Online Education White Paper

January 25, 2014

Executive Summary

A renewed interest in online education has surfaced recently, largely sparked by issues of bottlenecking and course availability on college campuses in California. Decision-makers across the state, including campus administrators and state legislators, have been looking to online education as a potential solution to many of these issues. It has become a fad across the state, sparking investments by both public and private parties, campus projects, and even a few startup companies.

Until now, one voice has been largely missing from the entire discussion: the voice of students. Students are the target audience for online education. They are the group that will benefit or suffer the most from it, and have yet to provide any real substantial input on the matter. This white paper is one of the first official opinions of college students in the California State University System on the topic of online education. In it you'll discover our hopes, our fears, and our ideas, all put together to help shape the future of higher education.

However, this white paper is much more than a collection of opinions; it is a discussion about the future. The point of this paper is not to talk about what online education has been, but rather what it can be. As the official representative body of the over 437,000 California State University students, the California State Student Association has worked with student leaders from across the CSU to compile a set of opinions relating to what online education should become. Some of these opinions include:

- That higher education decision makers consider online education as a new and unique resource that can improve the quality of education
- That invigorating and exciting platforms be pursued and developed to host the online curriculum
- That campus administrations and faculty give more interest to design thinking when developing online education courses
- That no student is required to take a course online in order to obtain a degree, whether it be a requirement of a university or by default if specific courses are only offered online
- That campuses continue to offer technology solutions to students like computer labs and laptop rentals
- That faculty members are retained as large contributors and deciders to the decision of implementing online technology in specific courses
- That faculty members remain determined to offer the best quality and experience possible to students participating in their courses, whether that experience be in classroom or online

With this white paper, we hope to help shape the future of online education so that it not only benefits the students, but also delivers a better educational experience than ever before.

Table of Contents

Introduction

Online education is one of the biggest topics currently being discussed in higher education. Some claim it is the solution to bottleneck courses, while others see it as the end to traditional education. While the recent flurry of attention given to the topic has many thinking online education is brand new, it has actually been widely used in higher education for the last two decades. The California State University system, for example, has been offering courses online since the 1990s.

We know that online education is in huge demand: a study conducted by the Babson Survey Research Group in 2011 took responses from over 2,800 Chief Academic Officers and Academic Leaders states that "Year after year the number of online enrollments steadily increases its proportion of total enrollments starting at 11.7% in 2003 and increasing to 32% in 2011" (Allen, 2013). So the question becomes less about "is online education coming" and more about "what should the structure and features be?"

The internet is simply not what it used to be. It has grown, expanded, and developed into something much larger and integrated with our day to day lives than we could have ever imagined. It is very likely that online education will transform the way education is provided in the future (if that hasn't already happened) and California college systems are leading that charge. It is time we give the type of attention to online education that tech startups in the Silicon Valley give to their products. After all, this is arguably the biggest thing to hit higher education in our history.

As students, we understand that a future is coming where online education will be much more integrated into college curriculum than ever before. It is a powerful process that has already set into motion. Our unique perspectives allow us to think differently about what is possible with online education and our roles as students give us a front row seat of what is needed.

What allows students to see online education in such a different light is that we have grown up in a fundamentally different world than many before us. What we know and understand to be possible with technology is very different than that of those building and administering online education platforms. We have grown up in a world where search engines hold more information than our biggest libraries, where some of the world's most complicated problems are solved in a line of computer code, and where ideas can be shared around the world in a matter of minutes.

As students, we have embraced the impending shift in higher education, and have filled this white paper with opinions on what we feel are the most important components of it. Everything from the quality of the curriculum offered to the platform it's offered on, to the way that it is implemented on college campuses.

This white paper serves as the voice of the over 437,000 students in the California State University System. Prepared and published by the California State Student Association, it takes the opinions of students from across the 23-campus system and outlines the most common opinions of the students in relation to online education.

Terminology

What is online education? It is a broad and complicated question that many different people would answer differently. The 2012 ASCSU white paper on online education examined the online education policies of 16 CSU campuses and found that the majority of them had different definitions for terms like “distance learning” or “hybrid course” (ASCSU). This tells us that although many are doing a great job trying to streamline the definitions, there is still some confusion. Although there are multiple parties, including the California State Legislature working towards a single definitions for some of the most common online education terminology, we have included our understanding of some of the most common terms below. These definitions are also used for the purposes of this white paper:

Education where curriculum is delivered without any online supplements.

