

Technology News & Innovation in Higher Education

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The [Good], the Bad, and the Ugly of Online Education

A symposium on why online learning of all stripes is not making the grade.

Looking Forward, Looking Back

14 higher ed leaders discuss key trends of 2014, and what to expect in 2015.





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5 campus IT security trends for 2015

What IT needs to know to stay one step ahead of cyber attacks and student data leaks

By Phillip Britt

Security of college students is a growing concern for the students themselves; for their parents, relatives and friends; and for colleges and universities. The security concerns are two fold, both for the physical security of the students themselves and for the security of the student data on university systems.

Both those seeking to cause physical harm and those seeking to attack data systems continue to advance their techniques, pushing college security experts to continue to evolve security strategies to stay ahead of the threats.

To better help institutions keep one step ahead, here are the top five campus IT security trends for 2015:

1. Monitoring of higher education social media

Today's college students are engaged on Facebook, Twitter, Pinterest and other social media platforms for hours every day.

So are hackers looking to spoof a classmate, professor, university organization, popular off-campus gathering places or a variety of other entities. The idea is to lure the most people in as possible says Chris Cullison, chief technology officer for [ZeroFOX](#), a Baltimore, Md.-based social risk management company.

"We monitor campus sites, and different university [social media] assets to make sure what's out there is legit and not something nefarious," Cullison says. "Social media doesn't use email, so there are no direct virus scans and no immediate way to tell if [a person or entity] sending you something is legitimate or not."

That verification is important, Cullison says,

because one of the popular methods hackers use to spoof sites is to buy followers so that the site looks more legitimate than the legitimate one. As many as 5,000 followers can be purchased for as little as \$10. The more followers on social media, the more likely the unknowing person will think a fake social media Facebook or other site or Twitter feed is legitimate.

2. Evolving BYOD policies

As smart watches and other wearable technologies start making their entrance into the market in 2015, colleges and universities will need to review their bring your own device (BYOD) policies to ensure that they balance the need for security with the need for access, says Renee Patton, U.S. public sector director of education at [Cisco](#), San Jose, Calif. "The policies define what access should be available. As more devices come on campus, you have to make sure those devices are trustworthy."

Some devices, like wearable health monitoring devices, have no reason to access the college or university network, so shouldn't have access to network resources, Patton adds. "Administrators have to understand the trends and transitions. They need to continue to adapt. They need to make sure that security software is installed on those devices and that is configured properly by enforcing limited access for unsecured devices."

The device management will get only more complex in the future as the Internet of Things (IoT) evolves. Cisco estimates that the number of connected devices will mushroom from about 15 billion today to more than 50 billion by 2020.

[Read: "[How to prepare for everything.](#)"]

Ron Woerner, director of cyber security studies at Bellevue (Neb.) University, adds limiting access

to those resources necessary for faculty or students. A professor may need access to grades of the students in his class, but not to their grades in other classes. Similarly, a student may need access to his or her grades, but not the grades of classmates.

3. Increasingly layered security

Antivirus and antimalware protection are commonplace, but still offer only a base level of protection, security experts agree.

Network monitoring is increasingly important to catch threats that can slip past antivirus and antimalware programs.

Santa Clara (Calif.) University, for example, employs algorithms to analyze network traffic and to send alerts to security staff about suspicious activity, says Robert Henry, the university's chief information security officer. Network traffic analysis helps identify spikes in network use and other activity outside of the norm.

The variety and number of attacks are increasing, says Neal Moss, system network analyst for BYU-Hawaii. Rather than random attacks, hackers are targeting specific parts, specific servers, etc. Higher education financial and human resources departments are top targets because of the depth of the personal information that they contain. So colleges and universities are using multiple firewalls in order to separate serves from one another and limiting the applications that users can access.

"They key for us is using zero trust," Moss says. "We treat everyone as bad guys trying to get at my stuff. We only allow specific applications to communicate with users." The applications automatically reject any modifications a user attempts to make.

Woerner also recommends enhanced penetration testing to examine if all physical and technology controls are in place and to ensure that commonly available information (i.e., university calendar) is separate from sensitive information (i.e., employee payroll).

4. Protecting data in the cloud

"One of the big topics in higher education is the movement to cloud services [and] protecting information that we no longer have in our data center," Henry says. The cloud-based information includes sensitive student information like grades, finances, class scheduling, history of credits, etc.

The first step in protecting this information, according to Henry, is selecting a cloud services provider that has strong security practices and a security staff large enough to respond quickly to any potential security threats.

Higher education administrators need to scrutinize cloud services contracts, not so much for the technology provided, but for language that clearly defines that the provider has the proper security certifications and follows specific security standards in operating cloud services.

5. Increased use of technology to augment physical security

College campuses have long used access cards for students to enter dormitories, certain buildings on campus and other areas with limited access. However, it's not uncommon for an authorized person to "be polite," holding the door open for the next person, who may or may not be authorized.

Also, an unauthorized person may rush in once the door is opened, so there's never a chance for it to shut.

To help combat this problem, the University of San Francisco, and a number of other colleges and universities, is deploying combinations of cameras and facial recognition software <http://eagnews.org/university-of-san-francisco-using-facial-recognition-to-track-dorm-activity/> to positively identify authorized students and other personnel. **eCN**

Phillip Britt is an editorial freelancer with eCampus News.

2015: Key trends in higher-ed technology

Faculty and higher-ed industry weigh in on what institutions can expect this year

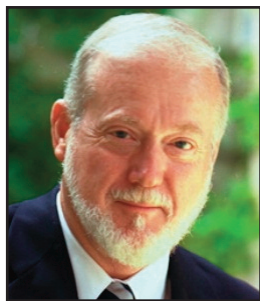
2014 was the year of higher education innovation—both because institutions began to accept disruption as the new normal, and because industry began to shape products and services around new innovations.

But what trends will continue in 2015 and what will stay buried in the past? What trends are yet to take shape, and why?

According to faculty, industry veterans, and IT leaders, 2015 will not only be the year for heightened security concerns, but may also be the year the concept of a traditional degree goes to the graveyard.

