concludes with a brief discussion of the limitations to current sources of college data. The Appendix describes the technical analysis and details about how to compare Payscale earnings with the Scorecard.

**An updated method**

The companion Methodological Appendix explains the details of the method and analysis used here.

The theory underlying this analysis is that the future earnings of alumni are affected by student characteristics (such as their academic preparation, age, racial or ethnic background, and family income), the type of college (a community college or research university, for example), the location of the college (as in a big city with many jobs compared to a small town), and the qualities of the college (Figure 1). To estimate the college's contribution to student earnings, earnings for an individual college are predicted based on these attributes and compared to actual outcomes. The value-added of the college can be thought of as the difference between expected and actual outcomes, or the sum of unmeasured and measured qualities of the college.
Figure 1. How value-added is calculated

Key outcomes

This study focused on three earnings measures from the College Scorecard (Table 1). One complication of any outcome measure is when to measure it. Lifetime earnings are best approximated by earnings later in life, but that provides less relevant information to current cohorts of entering students, who face a different labor market and may be entering a school that has changed significantly. Research on tax records for millions of Americans finds that annual earnings tend to reflect lifetime earnings very well by age 30. As it happens, the Council of Economic Advisors finds very high correlations at the college level between six-year and 10-year earnings measures, suggesting that both provide relevant information about students’ lifetime earnings potential. Hence, this report focuses on median earnings six and 10 years after entry to college.

Table 1. Earnings outcomes used in this study

<table>
<thead>
<tr>
<th>Measure of earnings</th>
<th>Year of entry into college</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median annual earnings 10 years after start of college, measured in 2011 and 2012</td>
<td>Students entering in 2001 and 2002</td>
</tr>
<tr>
<td>Median annual earnings 8 years after start of college, measured in 2011 and 2012</td>
<td>Students entering in 2005 and 2006</td>
</tr>
<tr>
<td>Median annual earnings 6 years after start of college, measured in 2003 and 2004</td>
<td>Students entering in 1997 and 1998</td>
</tr>
</tbody>
</table>

Notes: Earnings data are for employed, non-enrolled, undergraduate students who received federal aid (loan or grant) and who reported earnings to the IRS, likely excluding students living abroad. Change in earnings calculations adjust earnings to 2014 dollars using the consumer price index. Students who do not graduate, transfer, or go on to get a subsequent degree at any institution are included if they are working not enrolled during the years of data collection.

For comparison to previous work and as a check on the robustness of the data, this report also estimates value-added using the Payscale 2015-2016 College Salary Report for mid-career salaries (see Appendix and companion interactive and database). This measure assigns median earnings to a school from its pool of graduates (not dropouts) who have not gone on to earn a higher degree and who graduated at least 10 years ago from the time of measurement. For four-year colleges only, Payscale also provides the same measure for all undergraduate alumni (including those pursuing higher degrees).
A college's qualities that contribute to its value-added

As in earlier work, this analysis distinguishes between observed and unobserved qualities of a college.

Currently, there is no database available that would allow one to measure many aspects of a college that are likely related to its quality, such as teacher quality, administrative competence, and the utility of student programs. These unmeasured attributes of a college we refer to as its X-factor.

Still, there are many things about a college that can be observed, such as the extent to which its curriculum aligns with high-paying fields of study (its curriculum value and STEM orientation), how well its keep students on track (its graduation rate), and how well it compensates its teaching faculty. See the Appendix of "Beyond College Rankings" for details on how curriculum value and STEM orientation are measured.

The sum of observable and unobservable qualities of a college—weighted by their predictive power in explaining earnings—constitute the college's value-added.

Variables that contribute to a school's predicted outcomes

Calculating value added requires comparing predicted salaries to actual salaries. The prediction is driven by characteristics of the college's students and the college itself that are unrelated to how well it prepares students for economic success. These characteristics are listed below and include test scores, family incomes, and the regional cost of living near the college.

<table>
<thead>
<tr>
<th>Student characteristics</th>
<th>Type of college and location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average family income</td>
<td>Sub-bachelor's share of awards</td>
</tr>
<tr>
<td>First generation share of students</td>
<td>Local price index 2012</td>
</tr>
<tr>
<td>Math SAT/ACT score of students (imputed when missing)</td>
<td>State location</td>
</tr>
<tr>
<td>Female share of students</td>
<td></td>
</tr>
<tr>
<td>Black share of students</td>
<td></td>
</tr>
<tr>
<td>Asian share of students</td>
<td></td>
</tr>
<tr>
<td>Hispanic share of students</td>
<td></td>
</tr>
<tr>
<td>Foreign share of students</td>
<td></td>
</tr>
<tr>
<td>Part-time share of students</td>
<td></td>
</tr>
<tr>
<td>Mean age of students (and square term)</td>
<td></td>
</tr>
</tbody>
</table>

Findings

A college's curriculum value, mean faculty salary, and completion rates strongly predict the future earnings of those who attend.

