

eCN

eCAMPUS NEWS

Vol. 9 No. 2

eCampusNews.com

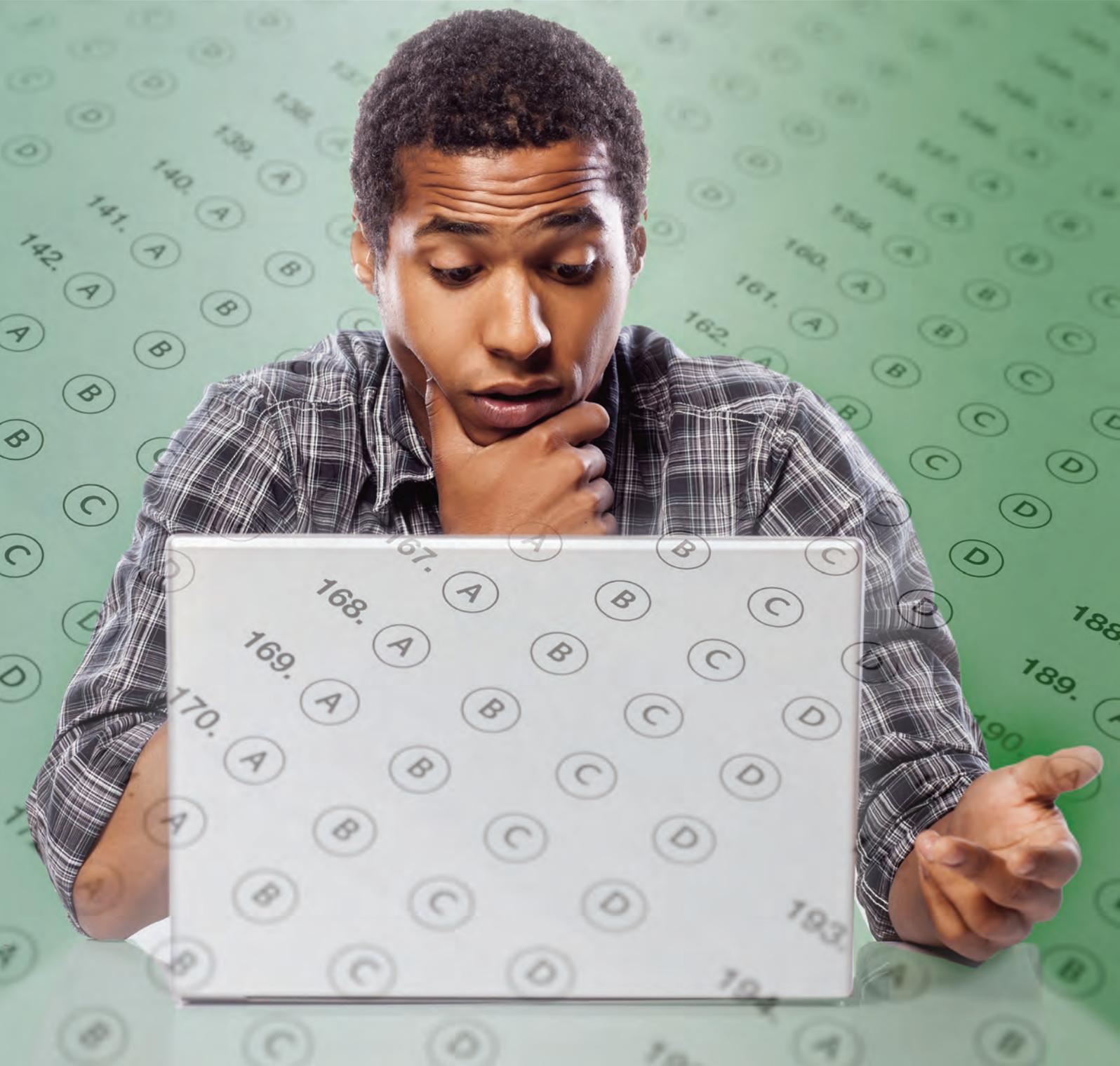
May/June 2016

Imagining Higher Ed's Standardized Assessments

Why is this an increasingly discussed consideration? Will they look like K-12's? Two experts discuss higher ed's assessment future.

When Curriculum Partners with the Business World

An in-depth look into the growing practice of businesses and industry providing resources and curricular input for postsecondary courses across the U.S.





STEM



Online Learning



Analytics



Disruptive Innovations



Open source

MAIL BOX

**Get the latest higher-ed news
delivered right to your mailbox!**



Register Today!

eCAMPUS NEWS

Technology News & Innovation in Higher Education



eCampusNews.com

[@ecampusnews](https://twitter.com/ecampusnews)

Contents

MAY/JUNE 2016 Vol. 9, No. 2

SYMPOSIUM

12 Imagining Higher Ed's Standardized Assessments

Why is this an increasingly discussed consideration? Will they look like K-12's? How can institutions ensure validity? Should faculty be involved in design? What role will these assessments play in federal mandates and policy, if any role? Two experts discuss higher ed's assessment future.

THOUGHT LEADERSHIP

4 4 short clips that wowed during ed's hottest innovation conference

Education expert Casey Green teamed up with eCampus News to interview some of higher education's leading trailblazers in sustainable, scalable and successful programs.

INNOVATION IN IT

10 STEM crisis quickly becoming an IT problem

Gen Z's dependence on tech and tech support not mirrored in their career choices; IT dearth a massive problem on the horizon.

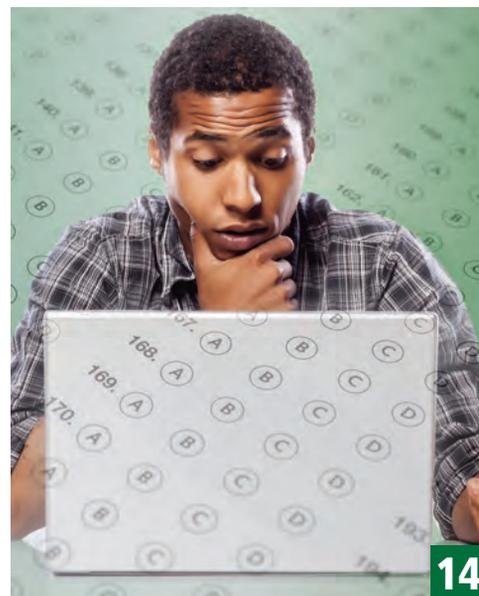
FACULTY/ADMIN CORNER

6 17 crowdfunding sites for millions in higher ed donations

Taking a cue from savvy students, colleges and universities are turning to online crowdfunding sites to rake in millions in alumni donations and program and research funding

18 When curriculum partners with the business world

How companies and organizations are working with higher education institutions and programs to help fill workforce gaps and bolster college and university resources.