The year of CBE

By: John F. Ebersole, President of Excelsior College



Looking back: The year now passed will go into the annals of education history as “The Year of CBE,” or “Competency-Based Education” for those living on remote islands. As 2014 drew to a close, an estimat-

ed 500+ institutions had either developed a CBE offering or have indicated their intent to do so. Additional interest in CBE has come with growing criticism from the employer community as to the “quality” of recent college graduates. A frequent complaint has been that newly hired grads lack expected skills and knowledge and, in too many cases, could not apply the knowledge that they do have. There is growing evidence that this disconnect between college preparation and employer need is adding to CBE acceptance by academic institutions large and small.

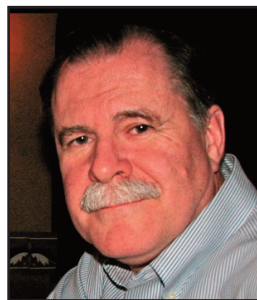
Looking forward: Many have asked whether

CBE in its various forms, is here to stay, like online learning (now approaching its 30th year), or will it fade into the nether like MOOCs, last year’s “next big thing”? Only time will tell, but the fact that government regulators, employers and higher education are already aligned in their support give CBE a high probability of being “a next big thing.” Remember, it took the Department of Education over 20 years to decide that online learning was worthy of Title IV recognition.

John F. Ebersole, LPD, is president of Excelsior College in Albany, N.Y., one of the oldest accredited, private, nonprofit distance education institutions in the country. In his 25 year career in higher education, Dr. Ebersole's personal experience as a post-traditional student has formed his approach to adult education.

Assessment tools to show value

By Geoff Irvine, CEO, Chalk & Wire



Looking back: At the start of an assessment initiative, schools typically introduce new software. Often, institutions are instructed to get an assessment system by an accrediting agency.

The software usually contains “analytic rubrics”—an assessment instrument with criterion—and key assessments linked to outcomes. People learn how to set up the software and will often dubiously proclaim the result to be a “Culture of Assessment.”

Looking forward: Using assessment tools to show an institution’s value will be a growing trend in 2015. While the [above mentioned] approach can result in a different “assessment

culture” this is very different from a “Culture of Assessment”; assessment plans and software do not mean that things have actually changed. A healthy culture of assessment begins with faculty expressing through their assessments what students need to do to improve. Varying types of rubrics are required as well as different protocols for the assignments. Advanced statistical analysis should be applied to the data to provide answers to questions about learning or to show the existence of trends that require action. Meaningful reports should be shared with faculty and leaders in a collaborative environment that allows for comments and helps structure decision-making. In the coming year, look to liberal arts colleges to lead the charge in breaking new ground in assessment, as they are less encumbered by process and are more nimble. While acquisition of assessment software is currently driven by IT procurement protocols, institutions that involve faculty and make assessment an academic process will achieve greater success.

Geoff Irvine is the CEO and Founder of assessment platform provider Chalk & Wire. Previously, he was an educator and researcher in both secondary and higher education.

Quality will be king



By Andrew Wait,
President of Lynda.com

Looking forward: 2015 will be the year of the market model shake-up. MOOCs, whose models rely on open platforms featuring non-curated content, will face stiff competition from learning organizations whose content is constructed for a specific pedagogical approach. It will also be the year the Enterprise figures large in online learning. Major players will pivot toward companies—rather than individuals—in search of less churn and more stickiness. Teachers will become the new Rock

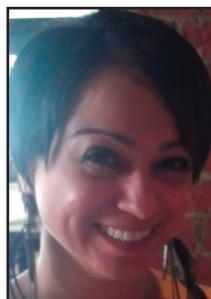
Stars in 2015; in the end, courses make it or break it based on quality content that’s created and delivered by teachers who have a real passion for teaching and deep subject matter expertise.

“Snackable” learning will also become a large part of the online education menu. The industry will start to figure out how learning best fits into the small spaces and snippets of time in people’s lives. Online courses will allow users to dive deep or get information in bite-size pieces. Mobile will be front and center in the morsel movement.

Andrew Wait has more than 20 years of experience working with web-enabled and web-delivered consumer products and services. Prior to lynda.com, Andrew was the president of EF EnglishTown.

A human-centered approach

By Salwa Ismail, Head of the Department of Library Information Technology at the Georgetown University Library in Washington, D.C.



Looking back: 2014 was the year where everyone evolved their understanding of what higher-ed should be. There are several challenges facing higher education, from disruptive technologies to dormant curriculum. However, with more universities exploring new design, as well as redefining students’ core competencies with the help of emerging technologies, disruption in higher education will be a positive for many institutions.

Looking forward: Online education that is student-centered and focused on core foundational concepts that develop a person as a human being will be championed in 2015; a degree that simply meets the credit requirements will no longer be acceptable.

Prior to her current position, Salwa Ismail was the Head of the Digital Library at Florida Atlantic University in Boca Raton, Florida. A Florida native, she holds various

graduate degrees in business administration, public administration and information sciences from Florida State University and Florida Atlantic University. In her current position, she oversees the information technology facets of library systems, library application development, web services and digital initiative and services for Georgetown University Library.

Ed-tech companies will need to show tangible results

By Dylan Arena, Ph.D., Co-Founder and Chief Learning Scientist at Kidaptive



Looking back: Funding for ed-tech hit a record high in Q1 2014, with lots of companies promising to make a difference for learners. In an increasingly crowded space, consumers (parents, learners, and teachers) will be

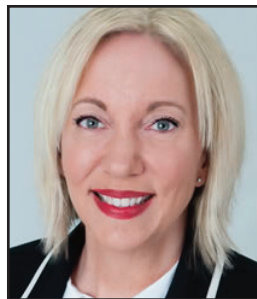
able to demand quantifiable results: if product A isn't working as advertised, products B, C, D, and E will be waiting in the wings. For example, digital technology makes personalization possible at unprecedented scale, and adaptive learning has become an ed-tech buzzword.

Looking forward: In 2015, many more products will boast that they support adaptive learning, so consumers will need to dig deeper to figure out which products are actually driven by solid psychometrics and which are just personalization poseurs.

Dylan Arena is a learning scientist with a background in cognitive science, philosophy, and statistics. Dylan started out as a software developer at Oracle, but after a few years he returned to graduate school at Stanford, where he spent several years as a MacArthur Emerging Scholar in Digital Media and Learning. Dylan has also been a Gordon Commission Science and Technology Fellow, a Stanford Graduate Fellow in Science and Engineering, a Gerald J. Lieberman Fellow, a FrameWorks Fellow, and a United States Presidential Scholar.