Colleges have no effect on what students learn before they enter, but they do control the content of what
students learn while enrolled. Colleges also control faculty salaries, subject to market pressure and, for some public colleges, state legislation, affecting their ability to recruit and retain top teachers. Finally, colleges also affect degree completion, at least to some extent, through summer programs, financial aid packages, tutoring services, and other less tangible aspects of the academic environment.

As our previous analysis showed, these factors are strongly predictive of higher earnings after graduation (Figure 2). Among the quality measures, curriculum value is the single most important factor. A standard deviation in curriculum value is worth an estimated 11 percent in higher annual earnings using Scorecard data and 7 percent using Payscale data. In general, the quality variables predict higher earnings using either source.

The characteristics of students, of course, also affect earnings. A standard deviation in the average family income of entering students adds 22 percent to predicted medium-term earnings. Conventional rankings, based on selectivity and other measures, and non-value-added rankings of colleges based on earnings, fail to capture this important relationship, and thus overrate colleges with high-income students and underrate those with low income students.
Colleges with the highest medium-term value-added for federal aid recipients are often focused on training for high-paying careers in technical subjects.

Among four-year colleges, those with the highest value-added for federal aid recipients are disproportionately specialized in high-paying fields of study, such as medicine, business, and engineering. Thus, Albany College of Pharmacy and Health Sciences reports the highest value-added score. Actual median earnings—$116,000—are more than double predicted earnings, based on student
characteristics and other factors. It is followed by the Massachusetts College of Pharmacy and Health Science (MCPHS). Both schools prioritize health-related fields like molecular biology, chemistry, pre-medical and nursing. The University of the Sciences in Philadelphia trains many students for careers as pharmacists, among other health-related occupations. Three other top scoring colleges—Maine Maritime Academy, Massachusetts Maritime Academy, and SUNY Maritime College prioritize engineering related to shipping logistics and offshore drilling. Meanwhile, Babson and Rose-Hulman—focus on business and engineering respectively.

Among the top 20, only Harvard and Duke rate highly on conventional rankings like U.S. News & World Report's. On the other hand, Brigham Young University, which ranks 66th in U.S. News, ranks 16th on value-added for medium-term earnings.

Table 3. Four-year or higher colleges with the highest value-added with respect to medium-term earnings for federal aid recipients for cohort entering in 2001-2002

<table>
<thead>
<tr>
<th>Value-added</th>
<th>Predicted</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivy College of Pharmacy and Health Sciences</td>
<td>1.63</td>
<td>$114,677</td>
</tr>
<tr>
<td>PHS University</td>
<td>0.91</td>
<td>$48,072</td>
</tr>
<tr>
<td>University of Texas Health Science Center at San Antonio</td>
<td>0.88</td>
<td>$37,855</td>
</tr>
<tr>
<td>Maine Maritime Academy</td>
<td>0.65</td>
<td>$41,321</td>
</tr>
<tr>
<td>Massachusetts Maritime Academy</td>
<td>0.62</td>
<td>$44,956</td>
</tr>
<tr>
<td>University of the Sciences</td>
<td>0.80</td>
<td>$49,410</td>
</tr>
<tr>
<td>VPI Maritime College</td>
<td>0.59</td>
<td>$45,803</td>
</tr>
<tr>
<td>US Maritime Academy</td>
<td>0.57</td>
<td>$48,803</td>
</tr>
<tr>
<td>University of Colorado-Denver</td>
<td>0.57</td>
<td>$43,852</td>
</tr>
<tr>
<td>Son College</td>
<td>0.56</td>
<td>$51,267</td>
</tr>
<tr>
<td>and States Merchant Marine Academy</td>
<td>0.55</td>
<td>$54,027</td>
</tr>
<tr>
<td>Texas College of Chiropractic-Davenport</td>
<td>0.51</td>
<td>$25,016</td>
</tr>
<tr>
<td>Rose-Hulman Institute of Technology</td>
<td>0.50</td>
<td>$50,223</td>
</tr>
<tr>
<td>IIT University</td>
<td>0.47</td>
<td>$57,191</td>
</tr>
<tr>
<td>Virginia Polytechnic Institute</td>
<td>0.47</td>
<td>$57,972</td>
</tr>
<tr>
<td>Champlain University-Provo</td>
<td>0.46</td>
<td>$38,097</td>
</tr>
<tr>
<td>Boston College</td>
<td>0.40</td>
<td>$45,570</td>
</tr>
<tr>
<td>University</td>
<td>0.40</td>
<td>$51,687</td>
</tr>
<tr>
<td>Virginia Polytechnic Institute</td>
<td>0.45</td>
<td>$55,407</td>
</tr>
</tbody>
</table>

For two-year schools, top value-added performers also tend to have a technical orientation. North Central Institute in Tennessee emerges as the top value-added performer on 10-year median earnings for federal aid recipients entering in 2001 and 2002. Actual earnings are 56 percent higher than predicted for attendees, who often study aeronautics and take courses in applied physics. A number of colleges focusing on nursing score very highly, including ATI Institute of Technology, Lawrence Memorial School of Nursing, St. Vincent's College, Laboure College, Southeast Missouri Hospital College of Nursing and Health Science, and the Carolina College of Health Sciences. Meanwhile, students at Bramson ORT and Foothill College typically study business or information technology.
dramatically. Below, the colleges with the largest increases are highlighted, with a view toward summarizing some of the broad factors behind the increase.