14



6



21

21 Online Update

22 Fast Facts

4 short clips that wowed during ed's hottest innovation conference

Education expert Casey Green teams up with eCampus News to interview some of higher education's leading trailblazers in sustainable, scalable and successful programs.

By Meris Stansbury, Editor

These are not infomercials," is perhaps the best way to describe the reinvented interview lineup recently part of ASU GSV 2016's **Innovation Conference Summit** held in San Diego said Casey Green, host of the interactive interviews and founding director of **Campus Computing**—the largest continuing study of eLearning and information technology in American higher education.

In what could be considered a remodel of the education conference to reflect the disruptive change occurring throughout K-12 and higher education, ASU GSV's Innovation Summit hosted a diverse mix of educators, corporate executives, public officials, education entrepreneurs, and foundation officials—and Green, in partnership with eCampus News, was there to capture the invaluable advice and thought leadership from some of the most notable attendees.

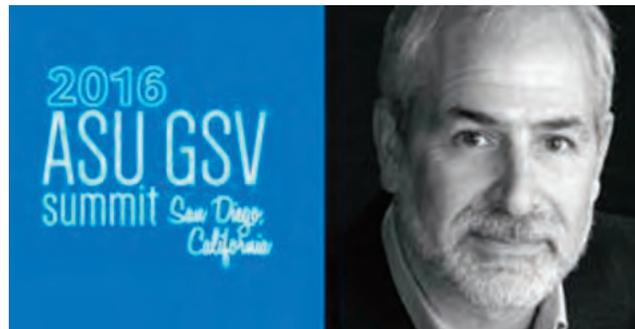
Here, you'll find a sample of the interviews recently conducted during the innovation conference, as well as a brief description of some of the topics discussed. For even more interviews (more will be added to the current list as we receive the archived versions), go to:

<http://www.ecampusnews.com/asugsvsummit/>

[Listed in alphabetical order by interviewee]

1. Why it's critical for institutions to get away from the "just a project" mentality

In his interview with Dan Greenstein, director



postsecondary success, Bill & Melinda Gates Foundation, Green delves into how colleges and universities can successfully transition from pilot and small programs and projects to large-scale implementations. He also asks Greenstein what makes some projects successful and sustainable versus those that don't make it past a year or two.

"What we've found in working with institutions that are at-scale with innovative and successful programs is that those who find the most success are those that realize these aren't 'projects,' but critical components to the institution's and students' success—the 'project' or 'projects' aren't one-offs or scattered pieces outside of a whole, but rather part of the overall strategic institutional objective to improve outcomes and retention," said Greenstein. "We've also noticed that institutions that have been trying to implement innovation for 5 to 10 years have staff at the ground-level speak in terms leadership often uses; and that's a great indicator of sustainability and a deep infrastructure in place for innovation-based successes."

<https://www.youtube.com/watch?v=b5nCagM6s8I>

2. Innovation as faculty-designed and student-centric

Speaking in-depth with **Dr. Michael Crow, president of Arizona State University (ASU)**, Green delves into the secret sauce behind ASU's dramatic success in some of the most important areas of higher education today: enrollment, retention and garnering research funding.

"It's really an overall culture change," explained Crow. "We have a massive diversification of our student body, representative of the entire socio-economic distribution in our area. We also have a faculty-designed, but student-centric, culture that truly allows us to alter strategies for better outcomes. We ask ourselves the question 'Why are we here? Are we here to feed ourselves or to be transformative on a social scale?' The commitment from faculty to be transformative on the social scale is imperative and we have it—we call them super faculty, because they are the designers of the institution and are free from academic bureaucracy common on other campuses."

Green also delved into why some institutions are doing better than others in terms of strengthening enrollment and retention, and Crow delivers an enlightening response.

<https://www.youtube.com/watch?v=392h2iZni0c>

3. The role of today's conference as a catalyst for innovation

Ron Reed, founder of SXSWEDU, says most of SXSWEDU's success comes from the ability to converge a diverse audience that's passionate about teaching and learning.

"SXSW is about creativity, innovation and cultural drivers. SXSWEDU just completed its sixth event and we aspire to be an international convergence zone of those passionate about teaching and learning, both in K-12 and higher education. The more diverse the community we convene, the more impactful the conversations."

Green also asks Reed some audience questions, including "what's a 'big wow' you've witnessed during SXSW events?" And though there are some big names Reed could drop, it's one organization's name that has exploded within educational technology that he says he's most excited to discuss, thanks to its recent traction in the education realm.

<https://www.youtube.com/watch?v=04TOYuuWArY>

4. On why education's perceived problems aren't like paving a new highway

As Green cites recent policy briefs that chide education for not improving quickly enough for the general public's approval, **Ted Mitchell, Under Secretary of Education, U.S. Department of Education**, discusses why systemic change and improving student learning outcomes aren't quick fixes—and where the real solutions might lie.

"These are systemic systems you're talking about with huge numbers of moving parts, things like family dynamics, social systems, et cetera. So looking at broad reform in education within a linear model is tough. It's not just give us your money and we can repave this highway and then the problem is fixed; though, many in education seem to think the solution does lie within a single-point solution on a linear path (e.g. professional development). The problem is, however, that when you focus on a single point, every other aspect tends to drop away! Also, there's the mentality that a problem addressed means that it's forever solved. I think there's real hope in the change management model, where the focus is not on 'fixing,' but keeping eyes on what's going on around you. This model focuses on agility, iteration, evidence, gathering data, and refining practice, and I believe it has real promise."

Green goes on to ask Mitchell whether or not education is really using data to its full advantage.

<https://www.youtube.com/watch?v=rtly4riLCGk>

17 crowdfunding sites for millions in higher ed donations

Taking a cue from savvy students, colleges and universities are turning to online crowdfunding sites to rake in millions in alumni donations and program and research funding.

By Meris Stansbury, Editor

Figures like \$2 million, \$300,000, \$10 million, and \$900,000, abounded in a [recent Washington Post story](#) that revealed how small liberal arts schools are turning to the relatively new-ish start-up concept of crowdfunding sites for alumni and student program donations – all through Washington D.C.-based crowdfunding website [GiveCampus.com](#).

The success in receiving alumni donations, relates the article, is due to understanding how younger, more tech-savvy alumni like to do things: quickly, online and part of a social group.

“We all live on social media, so getting friendly reminders from your alma mater to give is not only effective, but appreciated,” said Tatum McIsaac in the Post’s article, who graduated from the liberal arts school Holy Cross in 2001 and donated via the GiveCampus campaign. “It’s a lot easier for me to make a quick contribution online than to wait for an envelope to arrive in the mail and write a check. I don’t even know where my checkbook is.”