Google Glass leading the way

By Paige Francis, Chief Information Officer for Fairfield University



Looking back: 2014 saw an exponential growth of accessibility/connectivity needs. As we move more and more applications online, unfettered access is the expectation, by design. So selling the budgetary

reallocation from tangibles (PCs, software, etc.) to intangibles (storage, space, and bandwidth) becomes the challenge. People like to 'see' what they're buying and our future doesn't necessarily support that.

Looking forward: Wearable technology seems almost outlandish now, but after one day with Google Glass, I can envision this concept being a significant player in sharing experiences, facial recognition and demonstration/teaching.

Paige Francis is an executive IT leader with a wide range of experience. She was recently named to the Top 50 Most Social CIO's in Higher Education as well as one of Computerworld's 2014 Premier 100 IT Leaders.

The Internet of Things will explode

By Christian Gilby, Director of Product Marketing at Aruba Networks



Looking back: Over the last 12 months, we've seen an exponential rise in the number of mobile devices being brought onto campus by students, faculty and staff, the expansion of hybrid and online learning

to ease classroom crowding and expand access to courses for students, and the continued growth of 802.11ac among higher-ed institutions of all sizes. All these trends have played a significant role in shaping the current wireless environment on high-

er-ed campuses across the nation. Whereas coverage was once the key objective for the design process, today, meeting growing capacity and density requirements is the primary concern.

Looking forward: One trend that will play an increasingly important role in higher-ed IT will be the growth of wearables and the Internet of Things (IoT). In fact, IoT devices will become so ubiquitous that industry analysts are predicting that the number of connected devices will soar to 30 billion over the next five years. Impacting the wireless infrastructure, wearables and IoT devices will continue accelerating the demand for 802.11ac. In addition to moving their wireless infrastructures to 802.11ac, higher-ed IT departments will also want to ensure that their edge access switches are properly engineered to support the increased device density. Wearables and IoT devices will also impact the wireless network by introducing new potential security vulnerabilities. Higher ed institutions will need Wi-Fi security solutions that are robust enough to provide sufficient protection and flexible enough to enable appropriate QoS levels for business-critical real-time IoT devices, such as those used in HVAC systems for classrooms and residence facilities. As a result, advanced firewall technologies and WLAN access management solutions will be needed to identify IoT traffic, enforce policies and ensure safe environments for teaching and learning.

Christian Gilby has approximately 20 years of industry experience and holds a U.S. patent in authentication of caller identification. He has also served in marketing, engineering and senior product line management positions at Agito Networks, Meru Networks, Nortel and ShoreTel.

Open source will get a foothold

By Crystal Sands, Director of the Online Writing Lab at Excelsior College

Looking back: While MOOCs remain controversial, I think the lessons they can taught us about engaging students online were important



and can inform those of us who are not teaching in such large online settings.

Looking forward: 2015 is for open-source resources. As tenure and promotion committees realize the value of this kind of contribution, I think more academics, those who see the benefits of open-source resources for students, will be able to devote more time to creating these resources. Perhaps idealistically, I foresee a 'Maker Movement' of sorts in higher education that has the potential to change the way we teach, even in our face-to-face classrooms.

Crystal Sands has worked for nearly 20 years teaching college writing and began teaching online ten years ago. She has served as a writing program director, led writing across the curriculum initiatives, and worked as a curriculum designer and teacher trainer for several institutions. She has also published textbooks and articles on a variety of issues in writing, reading, literature, and education.

CRM gets a makeover

By Cole Clark, Global Vice President for Education and Research at Oracle Corporation



Looking back: Looking back at 2014 we've seen significant progress in the higher education industry's quest to improve data sharing and analysis to enhance the customer experience for students, faculty, and staff.

Specifically, we saw higher education institutions start to evolve their approach to customer relationship management (CRM)—moving from a departmental solution for a variety of disparate but related functions—such as student recruiting, engagement, and post-graduation cultivation—to a truly global enterprise-wide application.

Looking forward: The higher education industry will build on this foundation of CRM evolution to not only provide a better customer experience, but also improve competitive business edge by enabling institutions to make faster, more educated, and ultimately better decisions as to when to act on expressed interest from promising students and potential beneficiaries. As institutions become more sophisticated in their use of innovative technology, they have unprecedented insight that can enable them to rapidly assess which students and alumni are most likely to be successful (and lucrative), and very quickly – within minutes, not hours or days – respond to these individuals through the various channels in which they are most comfortable and likely to be using. Leveraging technology solutions that enable holistic CRM will be a crucial component to help enable institutions identify opportunities to drive new business and increase revenue, while streamlining operations.

Cole Clark is responsible for providing strategic planning and strategy execution support at a global level in terms of overall Education & Research solutions, including applications, technology and hardware. He is a member of the Forum for the Future of Higher Education and is an advisory board member for Western Governor's University.

The consumerization of IT

By David J. Hinson, Executive Vice President & Chief Information Officer of Hendrix College



Looking back: I think most would agree that [2014's trend] was the ready availability and free access to knowledge – in our hip pockets. If anything, I would say that the biggest game-changer in higher-ed

is that colleges and universities are no longer assured that “business as usual” is good enough to thrive, or even survive.

Looking forward: The consumerization of IT will continue unabated, as will the proliferation of mobile –and wearable– devices on campus. We're already seeing four-to-five devices connected to our Hendrix College campus network, for every student, staff, and faculty member.

David Hinson is also a mobile developer, who has developed commercial titles for iPhone, Android, Blackberry, and Windows Phone 7. Previously, Hinson was the CEO of Sumner Systems Management, a software development company that created custom applications for social networking services such as LinkedIn and Facebook, and for the Apple iPhone.

New degree equivalencies

By Joanna Young, Chief Information Officer and AVP for Finance & Budget at the University of New Hampshire



Looking back: New entrants caused major disruption in the higher-ed market, and this will only continue.

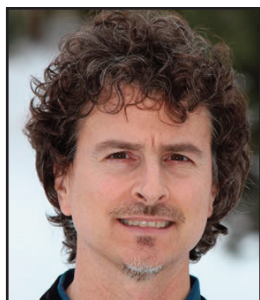
Looking forward: Flexible pathways to degrees, or new equivalent of degrees such as badging and credentialing.