Among four-year colleges, value-added increased the most for the Palmer College of Chiropractic in Davenport, Iowa. It increased the earnings of alumni, even as predicted earnings fell. The average family income of incoming students receiving federal aid was $50,000 in 1997–1998, corresponding to 0.6 standard deviations above the mean four-year college. But by 2005–2006, the mean earnings of incomes students was just $13,000, 1.7 standard deviations below the mean. Remarkably, earnings increased from 0.8 standard deviations below the mean to 0.5 standard deviations above the mean.

Some well-known schools also showed large increases in value-added between these periods, including Stanford, Yale, Georgetown, Duke, Emory, and Harvard. For each of these colleges, predicted earnings increased slightly over the period, even as the federal aid recipients at these colleges were from further down the income ladder in 2005-2006 than in the previous period. This would imply that these colleges are increasingly drawing from less economically advantaged families, but this conclusion does not necessarily follow. At Harvard, for example, the percentage of students receiving federal aid fell from 44 percent in 1999 to 24 percent in 2005, making the Scorecard data less relevant in the later period than in the former. These data do not tell us about the majority of students at Harvard who do not receive federal aid.

For some of the most improved colleges, value-added simply became less negative. This was the case for Central Yeshiva Tomchei Tmimim Lubavitz, the California Institute of the Arts, Washington Bible College-Capital Bible Seminary, and Manhattan Christian College. As implied by the names of these colleges, maximizing the earnings of graduates is probably not a principal goal for the administrators of these schools or their students. Rather, the focus is on preparation for careers as religious ministers and artists. Still, graduates from the later period have made some economic progress relative to their peers.
As for two-year colleges, some of those with the largest increase in value-added went from extremely poor performing to merely below average. This describes Stone Child College and Aaniiih Nakoda College, both located in rural Montana, Cossatot Community College of the University of Arkansas, Sisseton Wahpeton College in South Dakota, and Windward Community College in Honolulu. With the exception of Windward, these schools serve very low-income students in low-income areas. At Stone Child College, the average family income of students entering in 2005-2006 was just $15,000. The increase in Stone Child College’s curriculum value — placing it near the top of community colleges — explains some of its increase in value-added. However, modest their most results may be, these schools have made substantial progress for their students and communities.

Other schools with large improvements went from slightly above or below average to excellent, including the New Mexico Military Institute, North Central Texas College, and Lamar Community College in Texas. The same could be said of Whatcom Community and Bellingham Technical College, both in Bellingham, Wash.
Table 6. Two-year colleges with the largest increase in value-added with respect to short-term earnings for federal aid recipients, comparing cohort entering in 1997-1998 to 2005-2006

<table>
<thead>
<tr>
<th>College Name</th>
<th>Change in value-added</th>
<th>Value added for 2005-2006 cohort, 6-year earnings</th>
<th>Value added for 1997-1998 cohort, 6-year earnings</th>
<th>Metropolitan area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child College</td>
<td>0.48</td>
<td>0.10</td>
<td>-0.56</td>
<td>Central Montana nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.38</td>
<td>0.25</td>
<td>-0.64</td>
<td>South Dakota nonmetropolitan area</td>
</tr>
<tr>
<td>Mexico Military Institute</td>
<td>0.35</td>
<td>0.06</td>
<td>-0.44</td>
<td>Eastern Oklahoma nonmetropolitan area</td>
</tr>
<tr>
<td>Institute of Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Central Montana nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Lake Charles, LA</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Eastern South Dakota nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Honolulu, HI</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>North Central Texas nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Northeastern Colorado nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Bellingham, WA</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Northwestern Wyoming nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Upper Savannah nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Far Western North Dakota nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Northeast Maine nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Beaumont-Port Arthur, TX</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>East Arkansas nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Kansas nonmetropolitan area</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Bellingham, WA</td>
</tr>
<tr>
<td>School of Business and Technology</td>
<td>0.35</td>
<td>0.03</td>
<td>-0.32</td>
<td>Eastern and Southern Colorado nonmetropolitan area</td>
</tr>
</tbody>
</table>

Note: Analysis of College Scorecard and other sources. Negative value-added scores suggest earnings are lower than predicted, relative to schools with similar types of students and degree levels. All data are annual and measured 6 years after starting college.