Students have been crowdfunding for years, even for tuition; now colleges and universities are starting to follow suit, with hundreds of thousands, if not millions, in donations. And the timing couldn’t be better: according to the [Council for Aid to Education](#), though overall contributions to colleges and universities rose to a record amount in 2015, most donations were large sums to Ivy League institutions. And though the overall amount rose, alumni participation is on the decline; meaning that while individuals are making larger

contributions, less people are contributing.

The Crowdfunding strategy, it seems, is critical for higher education. But what are the crowdfunding sites that boast the most success?

Before You Start

Crowdfunding, which harnesses the “crowd” to gain needed funding for a product or cause instead of specialized donors, and often enlists the use of social media to increase the ‘virality’ of a project to make it more successful, is unique for education. In the scope of university crowdfunding, most donations go to a specific fund or cause, and because the money goes to supporting a larger nonprofit organization, many donations are tax-deductible.

Also, because of the nature of university crowdfunding, its structure typically varies slightly from the usual crowdfunding campaign. Where a product-based campaign might offer the donor first release of the product upon production, most university-run projects do not have the same type of tangible product. For that reason, university crowdfunding campaigns typically offer giving levels or project-specific perks to incentivize donors. Levels usually explain what the specific donation amount will do to help the project, whereas perks will offer individual recognition to the donor for their support to the cause.

According to marketing blog [HubSpot](#), all institutions should look for these three characteristics in a crowdfunding site before moving forward:

- Who uses the platform? Most platforms highlight who is the best fit for their platform, so

be sure the platform fits your unique needs.

- What is the pricing structure? Many platforms only reveal pricing if you request more information. However, for those that offer this information up-front, monthly or annual fees, a percentage of the total donation, and additional payment processing fees are standard.
- What features are included? “Whether it's peer-to-peer fundraising pages, event ticketing and registration, or CRM integrations, make sure to review all features offered and find the platform that best fits your fundraising needs, not necessarily the one with the MOST features,” writes blogger Taylor Corrado. “Think less is more in this scenario if you're just getting started with crowdfunding.”

20 Crowdfunding Sites for Colleges and Universities

[Listed in alphabetical order per section]

Specifically for Higher Education

AlumniFunder: Whether it's a project to enhance the student experience on campus, raising capital to build a new science lab, or funding consumer development of a robotics product, AlumniFunder can help. The site features projects from institutions like Georgetown and Princeton. Pricing available via inquiry.

Experiment: This site helps researchers secure microgrants to support their scientific work. Backers fund directly to scientists, so there's no middleman or overhead involved; however, the project must reach its funding target, or no one's donations are charged. According to the site, there have been 20 published papers in scientific journals through funded experiments. Institutions using the platform include Duke University, Cornell University, University of North Carolina Chapel Hill, Purdue University, UCLA, Brown University, and many more.

GiveCampus.com: With colleges like William & Mary, Holy Cross, Illinois Wesleyan, and Villanova to name a few, GiveCampus.com is a social fundraising and engagement platform that aims to empower institutions to not only get donations, but improve acquisition and retention. The site has helped more than 70 colleges, high schools and elementary schools raise \$10 million since it launched last year. Schools are charged a subscription fee based on the amount of money they aim to raise. Subscriptions start at about \$1,000.

Hubbub: Projects are created by students, university members, and alumni. The site reviews all projects for suitability, judging them on the quality of the presentation of the projects, their goals, and

“We all live on social media, so getting friendly reminders from your alma mater to give is not only effective, but appreciated.”

the level of organization and commitment demonstrated by the teams behind them. Hubbub covers the costs of payment processing fees, so that institutions always get 100 percent of the value of pledges. However, every project must achieve its minimum needed by its completion date or no funds change hands. **Hubbub's Pro-Site** is a fully featured crowdfunding platform that can be branded by specific institutions, and has been used with success by universities and non-profits worldwide. At the University of York, crowdfunding using YuStart (the name for their Pro-Site) led to an increase of 33 percent in total donor numbers in just one year.

PigIt: A site for all education-related causes that encourages the institution's community to be contributors, PigIt charges a 5 percent fee if the goal amount is reached and 8 percent if the goal amount is not. Loyola Marymount University and

Skidmore College are just two institutions that feature PigIt.

USEED: This platform allows institutions to use advocates—students, faculty and alumni—and their stories to increase donations from an internal community, as well as the community around the institution. **ASU has entered USEED's beta program** to allow students to use crowdfunding to raise extra funds they need to gain real-world experiences outside of the classroom, such as service abroad, starting a company, or creating a technology or work of art. Current USEED users also include: Knox College, University of Houston, Simon Fraser University, University of Louisville, uOttawa, Indiana Tech, Dallas County Community College District, and more. Pricing available via inquiry.

The Most Successful Crowdfunding Sites In General

Classy: Classy, a mobile-optimized fundraising platform offers peer-to-peer fundraising pages, fundraising event ticket and registration, as well as fully customizable for branding platform. For

leaders can also cash in the points for Crowdrise gifts, such as T-shirts. For free accounts, the site takes a 5 percent cut, or charges a monthly fee of \$49 or \$199 that lowers to 4 percent and 3 percent, respectively.

FirstGiving: is a long standing crowdfunding platform. The platform is specifically tailored to the needs of the nonprofit, including customization and extensive reporting. It offers peer-to-peer fundraising pages, event fundraising and registration, and event ticketing with an integration with Eventbrite. The site also has features for team fundraising as well that's important to bigger fundraising events, as well as a direct donation button for an institution's website. Along with the platform, FirstGiving offers educational material, including webinars, e-books and a fundraising blog for those organizations who are new to peer-to-peer fundraising or who are looking for more advanced strategies. FirstGiving charges \$500 a year for nonprofits and an additional 7.5 percent payment processing fee. There is also an additional 4.5 percent charge for event registration.

FundRazr: A crowdfunding site that started

Along with the platform, FirstGiving offers educational material, including webinars, e-books and a fundraising blog for those organizations who are new to peer-to-peer fundraising or who are looking for more advanced strategies.

those organizations using Salesforce as their CRM, they easily integrate to keep all contacts in one place while adopting Classy into the online fundraising strategy. Classy has a tiered pricing structure, which you can [find here](#).

Crowdrise: Crowdrise specializes in charitable giving, especially for event fundraising, such as for the New York Marathon, Boston Marathon and the Ironman Race Series. One special feature is Crowdrise Impact Points: with each donation, projects receive points that help to promote the campaign to the front of the site. Campaign

out as a Facebook app, FundRazr is less about connecting to accredited investors and entrepreneurs, and more about others seeking funds from people in a social network. Institutions or projects have the chance to be featured on the site's front page. Contributors pay no fee. Recipients pay a 5 percent FundRazr fee plus Payment Provider fee of 2.9 percent + 30¢ per transaction. There are no additional fees or penalties.