Joanna Young's IT career spans two decades in property & casualty and higher education, including eleven years in executive roles. Young's experience includes applications development, infrastructure management, program office management, and mergers & acquisitions, both domestically and internationally.

Flipped everything

By John Orlando, Northcentral University Associate Director of Faculty Training in the Center for Faculty Excellence

Looking back: Just as all new technologies are first misapplied through the paradigm of the old technology, faculty are still trying to figure out



how to deliver online instruction in a way that takes advantage of the internet's unique communication style. Most online classes are simply translating face-to-face content into digital format without

thought for whether that format is appropriate for the web.

Looking forward: Most, if not all, classes will be flipped. Studies have consistently shown that the traditional lecture is nearly fruitless as a way of teaching. Putting information online so that students can watch, and re-watch if needed, at their own pace and time is a far better way to deliver content.

John Orlando developed and led the CyberSummer online course program at the University of Vermont, as well as online master's degrees in Information Assurance and Business Continuity Planning at Norwich University. He has delivered numerous courses, workshops, webinars, and presentations on online teaching, as well as how to incorporate technology into face-to-face teaching. Orlando has also written over 70 articles on online education, including the monthly "Online Learning 2.0" column for Online Classroom newsletter.

New software administration

By Mark Baker, Assistant Registrar at Whitworth University



Looking back: The proliferation of task-specific software on college and university campuses helped change [and is helping to change] the entire landscape of higher-ed, from business practices to pedagogy.

Looking forward: The continued de-centralization of higher-ed software administration on

campuses. More and more non-IT staff members at colleges and universities are becoming software administrators of specific niche products that only their department uses. This is often supported heavily by the software vendor's support staff rather than the school's internal IT staff and resources.

Mark Baker has worked in higher education for the past 10 years and holds a BA in Cross-Cultural Studies and MIM (Master of International Management) from Whitworth University. He is also currently the Site Moderator of www.SoftwarePhD.com.

Adaptive and accessible



By Justin Beck, VP of Global Education for Kaltura

Looking back: While much of 2014 we heard that MOOCs were dying, perhaps the real thing the industry missed was a shift in perspective. Instead of focusing on 5-10 percent completion rates of MOOCs as failure, what if in 2015 we view MOOCs as something universities integrate into their comprehensive marketing strategy, namely as one of the world's greatest content marketing approaches in higher-ed history. If we view from this perspective, MOOCs become the marketing success story in higher-ed in 2015 and/or the comeback story.

Looking forward: With over 50 firms developing "adaptive/personalized" learning platforms, the market is ripe in 2015 for consolidation and acquisition. Even though there are leaders in the field such as Knewton, Adapt Courseware and LoudCloud, there are too many options for institutions to evaluate, making the "tyranny of choice" a real issue for a campus CTO. Moreover, the VC/funding for ed-tech is still vibrant in the sector, so expect some of the larger adaptive firm companies to gobble up the smaller ones and/or

some of them to no longer be in business.

2015 will also be the year that all ed-tech companies and institutions need to start addressing accessibility issues head on. All will need to follow the mantra that Accessible Design is simply Great Design, as opening up opportunities for all learners makes for a more collaborative and impactful learning environment. **eCN**

Justin Beck is the Vice President of the Global Education Practice at Kaltura, an open source video platform. Justin has a passion for education innovation and technology that are focused on improving student engagement and learning outcomes. Justin previously has held leadership roles at Blackboard, Inc. and strategic account roles with Apple, Inc. He is a graduate of Miami University (Oxford, Ohio).



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The [Good], the Bad, and the Ugly

From the Editor: Welcome to eCampus News' Symposium, where higher education professionals explore the future of online learning. In our first Symposium, our contributors address what might be called the "irrational exuberance" around online learning. Susan Meisenholder suggests that waning faculty confidence may be due less to "Luddite" opinions, and more to a desire for better ways to serve. For Theresa Capra, the issue of access, as well the problems of poor course design and inadequate support, are the most pressing but areas that need significant improvement in the broad spectrum of online learning. Both authors provide evidence proving that faculty, indeed, are not Luddites, and that online learning (and MOOCs) may just have the potential to revolutionize higher education. Read these essays at www.ecampusnews.com/symposium. We welcome your thoughts and responses.

Unpacking the claims about MOOCs

Who actually gets access to MOOCs? And what are they getting access to?

By Susan Meisenholder, professor emeritus of English at California State University, San Bernardino.

Claims about increasing access to higher education are at the heart of arguments for MOOCs, and rightly so; expanded access and greater equity in educational opportunity must be at the heart of any discussion about the future of higher education.

But access is a complex, even slippery, term. It means much more than the mere opportunity to enroll in a course just as access to the middle-class dream of home ownership meant much more than the opportunity to get a loan and move in for a while.

For access to be meaningful—and not just an empty advertising slogan—students must have a real chance, if they work hard, to succeed in getting a quality education.

How MOOCs measure up to their access claims can only be assessed by asking specific questions about the access they provide: Who is getting access to higher education through MOOCs? And to what?

It is in a close consideration of these questions that we find our best starting place for a more meaningful conversation about the value of MOOCs and the claims so often made about them.

Access for whom?

At its most basic, the question of who gains access to higher education through MOOCs involves questions about access to the necessary hardware and IT infrastructure to take advantage of online education in any form.

Will the "masses" of less privileged students in this country and abroad who are the poster children for the MOOC movement have the first-rate computers and reliable high-speed internet access required to take these courses successfully? Or will this expanded "access" mean that low-income and working-class students will have yet one more task to cram into a schedule already overbooked with work and family responsibilities—namely, finding a good computer with reliable internet access often enough to keep up with course videos and the online discussion boards in their MOOC?

MOOCs, page 16

of Online Education

ore topics of urgency and controversy with their peers. In our
ine learning. In her essay about the pitfalls of MOOCs, Susan
e to the digital divide among the very students MOOCs aim
uate assessments, aren't just MOOC-specific shortcomings,
provide potential starting-point solutions to these shortcomings,
potential to revolutionize 21st century education as promised.
to these essays at www.ecampusnews.com/symposium.



Online courses: Are we learning yet?