Conclusion

Overall, the College Scorecard represents a major advance in the effort to transparently compare colleges along dimensions of quality. Its major limitation—the lack of any value-added metric—is addressed here and in the companion interactive. Yet, it makes strides toward allowing college administrators, policy officials, and others responsible for the quality of a college to more readily identify and resolve its weaknesses, with a view to enhancing student well-being after attendance. It also can help make the market for higher education function more efficiently via greater transparency and consumer empowerment.

However, progress is severely limited by flaws in available data, as well as for more fundamental reasons. The remaining flaws in the scorecard and other sources include:

1. **Incomplete coverage.** In the Scorecard's case, this means the data are limited to federal aid recipients. For PayScale, it means a non-random sample and many institutions with no data. Neither report outcomes for students by graduate institution or program of study.

2. **Lack of outcomes data disaggregated by field of study.** This is true for all multi-state databases, but disaggregated earnings are reported by Texas Consumer Resource for Education and Workforce Statistics for alumni who remain in the state of Texas.

3. **No measures of learning.** Perhaps the serious omission related to data on college quality is the absence of any information about what students learn while in college. While achieving higher earnings
are often a secondary goal, acquiring a body of useful or meaningful knowledge is perhaps the chief goal of higher education. The OECD is working to develop metrics that could be used to measure learning in higher education, but comprehensive measures seem a long way off.

More fundamentally, there will always be serious imperfections to any effort to assess college quality. People are not randomly assigned to colleges and differ in important ways that will remain unobservable to any researcher.

Given these limitations, some contend that colleges simply cannot be meaningfully ranked or compared, but as we have seen in the above (and in elementary and secondary value-added analyses by leading economists) reasonably accurate and reliable measures of value-added can be produced for individual schools, especially four-year colleges. Such measures should never be mechanically and rigidly tied to fiscal or regulatory policies, but they can and should serve as relevant guideposts to how well specific institutions are doing in preparing students for economically prosperous lives.
LONG ISLAND CITY — When Jesse Benitez became a father at 17, he dropped out of high school and started working full time, holding down four jobs to support his family — but the long hours came at a price.

"I started realizing that I didn't have an emotional connection with my son," said Jesse, now 23. "I didn't grow up with my father, and I didn't want to have that same cycle, for my son to have the same experience."

About four years after his son was born, Benitez enrolled in the CUNY Fatherhood Academy (https://www.google.com/url?q=https://www.cuny.edu/about-cuny/fatherhood-academy/), started by the Mayor's Office to help fathers who want to better their own lives and their children's. The academy launched in 2010 and provides day care, educational and parenting services.

The free 14-week program is for dads ages 18 to 24 and helps them get their high school equivalency diploma, attend parenting workshops, secure internships as well as parenting classes that cover topics like child development and communication skills.

Since graduating from the program in 2009, Benitez earned his GED and is now studying psychology at LaGuardia, and eventually plans to pursue a doctorate. But most of all, he said it helped him build a bond with his now six-year-old son, Mason.

"They helped me improve my fatherhood skills and I was able to create this close connection with my son," he said.

Mayor Bill de Blasio is allocating $1.1 million from his budget to continue the Fatherhood Academy at LaGuardia, officials said Tuesday.

Another $1 million allocated through the city’s Young Men’s Initiative (http://www.nyc.gov/html/ymi/html/about.shtml) — which aims to address the achievement gap among young men of color — will allow the Academy to launch for the first time at Hostos Community College (http://www.hostos.cuny.edu/) in the Bronx and Kingsborough Community College (http://www.kingsborough.cuny.edu/page/default.aspx/) in Brooklyn.

"What we really want is give these fathers not only the chance to connect with their kids, but the chance to make a difference in the lives of their families," LaGuardia Community College President Dr. Gail Miller said.

According to LaGuardia, of the 350 men who graduated from the Fatherhood Academy...
so far, 65 percent who took the high school equivalency exam passed and got their
diplomas. Another 80 graduates of the program found jobs, and 21 enrolled in college.

Among those is Brooklyn resident James Bell, 24, who joined the program in 2013 after
the birth of his now 4-year-old daughter Jomila. He got his high school equivalency
degree with the help of the Fatherhood Academy and is now studying Human Services
and Mental Health at LaGuardia.

"To this day, I think back if they weren't there, I would probably be dead or in jail,
because that's the life that I come from," Bell said.

"Now me being in college and getting her (Jomila) dressed and ready for school is just so
amazing to me," he added.
A Way To Keep Construction Projects On Traxx

Iontraxx founder Artur Madej: A digital platform that brings order to the field.
From the If You Want Something Done Right file comes a startup determined to keep alternative-energy construction projects on track — starting with work done by the cofounders’ other company.

Incorporated in September in Florida, Iontraxx is an offshoot of Orlando-based clean-energy firm Sydac Solar, which custom-designs and installs solar-powered energy generators. Its mission: streamline the construction process by helping solar-energy contractors keep track of their stuff.