GoFundMe: This site is dedicated to more personal projects than business enterprises, such as raising money for a new mascot costume or some-



The Kickstarter model attracts backers who can pledge for specific rewards, such as early access to a discounted price of the product, or recognition as a supporter in some way

one's retirement gift. GoFundMe has raised over \$2 billion, and while it thrives off of these personal goals and relief efforts, the site also makes room for creative projects. GoFundMe deducts 5 percent from each donation and charges a 3 percent processing fee.

Indiegogo: Indiegogo made a name for itself by supporting one of the most iconic crowdfunding projects, "Let's Build a Goddamn Tesla Museum." Indiegogo charges 5 percent in platform fee, but that's refunded for fixed funding campaigns if the project does not meet its goal. There's a 3 percent + 30¢ charge for third-party credit cards. Additional fees are applied to PayPal contributions.

Kickstarter: The Kickstarter model attracts backers who can pledge for specific rewards, such as early access to a discounted price of the product, or recognition as a supporter in some way.

Submissions are reviewed by the team of 89 based in Brooklyn, who charge a 5 percent fee for successfully funded projects. The campaign must reach its goal or no money is awarded and backers are not charged for their donations.

Razoo: Founded in 2007, Razoo originally supported nonprofits with 24-hour online fundraising campaigns called "Giving Days" that included games and prizes to encourage donations. Through those campaigns on the platform, over 14,000 organizations had raised \$165 million. On Razoo, campaigns have hourly goals, leaderboards and random prizes for backers. Razoo provides charitable gift receipts, electronic payments, no monthly fees or setup costs, a 4.9 percent platform fee, and a 2 percent + 30¢ payment fee, all on a fully PCI-compliant platform.

RocketHub: This project-based platform is similar to Kickstarter, but what's unique is that it also has a Success School to teach institutions the basics, prepare them for launching and running a project, as well as how to manage funders. Pricing available via inquiry.

StartSomeGood: This site provides a funding platform exclusively for social good initiatives, no matter if it's nonprofit, for-profit or unincorporated. All campaigns have to meet a "tipping point" in order to receive funds, but they do not have to reach their listed ultimate goal. The company charges the standard 5 percent fee. The platform also requires that projects offer backers rewards, but it can simply be an acknowledgement listing or a thank-you note.

YouCaring: YouCaring offers free online fundraising for a variety of industries. The site operates on donations, and institutions need only to pay 2.9 percent + 30¢ credit card processing fees. The site also offers real-time chat and coaching, as well as personal support. **eCN**

STEM crisis quickly becoming an IT problem

Gen Z's dependence on tech and tech support not mirrored in their career choices; IT dearth a massive problem on the horizon.

By Meris Stansbury, Editor

According to recent data, Gen Z demands that devices and software—and the support required to use them—be woven into their daily lives; yet, most of this digital native generation has no interest in having an IT career. So who, exactly, will provide the technology and support needed to satisfy the future generation?

It's yet another cold water splash on the STEM fields that have been in crisis in the U.S. for years. However, unlike the somewhat vague notion of there being less engineers and mathematicians to better the collective intelligence and innovation of a nation, the fact that almost none of the future generation have any interest in information technology (think: computers, the internet, software systems, telecommunications, data analysis, electronic engineering) will have a direct, negative impact on not only individual consumers, but on entire ecosystems (like higher education) that are becoming increasingly dependent on IT.

For example, outside of daily consumer needs (e.g. seeking support whenever a phone application stops working), entire markets are rapidly becoming more dependent on IT, with the example of higher education and its reliance on everything from providing campus help desks to migrating critical systems to the cloud.

And a recent [Washington Post article](#) highlights the threat of hacking as an increasing concern for colleges and universities; yet, "U.S. universities may not be doing enough to prepare the next generation of cyber-defenders."

The panic increases when one considers where higher education is moving in the future. Already, leading institutions like Stanford are [making national pleas](#) for experts to be created in the bur-

geoning field of data science (combining skills in computing science and applications, modeling, statistics, analytics, and math to discover insights in data) as colleges and universities become increasingly reliant on harnessing data to increase performance in everything from enrollment to graduation rates. And innovators in the higher ed arena are starting to [build whole new offices](#) devoted specifically to data science and IT management.

[According to EDUCAUSE](#), colleges and universities this year will put heavy focus on mobile devices for learning, SaaS, administrative performance analytics, hybrid and online learning, apps for enterprise applications, and service desk tools...all technology-based innovations supported by campus IT. In next few years, these and other technologies [will only advance in capability and expertise needed](#) to support these capabilities.

Sobering Statistics

Gen Z's lack of interest in IT was revealed as part of CompTIA's *Managing the Multigenerational Workforce study*, based on over 1,000 teens and young adults aged 13-24.

At first, notes the report, the statistics seem promising: a total of 70 percent of those surveyed said they "love technology," with only 1 percent total saying they "dislike technology."

However, this love for technology, and the realization by Gen Z that this technology allows them to be connected, productive and anytime learners, does not translate to career choice.

"On the surface, it seems like the affinity for technology is a great thing for the future workforce, since technology will be so intertwined with business," states the report. "However, most students are not eyeing a career in IT as a result of

their technology leanings.”

According to the Gen Z students surveyed, 21 percent of 13-17 year-olds say they are not interested in an IT career, a number that jumps to 26 percent at 18-24 years-old. And while 19 percent of 18-24 year-olds *are* interested in an IT career, the report stresses that this is not a high enough percentage.

“This is largely a result of the information students receive about their careers,” emphasizes the report. “Among 18-24 year-olds who said they were not interested in an IT career, the primary reason for the lack of interest was not having enough information about the field.”

The report notes that students in the same age bracket who said they were interested in an IT career cited technology classes in high school or junior high as top influences, but 38 percent of all younger-aged students said that their school does not provide IT-focused career information.

Potentially negative stereotypes about IT careers also dampened Gen Z interest, revealed the report. When asked to consider what a job in IT is like, most students responded that it would require good math and science skills, which the report says means most students consider all IT roles to be deeply technical. But, only a small number of students responded that such jobs were in high demand, with many citing a fear of off-shoring.

Yet, even though Gen Z interest in an IT career is iffy at best, the report also highlighted data showing that IT support remains a critical component of society, and “most workers expect the need for IT support to increase or remain at the same level...”

Moving Forward

Though most K-12 schools do not currently have an IT curriculum, some colleges and universities are trying to garner interest among their current students.

For example, Ohio State University (OSU) began an **innovative internship arrangement**

with Hyland Software where students have a chance to intern at the company then apply the skills learned there in jobs within the university’s Office of the Chief Information Officer (OCIO), which utilizes the company’s OnBase enterprise content-management platform. “In our partnerships with companies like Hyland, we are interested in how we can add value for our students, whether it be internships or scholarships,” said Dave Kieffer, senior director of enterprise applications at OSU. “We are looking for opportunities for students to get involved in the work of the university as well as ways to engage them in the work of our partners.”