The problems with online education are not limited to MOOCs

By Theresa Capra, associate professor of education at Mercer County Community College

The benefits of online learning are undeniable. Barriers inherent in traditional learning such as time, space, location, and access are eliminated with asynchronous internet courses. But all that glitters is not gold.

In its present form, online learning is far from a substitute for traditional instruction and may be damaging to certain students, even faculty.

Susan Meisenholder, in her essay in this issue, exposes the fallacies and problems with massive open online courses (MOOCs). This article will further the discussion by showing that the problems are not limited to rogue MOOCs, but instead permeate online courses, which have become an established and lucrative staple on most college campuses.

Growing demand coupled with high failure rate

Similar to MOOCs, credit-bearing online courses are exacerbating achievement gaps, particularly for academically weak students.

Immense investments in technology, training, and technological support for students have resulted in well-oiled machines that are not always pedagogically sound. Their singular mission—to increase student access to education by providing asynchronous courses—may not be feasible for many students, especially low-income, first-generation, academically underprepared, inner-city and rural students, according to several studies from the [Community College Research Center at Teachers College](#), Columbia University.

Ironically, many institutions that serve these students tout the ability of online learning to overcome the obstacles generally encountered by nontraditional students (e.g., no transportation or child care) when pursuing higher education.

Yet the problem is not exclusive to community colleges.

For many institutions, including four-year universities, online education is creating an interesting paradox: growing demand and enrollment coupled with higher withdrawal and failure rates. The [Babson Survey Research Group](#), which has

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Unpacking MOOCs

continued from page 14

The digital divide is real in higher education—bandwidth is unequally distributed in communities and high data rates can mean unmanageable costs for poorer students; but this serious problem is almost invisible and rarely discussed by MOOC promoters.¹⁶ Talking about the wonders of MOOCs for expanding access without acknowledging these fundamental economic and technological disparities will not help the students who most need access in the first place.

Assuming a student has the hardware and infrastructure for meaningful access through a MOOC, another question to ask is whether that format offers her/him a reasonable chance at success.

The existing evidence to date reveals that MOOCs do not do so. Although they are rarely mentioned by MOOC supporters, drop-out rates in these courses hover at about 90 percent. Fewer than 10 percent of those who enroll in these courses complete them successfully. For example, in Duke University's "Bioelectricity" MOOC, which enrolled a whopping 12,000 students, only 313 achieved even a basic pass.

Equally telling are the demographics of the small percentages of students who successfully complete MOOCs. Overwhelmingly, they are academically well-prepared.

In one study of a variety of MOOCs, 85 percent of the successful students had a BA or a BS degree.¹⁸ In a study of another MOOC, 80 percent of respondents who passed the course said they had taken a comparable course in a regular university before enrolling in the MOOC.

As the reporter detailing these results opined, "One way to read the finding is to say that although [this MOOC] was open to anyone, anybody who had not already paid for traditional education would be ill-equipped to succeed in the course."

David Wiley, a leader in the open education

movement and an expert in instructional technology, has been outspoken in critiquing the current propensity to push MOOCs for any and all students.

"MOOCs are another tool in the box," Wiley says. "If we start swinging them, hammer-like, at everything, we will do so to the detriment of students. We should be honest about the situations they may be appropriately used in, and make heavy use of them there. We shouldn't make inappropriate claims about broader applicability."

It is a bitter irony that MOOCs are being used in precisely the ways Wiley decries and are being promoted as a boon for students least likely to succeed in them.

Access to what?

The current (and laudatory) goal of increasing the number of Americans with college degrees sometimes makes it easy to forget this basic point: our goal isn't (or shouldn't be) just to increase the number of people holding a piece of paper; it should be to increase the number of people with a quality higher education.

While "quality," like "access," is a complex term involving many factors, a truly democratizing, quality education must involve helping students become more careful thinkers and more effective communicators so that they can become active participants in all aspects of their society. A quality higher education, one that is truly transformative and empowering, is more than a narrow skill set.

Whether MOOCs can provide that kind of authentic education is an open question, according to the [National Institute for Learning Outcomes Assessment](#). Can MOOC students, they ask, "reflect on what they learned in these courses, can they integrate the knowledge they obtained in them with what they gained in other courses, and can they apply their new knowledge in multiple settings"?

"Without evidence of these outcomes," they

conclude, “the effectiveness of MOOCs will remain in doubt.”

A quick look at the features of most current MOOCs doesn’t inspire confidence that MOOCs can pass this test. Often on offer are short videos; no interaction with a professor; little or no required reading; multiple choice tests; and few, if any, written assignments beyond postings on discussion boards.

Given the numbers enrolled, professors don’t read student papers when they are assigned; instead, papers are graded by other students while the search continues for “satisfactory” robo-grading programs.

(if not us, then who?) in moving toward a fuller and more honest discussion about MOOCs and the future of higher education.

As faculty we have the expertise and the access to numerous platforms for exposing the fake access claims made for MOOCs. Even the simple act of demanding that those institutions beginning to push MOOCs for credit inform students about the data on success in MOOCs could empower a student to make wiser choices – and ask some hard questions.

Demanding that administrators answer questions about the digital divide among students being “targeted” will not only highlight a very

At the heart of authentic education that develops the complex skills and abilities that matter most for a person’s future are guidance and feedback by a qualified, dedicated teacher. Those of us who can, demand that for our own children. We must demand it for everyone’s.

As most people would agree and as the research on teaching writing certainly bears out, the practice of having students grading other students or even commenting on their work in an unmoderated environment simply does not provide developing writers with the kind of feedback and guidance most need to improve.

At the heart of authentic education that develops the complex skills and abilities that matter most for a person’s future are guidance and feedback by a qualified, dedicated teacher. Those of us who can, demand that for our own children. We must demand it for everyone’s.

What can faculty do?

In what passes for the public discussion of MOOCs in higher education, faculty have been carefully cast by many tech boosters as backward-looking, slow-moving, self-promoting Luddites cloistered in our Ivory Towers. Getting out of that box will be challenging, but we must take the lead

concrete problem with MOOCs but also open discussion of other social class and equity issues in their use.

As faculty we can also demand – and actually do – research on MOOCs and other innovations. Right now, the research “agenda” on MOOCs is largely being driven by universities sponsoring them and corporate providers. We need not only to scrutinize their research claims; we also need more independent research that pushes beyond what Phil Hill has called the “billions served” metric currently passed off as MOOC assessment.