The need for such services became clear when Sydac Solar was contracted to build a 24-megawatt solar-energy plant to supplement the power grid in the Central American republic of Honduras. After kicking off the project in 2014, Sydac CEO Artur Madej and senior project engineer Lian Niu realized they needed logistical help — lots of it — with issues like international shipping and tracking tools in the field.

“We didn’t have a sophisticated method of inventory management,” Niu noted. “Some of these tools and hardware are very expensive, and on a 200-acre plot of open land, it’s easy to misplace a tool that costs $10,000 and fits in a book-bag.

“And there was always confusion about where items were in the shipping process,” he added. “So there were a lot of events that we learned from, and we decided to avoid these mistakes in the future by implementing smart hardware and smarter
software."

Their solution: Iontraxx, which shortly after incorporating was welcomed into Empire State Development’s Start-Up NY program, which creates tax-free commercial zones around New York research institutions. The cofounders immediately took office space inside Stony Brook University’s Advanced Energy Research & Technology Center, Iontraxx’s base of operations since the end of the summer.

The Honduran solar plant was completed in April, but not before Madej and Niu displayed some fancy footwork dancing around those shipping and inventory issues. Some of the errors were costly, Niu told Innovate LI, but all were educational.

“Throughout this construction process, we saw a lot of little things that could be improved upon,” Niu said. “At the end of the day, they could have a big impact on an entire project.”

Their rapidly evolving plan involves a proprietary software platform that incorporates existing tech like GPS trackers, wireless radio-frequency ID devices and barcode scanners in a system designed specifically to improve asset management in large-scale solar-energy projects. They plotted for months, until Start-Up NY provided the shove that pushed Iontraxx from concept to reality.

“We heard about Start-Up NY and investigated it, and thought it would be a good launch pad for us,” Niu said.

In exchange for its inclusion in the tax-incentive program, Iontraxx agreed to create 13 jobs and invest $420,000 in the Long Island regional economy over the next five years. It’s already created two full-time
slots – including one for Niu, a native New Yorker who's relocated back to his old stomping grounds – and is planning a mini hiring spree focused on designers, programmers and engineers.

But first, Iontraxx must figure out what combination of global-positioning and radio-frequency technologies it will fold into its asset-management protocols.

"In the first year, our goal is to hire an additional two or three people," Niu said. "There are many ways to reach our goal, and once we have a better idea of exactly what technologies we're going to pursue, we'll hire more people who specialize in those technologies."

The idea here is not to reinvent the wheel, Niu noted, just to turn what's already available into a comprehensive package addressing the everyday details that sometimes trip up firms like Sydac Solar.

A great example was that $10,000 tool that went missing in the Honduran field. Not only did Sydac Solar have to replace it – including purchasing a new one and paying to ship the replacement internationally, including all of the customs requirements – but work on the new grid halted while workers waited.

All told, it was an enormous expense that "becomes a much bigger figure," according to Niu, "when you look at it from a liquidated-damages standpoint."

The "big lesson," he added, was the whole mess could have been avoided if the tool was fitted with a simple GPS tracker.

Another idea from their Central American adventure: tag shipping containers with RFID trackers to follow
international shipments on their journey, and to monitor if any containers are opened along the way.

Niu, who earned a master's degree in electrical engineering from City College of New York in 2010, recognizes these fixes are as simple as they are cheap. An amateur drone operator in his spare time, he knows he can buy GPS trackers in bulk, meaning a $20 piece of equipment could have pinpointed that missing $10,000 tool "within minutes."

But putting them all together in one construction-friendly software suite is an innovation with enormous potential. The company is already in talks with vendors who might like to lend their hardware to the cause — "no official partnerships yet," Niu noted, but a "lot of interest" — and once it determines which devices to address in its software package, Iontraxx will look to make tracks: six months to develop a prototype, Niu said, and a year more for a commercially viable product.

"The time will be determined by the technology we choose," he added. "Often you choose a tech because you think it's the best hardware to go with, but later down the line you realize there's a huge problem and you have to go back two steps to advance three."

However long the R&D phase lasts, Iontraxx won't have to look very far to initiate a proof-of-concept phase: Sydac Solar figures to be the startup's first customer.

"There will always be problems in construction," Niu said. "There will always be roadblocks and obstacles. The challenge for us to create software that works with smart hardware and is smart enough to mitigate those problems."
Documentary Aims Spotlight on Broken Juvenile Justice System

By Karen Savage | 19 hours ago

NEW YORK – She was 11 and in the sixth grade when she went to jail, eventually landing in solitary confinement. Nicole never imagined a petty fight at her Louisiana middle school would lead to years behind bars.

"They really made me feel like I was a bad person," Nicole said softly. "They tried to treat me like I was a criminal for real."

Nicole, who still has an easy smile, was one of several children in the Fusion documentary "Prison Kids: A Crime Against America’s Children" screened Tuesday night at the City University of New York (CUNY).

According to "Prison Kids," nearly 60,000 children are incarcerated in the United States. The film follows some of the many struggling to overcome a system many consider grossly unjust.