At Georgia Southern University, the **campus bookstore partnered with** a mobile repair company to not only provide tech repair services on-campus, but classes that teach students about the technology behind their devices, as well as how to perform simple repair services.

And on the more technical side, the University of Colorado Boulder’s Department of Applied Mathematics **developed a new statistics minor** that includes several new classes in the data science, plus several existing courses that were revamped to better serve those career fields looking for data scientists. Other examples of data science IT-based curricula in higher ed can be found **here** and **here**.

It’s important to provide information to students that show the “breadth and depth of technology careers,” explains the report, because “there are many career paths inside the IT industry that are not heavily technical, and there are many job choices outside of the IT industry where technology is becoming more critical...Whether students want to build the next great gadget or improve a social situation, technology will likely be the main ingredient. Improved information about how technology factors into career choices will be key as students with a changed set of priorities and interests make decisions about their future livelihood.”

For more detailed information on CompTIA’s report, **click here**. 

Imagining Higher Ed's Standardized Assessments

As colleges and universities are increasingly required to “prove” efficacy of teaching and learning, many conversations—especially at the federal level—are circling around developing standardized assessments for higher education. Naturally, postsecondary stakeholders and faculty worry that these assessments could have a negative impact, and shudder at the prospect of metrics mirroring those of K-12’s. But is it all doom-and-gloom in the standardized assessment realm, or can a postsecondary-specific design work to higher education’s advantage? In this month’s Symposium, a Purdue scholar emphasizes that the only way to accurately and fairly assess postsecondary learning outcomes is to account for institutions’ differentiation—in admissions practices and student body. In his essay, the President of the Council for Aid to Education (CAE) discusses how a standardized assessments initiative could provide a great tool for decision-makers, as long as researchers and practitioners work together. These essays can also be read at ecampusnews.com/symposium. There, we welcome your thoughts on this important topic. — Meris Stansbury, Editor



Standardized assessments must account for non-standardized institutions

Though differentiation is the enemy of sound social science, national efforts at assessing learning in college must make certain affordances for the variability inherent to the higher education system.

By Dr. Fredrik deBoer, Purdue University scholar and academic researcher

Assessment has become an unavoidable topic in higher education circles. The past two American presidential administrations, one Republican and the other Democratic, have both made endorsement of assessment of college learning outcomes a cornerstone of their higher administration policy. More and more state governments are putting pressure on public institutions to gather data about student learning gains as well. Accreditation

reform, meanwhile, has been in the national conversation as well, with many calling for more rigorous collection of data regarding student outcomes and student learning. The ongoing tuition and student debt crisis, meanwhile, naturally leads parents and students to question whether a given college delivers strong learning opportunities in exchange for all that money. For many administrators and educators, therefore, the question is not whether or not to conduct assessment of student learning but how.

But assessment of college learning represents a serious challenge. Colleges and universities have long emphasized their individuality, the particular culture, systems, and values that separates them from other institutions. From the standpoint of trying to attract students, this makes sense; in a crowded landscape of competing colleges and universities, there is an obvious intrinsic incentive for schools to differentiate themselves. But differentiation is the enemy of sound social science. Without consistency between institutions, making our assessments valid and reliable – that is, ensuring that they measure what we intend to measure and do so in a consistent and fair way – becomes a much more challenging endeavor. National efforts at assessing learning in college, therefore, must make certain affordances for the variability inherent to our system. If not, we will fail to develop an accurate picture of how well our students and institutions are doing, and risk making bad decisions based on bad information.

Here are some of the particular dynamics of higher education assessment that stakeholders in the assessment process should understand.

Adjusting for ability effects is essential.

Educational testing that is designed to assess schools and teachers rather than learners always faces a major hurdle: as different students have different levels of incoming ability, it can be difficult to fairly evaluate a given institution or instructor's quality. For example, we know that socioeconomic status is strongly associated with educational outcomes, with students from poorer backgrounds tending on average to perform significantly worse than students from richer backgrounds. To simply look at the average test results of a school full of poor children and compare it to the average of a school full of rich children is a sure way to unfairly judge the teachers at the poorer school.

In the college context, these problems are multiplied. We know for a fact that the incoming popu-

lations of different colleges are deeply unequal in prerequisite ability. The most obvious and strongest reason for this is the very college admissions process itself. Competitive schools invest tremendous resources into ensuring that their student body is not like that of other schools.

Admissions departments seek out the best-performing, most talented and accomplished high school students, who they then attempt to woo to their institution. The inevitable result is deep stratification in incoming student ability across the university system. We should be careful in noting that attending a competitive institution is quite rare, overall; most American institutions of higher education accept a vast majority of the students that apply. Still, these differences in incoming ability effects are troubling, as they potentially represent serious confounds in our effort to sort out how much students are learning at different institutions. This problem is compounded by the fact that the biggest criterion for selecting a college, for the average student, is not its perceived quality but its geography, with most college students choosing to attend schools close to home. As we know that there are strong geographical trends in educational outcomes – with students in Massachusetts, for example, performing far better than students in Mississippi – this represents another challenge to our analysis.

There are several ways to address these issues. First, score results can be normed against incoming SAT scores, an imperfect but powerful means to sort students into ranks of incoming ability. Scores on tests of higher education learning tend to be highly correlated with SAT and ACT results. We can quantitatively adjust scores on the latter to help control for ability effects. Second, test-retest systems, where students are tested in freshman and senior year, can help to determine how much growth has occurred, and can give us scores that are based not on where students end up but on how much their scores have improved during the course of their education. Sometimes, these efforts

can take advantage of complex Value Added Models, though such procedures are controversial.

Perhaps the best check is the simplest: everyone involved in the assessment process, and everyone evaluating the results of assessment, should remain clear that colleges and universities will always produce deeply unequal outcomes based on the admissions procedures of selective colleges.

The testing industry is big business.

Whether assessments should be developed “in-house” or should be provided by testing corporations and nonprofits is one of the perpetual controversies in the assessment literature. There are clear advantages to developing assessments internally. For one, internally-developed assessments can better adapt to the kinds of institution-specific complexity that I discussed previously. Internally-developed assessments also can better involve faculty, helping them to feel like stakeholders in the process, and in doing so, easing tensions that often result from assessment efforts. Internally-developed assessments also have the advantage of keeping funding within the university community, often resulting in money for graduate assistants and other staff. But there are major hurdles to developing assessments internally. They represent a significant investment of time, manpower, energy, and money. Also, in many cases, state administrators and accreditors will likely insist on the use of standardized instruments developed externally.