The hidden costs of MOOCs is another topic faculty are well-positioned to tackle.

Legislators offering up MOOCs instead of funding, administrators building the “efficiencies” sections of their résumés with MOOCs, and corporate providers of MOOC-related goods and services are not likely to look hard at the costs of actually developing and offering such a course.

The sparse evidence out there about the time

faculty put into a single MOOC, not to mention the technical support, hardware, and software required to put one on, suggests that these courses are not cheap. Let's do the math.

And let's follow the money being made by corporations and the cottage industry of consultants driving the MOOC train: One of their main talking points is that faculty are just protecting our own economic self-interest in critiquing their proposals.

Let's take that fight and put the average salary of faculty members (including the 75 percent who make a pittance as contingent faculty) up against the billions made by for-profit educational providers in their "bold" project of "transforming" higher education. The public needs to see the wide gap between those trying to make a living and those making a killing in higher education.

Our students will get it. In the best tradition of authentic education, they will answer the questions themselves if we ask the right ones. If students pre-

fer in-class experiences (as the research suggests); if employers are leery of online universities (as the research also suggests), why are MOOCs being pushed on us? If MOOCs are such a cutting-edge innovation, why aren't those in positions of power signing up their own kids in droves? Why, instead, are the students in remedial courses, community colleges, and cash-strapped public universities the target audience for these courses?

Our students deserve better. And they deserve our support in fighting for the kind of empowering education that changed the lives of so many of us.

*Susan Meisenhelder is professor emeritus of English at California State University, San Bernardino, where she has taught since 1980. This article was excerpted from "MOOC Mania," published in the NEA peer-reviewed journal *Thought & Action*, 2014 edition. To read the entire article including footnotes, and to learn more about *Thought & Action*, visit the [NEA website](#).*

eCN Symposium

eCampus News announces *Symposium*, discourse from higher education professionals on topics of urgency and controversy, with commentary and response from the field published on our web site, ecampusnews.com. We are actively soliciting submissions and response to topics for the rest of the year:

January/February: The [Good], the Bad, and the Ugly of Online Education

We are seeking responses starting immediately at www.ecampusnews.com/symposium

March/April: Whither Liberal Arts? —What is the future of liberal arts in higher education? What are best practices for online liberal arts teaching? Participants: Gunnar Counselman, CEO, Fidelis, Inc.; Josh Jarrett, Chief Learning Office, Koru; Sarah Steinberg, Principal Consultant, Frogstone Strategies, LLC

We are seeking responses starting 3/16 at www.ecampusnews.com/symposium

May: How to Value Open Scholarship — The tenure system is still built on a publish-or-perish foundation, but what does it mean to "publish" in a digital age? How does an institution appropriately evaluate, and reward, a body of academic work that is collaborative, iterative, and communal in nature?

Participant query: 2/15 • Submissions deadline: 3/1 • Responses start: 5/1

June: Containing the Costs of a Higher Education Degree — Many higher ed institutions are turning to online to more cheaply deliver certain kinds of courses (large, introductory). Is this, in fact, a good or sustainable model? What role does technology have to reduce the costs of delivering a post-secondary education?

Participant query: 3/1. Submissions deadline: 4/1 • Responses start: 6/1

August/September: New Models for Funding Technology: Critics say that traditional models for funding technology (capital vs. operational) have handcuffed higher ed leaders into using non-innovative technologies. How can funding models be improved so that they support, rather than thwart, innovation?

Participant query: 5/1 • Submissions deadline: 6/1 • Responses start: 8/17

October/November: Suggestions for our last Symposium topic are being accepted. Deadline: 7/1

For more information on each topic and/or to submit a 100-word submission query, contact Meris Stansbury: mstansbury@ecampusnews.com

Are We Learning Yet?

continued from page 15

tracked online learning in the U.S. for the past decade, reports that retention in online courses is a growing concern for college administrators.

Additionally, those for-profit, fully online institutions that instigated the virtual craze are leaving a dubious track record. The largest of the pack, the University of Phoenix, was placed on probation by accreditors in 2013 due to multiple issues including low graduation and retention rates, and high incidences of defaulted student loans.

The question of whether online learning is rigorous has been a common subject for researchers. Perhaps a less investigated question is whether or not online courses are perfunctory.

Anyone who has taken or taught an online course has probably found it, at least to some extent, to be a monotonous experience. Of course, we all have endured a snooze fest or two in face-to-face settings, but the nature and design of most online courses can amplify the tedium that often results from regimented learning.

Some research demonstrates that online courses typically keep students quite busy with layers of similar assignments that require hours of typing and reading but provide little opportunity for deeper application or cognitive stimulation: the posting of lecture notes that mirror the textbook; the creation of PowerPoints that speak key points; quizzes generated from test banks; and superficial discussion board questions culminate to produce a perfunctory, dry experience.

In many of these cases, managing the workload becomes the learning objective. Courses designed in this manner may appear rigorous because of the amount of work required, but they are not rigorous in a cognitive sense. For teachers, it is a similar situation; reading repetitive discussion threads and answering copious e-mails from faceless students can be a burdensome task.

"Best" teaching practices?

Research that has examined the impact of online learning on student achievement and satisfaction has consistently demonstrated the significance of the course instructor.

But what makes an excellent online teacher?

Most research that has attempted to address this question has based the answer on best practices. These practices, which include prompt eMail responses, timely grades and feedback, and a steady presence within the course shell, are helpful.

However, they do not necessarily produce a high-quality learning experience: Other research has noted that students have extreme difficulty perceiving instructional presence even when an instructor is following best practices.

According to Mark Edmundson, a professor of English at the University of Virginia, online teaching is a "one-size fits all endeavor." There is nothing that an online teacher can give a student that a good book can't.

When I ask my students, who are predominantly education majors, to recall their favorite teachers, their descriptions usually reveal the importance of intangibles; abstract and elusive qualities that great teachers exude: passion, enthusiasm, humor, just to name a few.

Unfortunately, this dynamic is very difficult to transport to an online classroom. As Edmundson pointed out, "online teaching is a monologue." Thus, great online teachers are defined by unmemorable best practices such as answering emails, updating announcements, or submitting grades.