In the Jefferson Parish School district, where Nicole's story began, the Southern Poverty Law Center filed a civil rights complaint. According to the complaint, though black students made up 41 percent of the district's population in 2014, they accounted for 80 percent of its arrests.
The
New York
Metro
Bureau

Science Common Sense Tell Us About Kids and the Law
(http://iier.org/what-science-common-sense-tell-us-about-kids-and-the-law/24085/)

Thena Robinson-Mock, civil rights attorney with the Advancement Project
(http://www.advancementproject.org/content/home), a national civil rights organization, says in the film that race plays a huge factor. "Childhood innocence is not afforded to black students."

Judge Elijah Williams, a juvenile judge in Florida, comments in the film, "Our legal system was designed by people who are white, wealthy and highly educated. So my challenge every day as a judge is to make this system work for people who are of color, who are not as educated and who are not as wealthy." Williams, who is black, says he feels reflected in those who pass through his courtroom.

The documentary also spotlights an Ohio youth: Allen was sent to prison at 15 and suddenly found himself a situation similar to Nicole's. One year he spent a whopping 313 days in solitary confinement. "I used to pace a lot, pace back and forth, just looking back and forth, pacing," he said.

While incarcerated, Allen was diagnosed with a mood disorder and ADHD. Like most in his facility, he was put on strong medication to keep him calm and thrown back in solitary.

"Instead of understanding what was going on with these kids, they were punished, they were put in solitary confinement," says Dr. Stuart Grassian, a psychiatrist and expert on the effects of solitary confinement.

"Once a prisoner gets into solitary confinement, usually because of impulsive and emotionally volatile-type behavior, they get worse," Grassian says in the film.

A panel discussion after the screening focused on ways to change policies and get kids the treatment they need. Speakers included "Prison Kids" director Alissa Figueroa; associate producer and CUNY Journalism School alumna Alcione Gonzalez, and Daryl Khan, CUNY adjunct professor and New York bureau chief for the Juvenile Justice Information Exchange (http://iier.org/). The panel was moderated by Yoruba Richey, Tow professor and director of the CUNY Journalism School's documentary program.

Figueroa said lawsuits are often what it takes to make change, citing Ohio as an example. After multiple lawsuits, she said, incarceration rates there have dropped dramatically and more than half of the kids' prions are closed.

"It's never been legislators deciding on their own to change something, it's always been groups suing or threatening a lawsuit," said Figueroa.
Khan agreed, saying journalism like "Prison Kids" is also part of the solution.

"This shows you the power of journalism to do good," he said of the film. "The reason these lawsuits happen and not legislation is because people don't give a ---- and the reason people don't ... is because they don't know. And so you have these obscure lawyers doing all of this heavy lifting instead of us."

Panelists all said the system urgently needs to change, something Nicole's mother emphasized in the movie.

"Help these children while they have a chance," she said, "While they're still young and there's still a chance for them."

Click here to watch "Prison Kids: A Crime Against America's Children".
Physicists mimic quantum entanglement with laser pointer to double data speeds

CITY COLLEGE OF NEW YORK

In a classic eureka moment, a team of physicists led by The City College of New York and including Herriot-Watt University and Corning Incorporated is showing how beams from ordinary laser pointers mimic quantum entanglement with the potential of doubling the data speed of laser communication.

Quantum entanglement is a phrase more likely to be heard on popular sci-fi television shows such as "Fringe" and "Doctor Who." Described by Albert Einstein as "spooky action at a distance," when two quantum things are entangled, if one is 'touched' the other will 'feel it,' even if separated by a great distance.

"At the heart of quantum entanglement is 'nonseparability' - two entangled things are described by an unfactorizable equation," said City College PhD student Giovanni Milione. "Interestingly, a conventional laser beam (a laser pointer)'s shape and polarization can also be nonseparable."

To make the laser beam's shape and polarization nonseparable, the researchers transformed it into what Milione refers to as a vector beam - a polarization dependent shape. Then using off-the-shelf components to 'touch' only its polarization, they showed it could be encoded as two bits of information. Surprisingly, this was twice as much information that could be encoded as when the laser beam was separable.

"In principal, this could be used to double the data speed of laser communication," said CCNY Distinguished Professor of Physics Robert Alfano. "'While there's no 'spooky action at a distance,' it's amazing that quantum entanglement aspects can be mimicked by something that simple."

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An article on the experiment appears in the latest issue of the journal "Optics Letters" and was supported in part by the Army Research Office.
On Fighting BDS

Wed, 10/28/2015
B. Cohen

Shame on the American Jewish community for sending our sons and daughters off to fight the campus battles for Israel so woefully unprepared ("The Wrong Way To Fight BDS," Editor's column, Oct. 16).

Yes, our youth should form alliances, but they also need the facts to combat the Arab Big Lies and they need tough role models to stand up to the intimidation and harassment of Students for Justice in Palestine, Jewish Voice for Peace and other verbal terrorists, as the Israelis fight physical Palestinian terrorism.