Education where the curriculum is delivered via an online medium.

This includes everything from courses fully hosted online, to traditional classes using Learning Management Systems to enhance the curriculum. If any component of the curriculum is delivered via an online medium, it is online education.

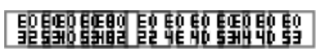
This does not include students in traditional classes using the internet to assist in their studies, only when an instructor delivers content via an internet medium.

Education that is a component of online education. When a portion, but not all, of a courses curriculum is taught via an online medium.

Using a LMS to deliver copies of lectures and grades is not considered a hybrid course, it is merely just a component of online education.

Teaching 100% of the curriculum via an online medium and holding tests/exams in person is not considered a hybrid course.

Software where educational components, including Learning Management Systems and curriculum, is delivered to students via the internet. Platforms can be as simple as a website that hosts content in a static manner, or a more complex system like Learning Management Systems, where content is hosted in a more dynamic manner.



Content hosted on an online website or platform that is only uploaded and posted for viewing and downloading purposes.

Common examples include informational pages on websites, and content for download like lectures and syllabi.

Content hosted on an online website or platform that can be interacted with.

Common Examples include online forums, chatrooms, and social networks.

Platform

The platform is the campus where the education is being delivered, via the internet. Popular platforms include Learning Management Systems like Blackboard and Moodle, educational content hosting programs like iTunes U, and teaching platforms like Udacity, Khan Academy, or Coursera. These are all platforms that host educational content that students consume.

It is important to note that the platform can be very flexible. Platforms can be as simple as iTunes U: a program operated by Apple, Inc. that sources educational content, largely lectures and presentations, from campuses around the world. That content is then posted and available for free download to anyone with access to the internet. Content is largely sorted by course, so an American History Class from Penn State would hold all of a semesters lectures and presentations as a part of one section. Students can download individual lectures, or an entire semester (iTunes U, 2013).

Platforms can also be very complex, including online instruction, test taking, and assessments of a student's progress. A very common example is Khan Academy, largely known for its instructional YouTube videos on topics ranging from geometry to chemistry. The platform has now grown into one that not only hosts these online lectures, but also offers working problems for each topic and assessments that test a student's accuracy on solving problems. The platform can also conduct pre-tests and accurately place a student in more difficult, or more simple, concepts depending on the outcome of that test (Khan Academy, 2013).

Learning Management Systems have become very popular on campuses. The most popular features include online grades that are accessible by students, discussion forums that both teachers and students can interact with, and pages full of resources that teachers can post for students. These platforms serve as a place to distribute curriculum, but usually does not supplement a professor's instruction.

The platform is arguably the most important component of online education. That is because everything that makes online education successful is in the platform. Everything from how professors post curriculum and instruct students, to how students receive and interact with the curriculum, and even how students submit assignments is controlled by the platform.

Just as the classrooms on a university campus allow traditional education to be successful, the platform is what allows online education to operate successfully. From what we have seen over the past decade, students enjoy the multimedia aspect of online education to enhance their college experience: "In a 2013 study on undergraduate students and information technology by Educause, 76% of students said that technology helps them achieve their academic outcomes" (Dalhstrom, 2013). As students, we want to see this type of technology be expanded and more versatile.

However, building a good online education platform is not as simple as it seems. Ask any startup in the Silicon Valley and they will tell you a book's worth of roadblocks that come in the way of building a good product for this new technological age. A good platform takes the right combination of designers, developers, and administrators who understand both faculty and student perspectives. The best platforms focus on making the user experience as seamless and simple as possible.

The internet has changed dramatically since its inception. While it has been around for decades, the internet has only been a leading global force for the last 10-15 years. Furthermore, the internet has expanded in an even more exponential fashion in the last 5 years. The technological world that students have grown up and become accustomed to is vastly different than that of some college faculty and administrators. This is because of nothing more than the rapid and dynamic growth that the internet has had in the last decade. There are simply different perspectives to how technology can and should be used to solve problems.

One example that can be used to prove this notion is Google. Incorporated in 1998, it is one of the most well known search engines on the internet. It wasn't until 2007 that its emailing platform, Gmail, was released to the public. Since then Google has made a name for itself in everything from mobile operating systems (Android) to social networking (Google Plus). The Google that the world knew 5-10 years ago was probably no more than a search engine. Now, it is one of the largest brands in the world with over 100 products and services it offers.