What everyone involved in the assessment process must understand is that the testing industry is just that, an industry, made up of institutions that are primarily motivated by the drive for profits. The testing industry makes hundreds of millions of dollars, and many companies are fighting to gain purchase in the higher education space. And while there are prominent nonprofit organizations like the Educational Testing Service and ACT in test development, their status as nonprofits has been repeatedly

challenged, including legally. Those involved in assessment must bear in mind that, when organizations attempt to sell them tests, they are receiving a marketing pitch like any other. Skepticism of the claims of the institutions that develop tests is perfectly warranted.

This is not to dismiss these instruments or the organizations that make them. Tests developed by for-profit entities are frequently valid and reliable. Many aspects of the collegiate learning experience, such as the production of textbooks, are already farmed out to the private sector. It does mean, however, that everyone involved in the process should utilize critical reasoning when considering these instruments, and to recognize that the developers have the profit motive in mind when selling them. We can fairly expect test developers to frequently exaggerate the validity and reliability of their tests, in an effort to sell them to colleges and universities. Let the buyers beware.

We’re all in this together.

Controversy is a constant in this debate, and for good reason. When we discuss assessment, we are discussing, in a very real way, what the academy does and should value. It’s natural and healthy for such issues to invite debate, even heated debate. What we must all strive for as a community of educators is to make these debates constructive rather than destructive. Faculty, administrators, students, politicians, and parents all have legitimate points of view to bring to bear in this discussion, and in order to serve the interests of our colleges and universities, all of them must be heard. We may never arrive at perfect agreement about how to assess college student learning. But we can create constructive compromises that protect the interests of all involved. If we do, we can gain invaluable knowledge about our institution, our students, and our value in a world where many colleges and universities are threatened. It’s up to all of us to start this conversation. 

Why higher-ed's standardized assessments can work toward progress

Creating an integrated, multidisciplinary assessment initiative that brings researchers and practitioners together can lead to new tools for better decision-making.

By Roger Benjamin, President of the Council for Aid to Education (CAE)

Federal law mandates that all public schools and students participate in NCLB testing activities – a requirement that has proven to be problematic for the K-12 system. Our higher education sector is a complex, bottom up, highly diverse system of colleges and universities. A mandatory testing requirement there would be a disaster.

Despite the vision the Common Core leaders had – to establish higher national standards – most of the tests used to satisfy NCLB requirements focus on low- to medium-level reading and math skills, the skills seen as important for success in college and work. NCLB requires public release of test results by district and school and the results are reported for all students. The high stakes nature of these tests has led to corruption in testing and results reporting in a number of districts. Unfortunately, because the states use different tests, assess different abilities, and set their own cut off standards for proficiency, it is not possible to compare results across states and, as a result, no national norms can be established.

In addition, many districts use tests that control for entering student ability in an attempt to give credit to districts for their value-add to student scores. Some districts also use these value-added student scores as part of their teachers' annual evaluations. Measurement scientists do not believe the methodologies being used for such purposes are credible.

Know They're Not Like K-12

In comparison, at least three assessment organizations, Educational Testing Service (ETS) <https://www.ets.org/>, ACT <http://www.act.org/>, and Council for Aid to Education (CAE) <http://cae.org/>, offer national education assessments of critical thinking skills that both faculty and employers consider essential requisites for success in college and the work place. These assessments each provide both the college and its students participating in the testing with confidential information that the students or colleges can make public if they choose. At least one of these testing organizations publishes national norms and a variety of analyses based on the testing results (while not identifying institutions or students.)

Further, at least one organization provides certificates and/or badges for the mastery level students have reached, enabling students to claim badges for use with potential employers and as additional diagnostic insight about their skill attainment and how to improve in college and work.

Ensure Validity and Reliability

First, it is important to understand the tension between formative and standardized assessments. Faculty, understandably, rate assessments like portfolios and value rubrics as having a high degree of face validity because they present the work of students. Standardized tests, on the other hand, are not seen as adding any value and are therefore considered unnecessary. Measurement scientists, however, are skeptical about claims that only formative assessments are warranted

because there is no systematic evidence showing that formative tests are reliable or valid.

Measurement scientists have developed criteria to evaluate the validity and reliability of assessment protocols. Validity refers to the extent to which the test measures the knowledge, skills, and abilities it was designed to measure. Reliability is the degree of consistency of student's (or institution's) scores across a test's questions, the consistency of scores across different assessors, and whether the tests are given to students under the same conditions and over the same time period. Standardized assessments that provide statistical evidence of reliability on these criteria are preferred. Moreover, measurement scientists are insistent about recognizing this point for any tests that have stakes attached to them.

The interest in formative and standardized tests is growing rapidly in higher education. Interest in value rubrics, degree qualifications, and tests that faculty and students can use in the classroom is soaring. So, too, is interest in using standardized tests for any student learning outcomes that have stakes attached. Boards of trustees and administrators want to know how well their institution is doing (on the kind of tests noted above) compared to institutions that are similar in student characteristics, financial support, size and other characteristics. Reviewers of the claims of competency-based education programs want to know if these programs are as strong as traditional on-site four-year colleges. Employers who receive badges or certificates from job applicants want to know how to interpret them. All of these examples have stakes attached to them. Therefore, it is essential that test data for these purposes be based on the transparent criteria measurement scientists have developed for standardized tests.

Involve Faculty

Testing organizations have the resources – measurement scientists, internet-based platforms, scoring and analysis capabilities, experience, and

sunk costs – that translate into lower costs for high quality standardized tests. Individual colleges or systems of colleges do not have the capacity to match. However, faculty must be partners with their measurement scientist colleagues in providing content for the design of standardized test items, evaluation of the standardized test results, and the development of formative test items that are aligned with the standardized tests.

Measurement scientists, the statistical-based tools they use, and the test analyses they produce are often challenged by faculty. Why? Faculty are housed within departments that are granted relative autonomy by the university to recommend what to teach, who to teach it, and how students should be assessed. Education assessment test results and analyses are typically isolated, one-off research activities that are not related to either faculty engaged in teaching or to researchers in other fields relevant to improving student learning. Independent experts, no matter how talented, are not considered to have the standing necessary to contribute to department affairs. However, measurement science, including its education assessment sub-groups, is a branch of statistics that has been in good standing in the Academy for hundreds of years.

Progress to an Integrated, Interdisciplinary Approach

Science-based research is essential to address any policy problem in education that has stakes attached to it. Researchers in cognitive science, macro- and microeconomics, educational assessment, educational technology, and data analytics – to name a few – toil in independent silos, isolated from each other. However, they share a commitment to the logic and strategy of scientific inquiry. The premises of the value system of science, peer review, transparency, and the ability to replicate results are familiar to faculty and administrators. Most faculty should and will accept

assessment-related work based on these core principles. When paired with a coherent and compelling use-inspired basic research strategy, it is possible to imagine a more integrated, interdisciplinary approach to the challenges that higher education faces.