Ask the students at University of California and now Brooklyn College and their parents if BDS, Israel Apartheid Weeks, etc., are imaginary threats.
City Hall helps CUNY expand Fatherhood Academy

By Conor Skelding

5:18 p.m. | Oct. 27, 2015

The City University of New York’s Fatherhood Academy will double in size at LaGuardia Community College and expand to Kingsborough and Hostos community colleges with the support of City Hall’s Young Men’s Initiative, City Hall announced today.

Founded in 2012 at LGCC with the support of the Campaign for Black Male Achievement at the Open Society Foundations, the Fatherhood Academy promotes responsibility and economic mobility for New York City fathers aged 18-24.

“We are investing an additional $1 million to expand the CUNY Fatherhood Academy to Kingsborough Community College and Hostos Community College through the Mayor’s Young Men’s Initiative. As the son of a loving father and the father of two sons myself, I know how much a father’s love affects a child’s self-esteem, independence, emotional responsiveness, and more,” deputy mayor Richard Buery said in a statement.

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FOR IMMEDIATE RELEASE: October 27, 2015

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MAYOR’S YOUNG MEN’S INITIATIVE ANNOUNCES EXPANSION OF CUNY FATHERHOOD ACADEMY

NEW YORK—Deputy Mayor for Strategic Policy Initiatives Richard Buery today announced the expansion of the CUNY Fatherhood Academy (CFA), a program of Mayor Bill de Blasio’s Young Men’s Initiative. With $2.1 million in new funding, CFA will double in size at LaGuardia Community College and will expand to two new CUNY campuses, Kingsborough Community College and Hostos Community College.

“Today we are announcing that we are doubling down on the CUNY Fatherhood Academy once again,” said Deputy Mayor for Strategic Policy Initiatives Richard Buery. “We are investing an additional $1 million to expand the CUNY Fatherhood Academy to Kingsborough Community College and Hostos Community College through the Mayor’s Young Men’s Initiative. As the son of a loving father and the father of two sons myself, I know how much a father’s love affects a child’s
self-esteem, independence, emotional responsiveness, and more. CUNY Fatherhood Academy is one of the most important investments we can make as a City. By investing in our fathers, we are investing in our future.”

“In New York City, far too many children grow up without fathers, which research shows has a profoundly negative impact on the life outcomes of a developing child,” said W. Cyrus Garrett, Executive Director of the Young Men’s Initiative. “The CUNY Fatherhood Academy offers our young men a chance to turn this damaging tide and become the nurturing parent they have the potential to be. The Young Men's Initiative is proud to support the expansion of this critical program, which will increase opportunities for our city's young and disconnected fathers to become the best dads that they can be.”

The CUNY Fatherhood Academy, started at LaGuardia Community College in 2012 with support from the Campaign for Black Male Achievement at the Open Society Foundations, is a comprehensive program designed to promote responsible parenting and foster economic stability for unemployed and underemployed young fathers through education, employment, and personal development.

Increased familial engagement, attaining a High School Equivalency (HSE) diploma and finding gainful employment are all essential goals of the program. It aims to help young fathers prepare for and enroll in college or training programs, with the understanding that earning a college degree is the most effective path toward providing long-term economic sustainability for themselves and their families. The program serves young fathers 18 to 24 years of age throughout New York City.

Earlier this year, Mayor Bill de Blasio provided LaGuardia Community College with $1.1 million to double the size of the CUNY Fatherhood Initiative.

An evaluation of CUNY Fatherhood Academy by the Urban Institute in 2014 found that participants earn high school equivalency diplomas at rates above the NYS average (61.3% average pass rate among CFA participants, compared to 56.4% average among 19 to 24 year olds in New York State).

Participants also credit CFA with increasing their motivation and their ability to pursue education and employment. The evaluation report highlights CFA’s location on the LaGuardia Community College campus as helping participants develop a sense of belonging and possibility.
With CUNY students facing yet another possible tuition hike, their professors and teachers are preparing for a possible strike if Governor Cuomo doesn't sign a stopgap spending bill by the end of November, KCP has learned.

The legislature passed the bill, dubbed Maintenance of Effort, last June. It provides public funding to cover CUNY's annual mandatory cost increases, including contractual raises.

The Professional Staff Congress argues that if Governor Cuomo doesn't sign the MOE, the future state budgets will not cover CUNY's and SUNY's mandatory costs increases. To fill the gap, tuition increases may be necessary. At Brooklyn College, full-time undergraduate New York resident students pay $3,466 per semester in tuition.

According to bill S201A/A3370A, "The state shall appropriate and make available general fund operating support to cover all mandatory costs of the City University, which shall include, but not be limited to, collective bargaining costs, including salary increments, fringe benefits, and other non-personal-service costs such as utility costs, building rentals, and other inflationary expenses incurred by the City University."