Students are dynamically different from their instructors and administrators. The two populations have grown up in two nearly opposite environments. Most students today have a hard time remembering a time when they didn't wake up next to a smartphone. Generations before us did not grow up in the same technological environments; therefore the approach to how to use and administer technology comes from different perspectives.

To find what the students best respond to, look at what we are doing online today. We use websites and online application that are visually appealing, allow us to interact with the people who are important to us no matter where they are, and discover information at a more rapid rate than has ever been possible before.

The argument here is not that current faculty and administrators cannot build out an online education platform in an effective and usable manner, but rather that they should not be solely responsible for this. More innovative approaches need to be sought after when building an online education platform. Extra attention should be placed on interface design and interaction of the platform from both student and faculty perspectives. Mobile applications must be a part of the final package. Teams developing the platform should be developing it with the same tenacity as developers in the Silicon Valley give their

products. The platform can be argued to be the make-it-or-break-it part of online education, its importance cannot be stressed enough.

Quality

Some of students' biggest concerns with online education is that quality of education can sometimes take a hit in the name of extra accessibility. Many common approaches to online education involve methods like placing pre-taped lectures online for students to view. However, online education can be much more dynamic and intuitive than this. Professors should view online education as a tool that allows them to deliver higher quality education more efficiently, not as a way to streamline the curriculum they currently teach.

Instructors should also give the same amount of attention to their online students as they would to their in class students. The internet makes it easier than ever to communicate; students should be able to reach out to their instructors or teaching aids as frequently as possible.

Both the platform and implementation of online education help improve the quality of the educational experience. When designed and developed properly, the platform can help ensure the highest quality of education for students is presented. It can also make it easier for faculty to engage and interact with students over the curriculum being presented through features like interactive discussion boards. Implementation of online education can also ensure that the students best suited for online education are able to access it, while other students who don't fare as well in online environments are not required to participate in it.

Online Education is a tool to be used by instructors, faculty, and administrators to improve the quality, accessibility, and affordability of college. It should contain the same level of quality, if not better, than a traditional course. The platform should be innovative and intuitive to such a point that the private sector wants to know how California did it so well. And the implementation should be something that helps students through their experience in college, not hinders it.

Implementation

Online education is about more than just transferring curriculum out of a physical classroom and into an online one. It's about enhancing the overall experience of the course. Sometimes, fully online classes will work and, other times, they will not. However, there is also a middle ground to consider: the idea of supplementing the traditional course with online education.

Flipped, hybrid, and blended course models are all similar terms for a supplemented course experience. Supplemented courses can take the more menial aspects of a course: lectures and busy work, and place them online. From there, faculty members can try to make the online content as intriguing and enticing as possible with new online technologies, while freeing up class time.

The time left in class is then used for more active learning experiences. These classes can instead include more hands on work, discussions, group work, and more interactions directly with the instructor and classmates. These course models have proven to be highly effective. One instance is the partnership between San Jose State and the Harvard-based startup edX. In April 2013, the SJSU campus blog cited a statistic about the success of the blended course model that edX helped SJSU facilitate: "Although the numbers of students were small and classes differed on many factors, the pass rate in the blended class was 91% and the pass rates in the conventional classes were as low as 55%" (Harris, 2013). The online medium can help increase the rate at which students are passing traditional education courses that normally have a much lower success rate.

Implementation of online education includes several factors, but campuses should consider the supplemental value that online education creates, and incorporate it into its current offerings. This can be as simple as integrating an Learning Management System to distribute notes and grades online, all the way to fully embracing a hybrid course model for its courses. Whatever solutions are embraced, understand that a supplemental experience is still a component of online education, and the same attention should be given to the platform, quality, and accessibility.

Accessibility

While a vast majority of students have ready access to laptops, tablets, smartphones and the internet, not all do. Every campus needs to have free and affordable technology options available to students. In addition, students should be able to fully understand what will be required of them when enrolling in new courses.

Because not every student will have access to technology, no student should be required to take a course online in order to receive their degree. This means that while online education should be available as an alternative or complimentary to many courses, there should always be a traditional option. Furthermore, no student should feel pressured to take an online course when traditional course options are lacking, or even sometimes non-existent.