Already, an initial effort has been launched to include all subjects within standardized assessments. The Gates Foundation's Measuring College Learning (MCL) <http://www.ssrc.org/programs/component/education-research-program/measuring-college-learning/> project is a collaboration of six national disciplinary associations to define the core learning outcomes of their fields. Prospects for success of this endeavor are good. If this group of six associations succeeds in creating attractive, reliable and valid tests, other disciplines will follow. It will be important to develop standardized tests for the arts and sciences that form the basis for general education curriculum; other professional schools and applied subjects should and will follow.

This does not mean that critical thinking tests will no longer be needed. The case for these meta domain tests is strong in today's Knowledge Economy when college graduates need to know how to access, structure and use information – not only remember facts. Employers see these skills as the most important requisite for success in the work place and faculty see them as necessary for participation in civil society.

Looking to Future Possibilities

Increasingly, private and public leaders understand that human capital is the nation's most important asset. The K-16 education system is the formal venue to preserve and enhance that capital and NCLB is the mandated accountability measure. But so far, the efforts to create federal accountability – from the Spellings Commission to the recent College Scorecard – have not gained traction. Efforts to create federal mandates are

likely to continue. And, because of the tradition of relative autonomy of higher education in the U.S., the best way forward is for leaders of higher education and state and federal policy makers to work together as partners to develop accountability metrics that both sides agree are appropriate.

Post-secondary education is the anchor of the K-16 education system charged with preserving and improving the nation's human capital, the knowledge, skills, and experience of all its citizens. The higher education sector faces many challenges,

- Reducing the high costs
- Addressing inequality
- Creating more access for underrepresented groups
- Achieving higher retention and graduation rates
- Providing higher quality student learning outcomes

We need to develop a continuous system of improvement in teaching and learning combined with solutions to the other major issues noted. Use-inspired interdisciplinary research on higher education, stimulated by a book by D. Stokes, <http://www.brookings.edu/research/books/1997/pasteur> is the best way forward.

Higher education should follow the path taken by other major policy domains in the United States, such as agriculture, healthcare, and national security. In each of these major policy arenas there came a critical historic juncture where a commitment was made to create an integrated, multidisciplinary research program that brought researchers and practitioners together to create new tools for decision-makers to make better decisions. Such a commitment is long overdue for higher education. (Please see my Pasteur's Quadrant in Higher Education for the complete argument and a description of how CAE is transforming its standardized tests into education technology tools at cae.org.) 

When higher ed curriculum partners with the business world

How companies and organizations are working with higher education institutions and programs to help fill workforce gaps and bolster college and university resources.

By **Bridget McCrea**

When **Hydrotech, Inc.**, detected a noticeable gap between the experienced, knowledgeable recruits that it needed and the types of job candidates it was attracting, the company knew it wouldn't be long before its eligible employee pipeline dwindled. "We're less interested in finding someone who can swing a hammer," says Jim Pickrel, marketing manager for the Cincinnati-based fluid power and motion automation solutions distributor, "and more intent on getting employees who can interface with computers and operate intelligent machinery."

To help fill the gap, align itself with the regional education system, and cultivate future job candidates, the distributor reached out to **Cincinnati State Technical and Community College**. The school was running an electromechanical engineering program that relied on outdated equipment for student training. Pickrel says the distributorship participated in a series of meetings with the Electro-Mechanical Engineering Technologies department head before coming up with a plan of action.

"We looked at exactly what the school needed to bring its lab up to date," says Pickrel. "We wanted to make sure we understood the requirements and the specifications, and that we'd be able to make a positive impact on the program."

Working with manufacturing firm **Bosch Rexroth**, Hydrotech initially donated four Pneumatic and Fluid Dynamic Training Systems to replace the school's existing, antiquated equipment. Today, the Bosch Rexroth DS3 models are



used to demonstrate simulations of manually and/or pneumatically operated valves, electrically operated valves, and PLCs (programmable logic controllers).

According to Pickrel, Hydrotech engineers, assembles, and develops the equipment that the college is using. Last year the distributor donated another four hydraulic training stands that students are now using to test and train different scenarios they may encounter when working in the fluid power industry. "These students may be working for us someday or for one of our local clients or partners," says Pickrel. "It's a blessing to be able to help them develop the crucial skills that they need to be successful."

A Long History of Success

Higher education has long relied on strong partnerships with businesses and organizations to help enhance student success both in and out of school. Thanks to advancements in technology, emerging careers (i.e., data scientists), and the changing needs of today's employers, a growing number of firms are joining forces to do their part in developing the modern-day workforce.

“From a macro perspective, a large number of people are looking to prepare themselves for re-entry into the job market while others are just coming into the job market for the first time and competing with these experienced individuals,” says Chris Neimeth, COO at [NYC Data Science Academy](#) in New York. “At the same time, organizations are looking at new ways of doing business and new solutions—such as data-driven decision making. This has created a need for students to learn how to use these new tools and solutions.”

Examples of these partnerships in action can be

analytics. During a 12-week, full-time “Data Science Bootcamp,” students use Dataiku’s DSS software and also work with the firm’s data scientists to learn about data analysis and machine learning, production line integration, and big data analytics.

Neimeth says NYC Data Science Academy’s goal is to make the field of data science more accessible to a larger swath of students. “Up until recently, understanding powerful algorithms was the domain of those with very high levels of education and complex statistical knowledge,” says

“From a macro perspective, a large number of people are looking to prepare themselves for re-entry into the job market while others are just coming into the job market for the first time and competing with these experienced individuals.”

seen across numerous fields of study and colleges/universities. In the information technology (IT) field, for example, [Ohio State University partnered with Hyland Software](#) to give students the opportunity to intern at the company and then apply their skills in jobs within OSU’s Office of the Chief Information Officer. At Georgia Southern University, the campus bookstore partnered with a mobile repair company to teach students about the technology behind their devices, as well as how to perform simple repair services.

In Silicon Valley, [companies are helping to create a talent pipeline](#) from colleges and universities, and from privately-funded academic programs, for students skilled in cybersecurity. At the Rochester Institute of Technology, [a recent \\$25,000 gift from Intel](#) is helping to transform computing security education by developing new cybersecurity curriculum on strategic thinking and tactics.

According to Neimeth, NYC Data Science Academy is currently working with [Dataiku](#), a French software developer that helps data scientists process and understand big data, to help students prepare for successful careers in data and

Neimeth. “Using open-source software solutions like R and Python—and user-friendly packages like DSS—we’re making these powerful algorithms more accessible.”

Not Just High Tech

It’s not just data scientists and analytics majors who are benefitting from stronger alignment between higher ed and business. In March, [Yale’s Center for Customer Insights](#) (YCCI) joined forces with [EduSourced](#). Through this relationship, YCCI produces research and thinking on behavioral economics and data analytics, while EduSourced helps universities modernize their approach to learning to help better prepare graduates for the job market. The initiative pairs teams of MBA students with industry partners to work on “Discovery Projects” that focus on finding solutions to real-world marketing problems.