Meisendhelder points out that faculty are largely absent from the discussion of MOOCs and their place in higher education. Well, the problem is a lot closer to our front door; standard online college courses may be diminishing the value of faculty. Many institutions are removing the need for faculty expertise during the course-design process. Colleges are moving

more toward the creation of cookie-cutter, ready-made courses that can be rolled over to anyone, anytime.

Textbook publishers are also aiding in this effort by supplying most of the material necessary to develop a fully online course—plug and play compatible with the major learning management systems.

On the one hand, these prototypes can ensure consistency for students. On the other, they completely remove any individual contributions that faculty can, and should, add. And while it's true that even face-to-face courses are bound by a designated curriculum and course outline, this is merely a skeleton; in person, the teaching and learning process is dynamic and fluid with

Despite these many challenges and limitations, many college administrators have declared the expansion of online learning as paramount to their institution's futures.

instructors who consistently add, subtract, enhance, or extend, based on the contours of the classroom.

When a course has been prefabricated, an instructor is immediately removed and disconnected from its content.

Some institutions, especially for-profit ones, realize this, and consequently try to track instructional time the same way some instructors tally (and attempt to force) student participation. This usually entails a minimum amount of online activity and forum postings—a tangible footprint to “measure your teaching.”

These policies attempt to define efficacy, for both teacher and student, with a rubric built around compliance rather than depth of learning or individual development. Of course, teachers and students must be present, regardless of the

type of classroom. But under these circumstances, learning becomes sterile; a business model that is boxed and packaged, limiting the potential for emergent and profound learning experiences.

Some solutions to the problems

Despite these many challenges and limitations, many college administrators have declared the expansion of online learning as paramount to their institution's futures. Online courses can potentially attract new students, boost enrollment, increase revenue, and use instructors from remote locations—without much in the way of infrastructure costs.

Additionally, their convenience and flexibility are irrefutable.

However, putting more courses online is unlikely to benefit anyone without acknowledgement and closer examination of the issues that impede student success and diminish their retention. So, as colleges all over continue to roll out online offerings, what can be done to engage and retain students?

First, institutional efforts should move beyond prepping and orienting students for an online course and examine the depth and level of learning that is occurring. Although significant attention has been paid to the role of orientations and readiness surveys for improving retention, research warns against an over reliance on these items because students may not participate or perceive them to be beneficial.

Additionally, most orientations are designed to facilitate an understanding of the technology and learning platform rather than the actual expectations of the learning environment, and more specifically the instructor.

And while orientations are definitely important, we need to move beyond them to more consistent support mechanisms that can sustain student success throughout the semester. For example, assigning stronger and more seasoned

students as peer leaders for some incentive, and providing mentoring for inexperienced online learners can decrease withdrawal and attrition.

Next, common practices that underscore the design of online courses should be reviewed and revamped.

It's true that the asynchronous nature of online courses limits the scope of interactions while activities are constrained by technology. But current design practices may amplify these inherent weaknesses.

Often, instructors begin the design process by considering the content and learning objectives – usually embodied in the textbook. Activities, assignments, and assessments are then built around these items and minimally determine whether or not a student did his or her homework. Student interactions are manufactured with mandatory discussion boards that are typically repetitive and dull.

Instead, a less-is-more approach should be applied, with fewer, more substantial activities. Conclusions about the rigor of an online course should not pivot on the amount of tasks that are present; a meaningful workload should be the preferred goal.

Similarly, the principle of engaged learning can help improve the design of online courses. In simple terms, all activities and assessments should be designed to challenge and engage students on the upper levels of Bloom's Taxonomy.

With engaged learning, creative uses of technologies such as videos, virtual chats, and discussion boards are viewed as vehicles of expression rather than the main teaching tools. Engaged learning includes allowing students to establish their own learning goal, to seek out and evaluate appropriate sources for learning, and to share them with the group.

An example of this can be posing a question for the weekly topic and asking students to track down sources to aid in its understanding, instead of composing canned responses.

Students can share their sources, perhaps in a class repository or even on a discussion board, and collectively determine their worth.

Why have a discussion board if a primary objective is to ascertain whether or not a student read a textbook chapter? There is probably little need for students to select and discuss varying chapter questions when the goal is to assess individual understanding.

Likewise, if there is a designated truth or series of facts a student must arrive at, as is the case in many survey courses, a discussion forum is unsuitable.

Problem-based learning, which is a constructivist approach that presents an ill-structured problem leading to multiple perspectives, has been found to be an effective way to engage online students in the course material. With this premise in mind, perhaps mathematics and science courses could reserve discussion boards for mandatory postings about a struggle, strategy, or eureka moment rather than rote answers of textbook questions.

Presently, online learning is the most viable alternative to face-to-face instruction on a college campus. As a faculty member in a community college who has taught online for 10 years and conducted extensive research on the topic, I have witnessed both the potential and detriment to online learning. I have come to believe that it's not the renaissance of learning so frequently extolled, at least for most undergraduates. It's becoming painfully clear that we need to rethink Internet courses across the board. **eCN**

*Theresa Capra is an associate professor of education at Mercer County Community College in West Windsor, NJ. This article was excerpted from "A Consideration of Online Learning," published in the NEA peer-reviewed journal *Thought & Action*, 2015 edition. To read the entire article including footnotes, and to learn more about *Thought & Action*, visit the [NEA website](#).*

Going beyond the basics of flipped learning

How educators are going beyond basic flips

By Bridget McCrea

This is not your mother's flipped learning.

Often thought of as an educational method whereby students watch online instructional videos at home and come to class prepared to do "homework," flipped learning has come a long way since its origins in 2007. The concept has since evolved to include myriad instructional methods that take the basic concept and go further in method to turn traditional higher educational learning models on their heads.

"Professors are starting out with basic classroom 'flips,' and then moving into deeper learning pedagogies," said Jon Bergmann, chief learning officer at FlippedClass.com and a pioneer of the innovative teaching concept, "including deeper project-based learning and flipped mastery models where students prove that they learned a specific concept and then independently move onto a new module."

While Bergmann still sees the original "view video at home, do homework in class" model as a good starting point for new flipped learning adopters, he says educators are helping students interact with those videos and gain understanding from them. "It's not just about assigning a video and hoping that the class watches it," says Bergmann. "It's about getting to the next level and truly engaging students in class, and in a way that positively impacts the learning experience."