Faculty

Faculty are just as an important stakeholder as students in the equation for what online education should be. Faculty are the gateway to education for students, and it should be simple and effortless for them to deliver their instruction to students.

Faculty also understand the classes they teach better than anyone else. They know what works and does not work. Faculty should be the ultimate deciders of whether online education is used in their classroom and, if so, to what extent.

That said, faculty should remain open to the potential positive impact that online education can have in their classroom. New tools and experiences will become increasingly available and have the potential to change the environment of the classroom. In addition, as students become more invested in technology, both in and out of the classroom, they will seek out classroom environments that best suit their learning styles.

Design Thinking

Online education is about more than a good platform or good content. The curriculum itself must be designed for this new medium. Courses cannot simply be transferred from in classroom to online without an adjustment to the presentation of the curriculum.

Curriculum in an online environment must be specifically developed for that medium. The online medium itself must be designed to operate from a user's perspective - both for the faculty and the students. When developed efficiently, professors are able to challenge students with interactive and media-rich content, while students are able to learn in an agile and innovative way. The CSU System has the tools available with online education to revitalize the learning process for its students. Collaborative and interactive learning experiences, designed in a heuristic and human-centered way, can provide students with a much higher quality of education across all CSU campuses in one unified, organized system.

MOOCs

The question of “What is a MOOC?” is very common. And the answer is even more ambiguous. At its core, Massively Open Online Courses are ones in which a professor (and possibly a small staff of teacher assistants) can teach an extremely large number of students at one time, in a open environment. But MOOCS can be much more diverse than that. The easiest way to understand MOOCs, is by thinking of them as a teaching format. Two common formats used to teach education are the lecture format and the discussion format. In both, there is only a set of guiding principles that instructors follow. For example, in lecture based formats, the instructor generally will lecture in a large classroom and will have a small amount of direct interaction with the students during class time. However, many other elements, like class size, homework requirements, and exam structures, can vary greatly between lecture formats.

MOOCs are the same way. They can be open to the public and free, or private and charge a rate. Some may be taught within the same time constraints and schedule as a normal university course, while others may be completely self-paced. All of this is determined by the faculty member teaching the course.

It is important to understand that the terms MOOC and online education are not interchangeable. MOOCs are like the format that online education is taught in. MOOCs are just one format that online

education can be taught in. And while MOOCs can be an effective format to teach some courses, they don't work for every course. MOOCs have shown great promise in providing quality general education to large audiences (similar to a lecture) but have shown less promising results in courses where more direct interaction is needed.

Funding

When funding is available, it would be expected that online education is funded just like any other campus project. However, it should be acknowledged that online education can solve a multitude of problems, not just establish a different medium for delivering curriculum; therefore online education can sometimes be a solution to multiple problems on a campus.

Sometimes, campuses do not have the appropriate funding for online education. In these scenarios, a much more innovative approach is required. Online education is possible on shoestring and seemingly nonexistent budgets, but only with the right team and the right plan.

First, treat it like a startup. Look for new partners and resources to help solve the problem. Online education contains many components to allow it to function, but a university campus has all of them at its disposal. One of the most commonly overlooked resources is the student. Computer engineering students have the ability to build the platform, as well as an unwavering curiosity and desire to do something that compares to real world environments. Education students want to help develop course plans and build the future of education. Business students want to do research and develop pitches to secure partnerships that would give them validation and credibility for future job prospects.

When there is a desire for online education, but no funding for it, there is still a solution. Campuses should think outside the box and create opportunities for their campus constituencies to solve the problem internally. Not every campus will be the same, which makes this solution an even more beneficial one, as campuses can build solutions that solve problems specific to their own environments.

Private Sector Partnership

More often than not, online education solutions include partnerships with private companies. Every situation will be different, so a campus could consider developing partnerships with the focus of the sole benefit of their own campus.

The biggest determining factor should be the type of experience it gives both faculty and students. This is a list of some of the questions campuses could ask of private company partnerships for online education:

- Is it simple, easy to understand, and intuitive?
- Does it give extra accessibility with mobile applications for smartphones and tablets?
- Does it require students to pay extra for the service?
- Does it require faculty to pay extra for the service?
- Is technical support available for students and faculty?
- Is full copyright of the curriculum given to faculty members? Does the company take any of the content as its own?
- How determined is the company to improve on its exiting product that its built?

References