David Comisford, EduSourced’s CEO, says his organization’s role is to consolidate all of the Discovery Project information on a single platform where users can login, view projects, and complete work. “We created a collaborative platform where the client (i.e., an outside

company) can participate,” says Comisford. “Whereas an outside party can’t use a university’s learning management system (LMS), we open that up and provide value by allowing everyone to have access to the team’s work.”

In a move that’s bringing Hollywood’s newest technology to New Jersey, for example, Montclair State University has partnered with **Sony Electronics** to give the school’s communication and media students real-world experience and to get a high-tech preview of their future careers.

When it opens next year, the university’s new School of Communication and Media building will provide a facility where Sony will offer industry professional training similar to what is offered at its Digital Motion Picture Center (DMPC) on the lot of Sony Pictures Studios in Culver City, California. Merrill Brown, director of the School of Communication and Media, says right now the focus is on building a facility that will be both comprehensive and relevant for both the “older world” and for the “newer word.” For instance, it will include facilities for learning both about traditional film and TV production as well as those designated for newer, digital technologies.

“We are building a facility at a moment of dramatic change, with obvious higher education state university budget limitations,” says Brown. “At the same time, we need to cover many, many

disciplines and create an environment that can be flexible and nimble as things change.” Theresa Alesso, Sony’s vice president of sales and marketing, says the company has increased its use of university partnerships over the last two years. She’s learned a lesson or two along the way, and says her best advice to schools is to seek out a partnership that’s mutually beneficial.

“Think through the partners that you want to work with and take the time to make sure that you’re not over-spending, overbuilding, or otherwise overextending yourself in the process,” says Alesso. “Don’t just go for the partner that comes in and wants to sell you a whole boatload of product. For the relationship to work, it should be both collaborative and consultative.”

More to Come

Going forward, Comisford sees more opportunity ahead for colleges and universities to partner effectively with outside organizations with the overall mission of helping to better prepare graduates for success in the workforce. “This level of partnering has been happening for a long time, but historically it has taken place ‘under the radar,’” he says. “Now, it’s becoming a formal initiative that schools are putting resources into and thinking about in a more strategic manner.” 

Biget McCrea is a freelance writer for eCampus News.



Whether at home, at work,
or on the road, you can
keep up with
eCampus News 24/7.
Login and learn!
eCampusNews.com/social

Social media's top 50 colleges and universities

Engagement, impact and responsiveness were all key to landing a spot on the list of the best institutions on social media.

<http://www.ecampusnews.com/top-news/social-media-colleges/>



3 blossoming fields of study with massive potential

For institutions eager to help their students not only leap into the job market, but enter a future-proof career, these fields of study are wise investments.

<http://www.ecampusnews.com/technologies/fields-of-study/>



Should Startup Fever have a place on campus?

Investors, ed stakeholders discuss whether or not campuses should support startup culture through curriculum, campus resource centers.

<http://www.ecampusnews.com/top-news/startup-fever-campus/>



Students say digital presence is key to enrollment decisions

Digital presence via campus websites and social media can all majorly impact college decisions, say students.

<http://www.ecampusnews.com/top-news/digital-presence-enrollment/>



2016 Higher Education Online Learning Landscape

Today's Student's are Driving The Online Learning Imperative

TAKING THE PLUNGE



5.8M students enrolled in online courses



that's a **263%** increase over the last twelve years



2/3 of whom take online courses at public institutions

TODAY'S STUDENTS ARE UNIQUE



75% of undergrads are **25** or older

85%



of Americans enrolled in post-secondary institutions are **contemporary** (or non-traditional) learners

Most students think online learning is the **same or better** than the traditional classroom experience



90%

MANY CAN'T AFFORD TRADITIONAL HIGHER EDUCATION EXPERIENCE

WHO APPLIES?

48% of high-achieving students from wealthy families
23% of high-achieving students from low-income families

WHO'S ACCEPTED?

72% of students from wealthy families
3% of students from low-income families

77% of students from wealthy families
9% of students from low-income families

WHO EARNS A DEGREE?

WHO DROPS OUT?

While over 1/2 of college students graduate within 6 years, **the completion rate for low-income students is just 25%.**



WHO HAS DEBT?

The percentage of graduates who earn a bachelor's degree with **student loans continues to rise.**

< 50% 20 years ago 

64% 10 years ago 

> 71% today 

AND HOW MUCH?

For the 1st time in history, student loan debt is **higher than credit card debt.**

\$35,000 on average, **owed in student loans**, by the Class of 2015.

And remember, dropouts will likely default on student loans!



AFFORDABILITY REALIZED ONLINE



Universities often charge less for online courses.

\$3.4K TO \$8.4K

Annual tuition rate at the top non-profit schools offering the most popular online degrees.

EDTECH: A PROVEN CATALYST FOR SUCCESS

Students report that tech increases engagement



--- **77%** with **course materials**

--- **64%** with **professors**

--- **50%** with **fellow students**

University CIOs agree

--- **94%** digital curricular resources **improve learning** for students

--- **87%** provide a **richer experience** than traditional print materials

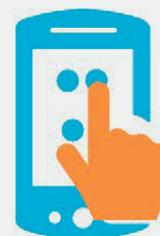
Students report that adaptive analytics lead to better learning outcomes

--- **87%** **better performance** with access to personalized data

--- **68%** continual **feedback drives improvement**

University CIOs agree

--- **96%** adaptive technology has great potential to **improve student learning outcomes**



In fact, 84% of students feel tech helps instructors teach better... but 4-in-5 say universities & professors could do more with technology.

MOMENTUM CONTINUES TO BUILD

For Academic Leaders

--- **77%** of institutions offering online learning say it's **crucial to their long-term strategy**

--- **71%** of academic leaders rate online learning outcomes the **same or superior to face-to-face**

--- **60%** of the schools with the **largest distance enrollments report faculty acceptance**



But For Faculty

--- **85%** have **very little experience** with digital learning materials and open educational resources (OER)

--- yet **71%** **would adopt digital/OER materials** if they are of high quality and improve affordability for their students



Higher Ed's No. 1 Source for Ed-Tech News and Information

www.eCampusNews.com



From higher ed's leading ed-tech Newspaper

Keep up with **eCampus News** between issues

The web address of higher education's most comprehensive source for technology news and information

– Visit us online every day at www.eCampusNews.com

Get the latest news and information delivered straight to your desktop

eCampus News This Week

– your executive summary of the week's most important ed-tech news and information

eCampus News Today

– your source for the latest ed-tech news and information every school day

Sign up for subscriptions to our eMail newsletters—FREE:

<http://www.ecampusnews.com/registration>

Higher Ed's No. 1 Source for Ed-Tech News and Information www.eCampusNews.com