Here's how three different professors have used Flipped Learning to achieve that goal:

1. Coming to class prepared

Never one to be satisfied with traditional, time-tested educational approaches, Matthew Stoltzfus started experimenting with flipped learning in 2012. At the time, this general chem-

istry teacher at The Ohio State University in Columbus, Oh., was looking for a way to break out of the traditional notes/lecture method of teaching his 2-semester class. "I began looking into ways to improve instruction," Stoltzfus recalled, "and learned about the flipped classroom/peer instruction model being used by Eric Mazur at Harvard."

After researching the methods that Mazur was using, Stoltzfus started making content – both online videos and textbook material – available to students before they came into class. He also incorporated pre-lecture assignments, an online homework system called "mastering chemistry," and a polling system (which allows him to see who is and isn't prepared for class) into the mix. His ultimate objective is to have students review content and gain some understanding of it before class.

"I can then give them a poll question in class to get a gauge on where they are," he explained, "and how fast I can move through the lower-level content to get to the more complex topics."

Watch Stoltzfus' TEDxOhioState talk on why he flipped his classroom:

<https://www.youtube.com/watch?v=o8a1dsv5IXo>



He has students work individually at first, and then breaks them up into groups in order to leverage peer instruction. "Research has shown that that's the best practice, rather than just saying, 'Hey go ahead and work with your neighbor,'" Stoltzfus noted. "You want them to have ownership of their answers and to start thinking about the content before they begin any group work."

Watch his short video demonstration of his flipped Chemistry course:

<https://www.youtube.com/watch?v=UPSUmOumzJI&list=UUuTXrXqGq72xygtBUZo6plw>



Looking back on the time he's spent honing his flipped learning techniques, Stoltzfus said he's happy with the results. "It's going great, but of course anytime you introduce a new idea there will be some small tweaks to make along the way. That's really the only way to make a new concept work in the classroom."

2. Taking the right approach

With the online goal of moving direct instruction from the group learning space to the individual learning space, Jerry Overmyer, mathematics and science outreach coordinator at the University of Northern Colorado in Greeley, Co., helped establish the Flipped Learning Academy at his institution. Through this effort, a group of UNC educators has allocated a semester to figuring out the most effective approach to flipped

learning on campus.

Calling online video "secondary," in the flipped learning environment, Overmyer said the group is focused on creating dynamic, active learning environments. "The last thing we want UNC students to say is, 'Oh, we don't have to go to class because the lectures are on video,'" he explained. "We want them to say, 'We have to go to class because that's where the actual learning takes place.'"

Nursing students, for example, will be able to experience clinical situations and applications in even the most introductory classes. Other professors are experimenting with more in-class group work and/or activities that go beyond the scope of a single student.

Overmyer sees this type of hands-on pedagogy as particularly vital in an age where online learning is gaining ground, yet not always as respected as traditional or classroom learning.

"We live in a YouTube world where students are going to wonder why they're even in college in the first place when they can learn everything online," he said. "Students are going to feel like they're being ripped off if flipped learning is based solely on videos." He points to the college algebra teacher who decided to point students to online videos and then sit at the head of the class to answer questions as an example of how not to implement a flipped learning initiative. "Taking a bad pedagogical lecture and putting it on video is the wrong approach."

3. One lecture at a time

As the stop gate between students who want to be nurses, and the actual nurses themselves, Terry Austin is tasked with infusing the former with the anatomy, physiology, and microbiology knowledge that they need to become nurses at Temple College in Temple, Texas. Using Learning Catalytics' bring your own device (BYOD) student engagement, assessment, and classroom intelligence system, Austin has stu-

dents watch short lectures before class. He then monitors student performance, tracks any modifications needed in his own instruction, and adjusts accordingly.

With a high percentage of working, non-traditional students, Austin has been using flipped learning since 2008 to teach his courses' tough-to-grasp content. "Not only are there a lot of anatomical terms to learn," he noted, "but my students also have to learn the science itself and the language behind it." He said the videos give pupils a jump start on content that in the past may have required two to three course repeats. "The class retake rate has improved since I started using this new learning style," said Austin.

That learning style finds students using computers and mobile devices to watch videos on key topics. After answering three or four thought-provoking questions at home, students step into the classroom and are immediately assigned to teams. Those teams spend 5-10 minutes discussing a single question before committing to a single answer. "This brings an exciting new dynamic to the classroom," emphasized Austin, "where students can teach one another more effectively than I'd be able to."

Watch Austin explain his use of Learning Catalytics:

<https://www.youtube.com/watch?v=LpqCAhI8bGQ>



To educators looking to leverage flipped learning in their own classrooms, Austin says the best approach is to start small. "If you come into this with the 'all or nothing' mindset, it will never get done," he cautions. "There's nothing wrong with flipping a single lecture and then growing from there. **eCN**

Bridget McCrea is an editorial freelancer with eCampus News.

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<http://www.ecampusnews.com/technologies/how-internet-everything-190/>



Why campus IT systems are moving to human-centered design

A California school dramatically improved its online interaction with students by hiding its back-end systems behind an elegant user interface that integrates them all.

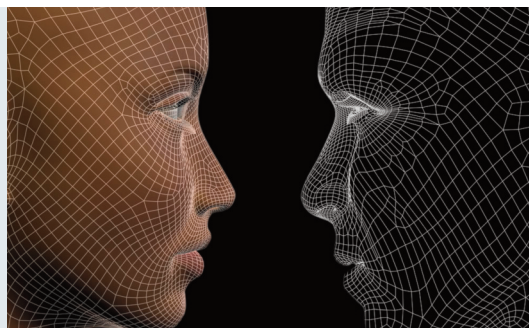
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Student collaboration turns to 3D, avatars

Wanting to create a collaborative studio experience online, an architecture school has turned to a virtual 3D environment populated by avatars.

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Why Cloud Security is Critical in 2015

Think it only happens to consumer businesses like Apple? Think again: As campus data moves to the cloud, so do hackers. Here are some startling facts to get your campus one step closer to better security.

The higher education industry accounts for 17% of all reported data breaches,
second only to the medical industry.



27,509

average number of records
exposed per breach

That means the average
cost to an institution
for every day data
breach is roughly

x \$142
per record

=

\$4
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*Source: From "Cloud Security: What Higher Education Need to Know," an infographic from ellucian.
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