In an effort to raise support for their cause, the PSC is collecting 100,000 postcards signed by CUNY and SUNY students in support of the bill. Of those 100,000 signatures, 40,000 are needed from CUNY students. The signed postcards will be delivered to Governor Cuomo's office at a public event in late November.
Earlier this month, PSC President Barbara Bowen announced through emails to PSC members that a strike authorization vote will be held at the union’s meeting on November 15 at the Great Hall at Cooper Union.

Brooklyn College

“There is still no offer on the table, despite the increased attention our contract has received in all areas, City Hall and CUNY’s corporate office as a result of our October 1st demonstration and the announcement of a strike authorization vote. We need to turn up the heat again,” announced Bowen. According to her statement, PSC members have been training this fall to participate in non-violent disruptive protest.

The PSC Chapters ([http://psc-nyu.org/about-us/affiliates/Chapter-Sign-Chains](http://psc-nyu.org/about-us/affiliates/Chapter-Sign-Chains)) at Kingsborough Community College and Brooklyn College are reaching out to students to encourage them to sign cards in support. Postcards can be distributed to students in class if professors feel comfortable doing so. The students can then decide if they would like to sign.

The PSC is also encouraging faculty members throughout CUNY to find pedagogically appropriate ways to make CUNY funding and the contract part of classroom learning (http://psc-nyu.org/teach-teach-out-materials/taas). We encourage email this week to the provosts will-you-teach-professors_reference this week in the provost will-you-teach professors.

“CUNY management’s failure to produce an economic offer has already begun to damage the quality of education for CUNY students. The failure to resolve our contract is a failure to invest in the college education of working people, people of color and the poor in this city,” said Bowen.
SUNY expanding its 'badge' credential program

By Conor Skelding

5:47 a.m. | Oct. 29, 2015

The State University of New York will soon offer "micro-credentials" to more students, chancellor Nancy Zimpher will announce Thursday at SUNYCON in Manhattan.

Micro-credentials, also known as "badges," are digital documents that demonstrate a student has a specific competency. SUNY piloted the program at Stony Brook University, which offers badges to education and business majors with descriptions such as Investment Analysis, Diverse Literatures and Teaching Students with Special Needs.

The program will soon expand to more SUNY campuses and to more majors, Zimper will announce on Thursday. SUNY will form a task force made up of of faculty, administrators and workforce experts to plan for the systemwide expansion.

Alexander Cartwright, SUNY provost and executive vice chancellor, said the badges will help prepare liberal arts graduates to demonstrate their employability.

"For a lot of people who have liberal arts degrees, long-term they do incredibly well because they have such a rich skill set that they learned in college — about learning, about logic, about arguing, about how you actually have a good life," Cartwright said in a phone interview. "Where they struggle a little bit is getting that first job."

Cartwright also said the badges might help encourage other students to graduate, thereby improving SUNY's completion rates.

"It has to do with whether [students] believe they can complete their degree or not," he said. "So, can we give them something that says you've demonstrated competency in a specific area that gives you a qualification that is on the path to something much bigger?"

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NYPD Officer Allegedly Put a Skateboarder in Illegal Chokehold

"Here we go again."

That's what a bystander said as a New York Police Department (NYPD) officer appeared to put a 22-year-old college student in an illegal chokehold. Last year, national outrage and debate sparked when Eric Garner died as an NYPD officer placed a chokehold on him in Staten Island.

Video recording of the incident shows a cop subduing Yibin Mu, a sophomore at Queens College, by putting his arm around his neck and swinging him to the ground at Columbus Circle. Once down, the two wrestled around until the officer managed to get Mu to lie flat on his stomach while he sits on top of his back. He then sprays him with pepper spray and proceeds to handcuff him.

"What did I do wrong?" Mu can be heard asking the cop in a YouTube video that was uploaded Monday. "What is my crime?"

Witnesses can be heard screaming "Yo! Yo!" and "Here we go again" during the confrontation.

Apparently, the cop charged Mu with skateboarding illegally.

"I was just skating around, killing some time. I saw this police officer approaching. I got off my board to ask him [if I could skate] and the first thing he did was reach for my board," Mu said, describing the beginning of the incident, according to NYMag.

Mu also accuses the cop of grabbing him "without warning" and putting him in a chokehold.

"The police officer used one hand to grab my forearm and the other hand to grab the back of my neck. He then put me in a chokehold and this is what happened next," Mu wrote in the YouTube video description. "I was nonaggressive the entire time. I'm tired of abusive cops."

A police spokesperson told Gothamist that Mu "refused to sit down and ignored" the police officer. Police also argue that there are six signs alerting skaters that it is illegal to skateboard in the area.

A police spokesman said the officer stopped Mu to give him a ticket for skateboarding at Columbus Circle before the confrontation ensued.

The Chinese-American student ended up spending Sunday night in jail and was charged with resisting arrest, disobeying park rules and defacing park property. He was then released on his own recognizance at his arraignment Monday.

Watch the video below.