A Framework for Online Learning Revenue Models at Universities: Research and Opportunities
White Paper

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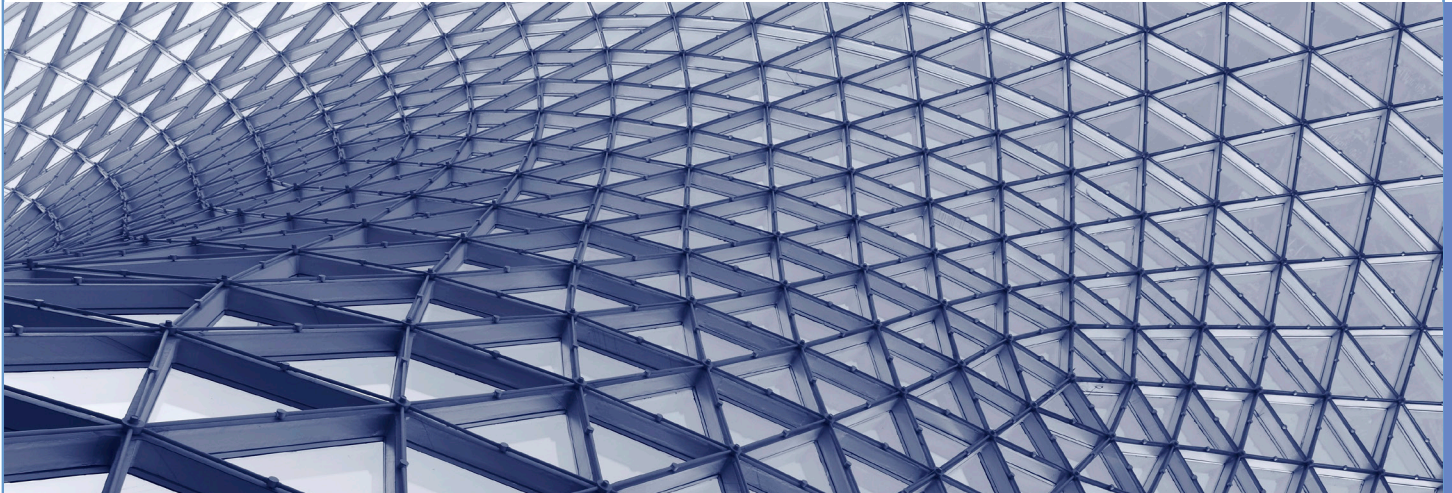
As online learning has become more established, we at ExtensionEngine have noted the evolution of a framework comprising four distinct revenue models: *For-Credit, Research, Pre-Matriculation* and *Post-Graduation*. This study investigates the prevalence of these four models among 136 U.S. colleges and universities as a means to identify and define new opportunities for learning in higher education.

To determine the current prevalence of each model, we used each sample institution's website to tally the number of online programs in each model. For comparison, we noted the occurrence of in-person programs for the *Pre-Matriculation* and *Post-Graduation* models. We analyzed this data against college type (private or public), enrollment, and endowment size.

The *For-Credit Model* is well established with 71 percent of institutions offering for-credit online courses. 58 percent of institutions have ventured into the *Research Model* via Massive Open Online Courses (MOOCs). Far fewer colleges and universities have experimented with the *Post-Graduation Model* as a means to connect with alumni (19.3 percent), and only 10 percent of institutions have developed online programs in the *Pre-Matriculation Model* targeted at prospective and incoming students.

Focusing on the *Pre-Matriculation* and *Post-Graduation Models*, private schools are more likely to offer online programs than are public institutions. The proportion of schools offering programs within these models tends to increase with endowment size. Analyzing by enrollment size produced more variable results: the number of programs increases with enrollment size up to 30,000 students, then drops off in the largest schools.

These results reveal substantial untapped opportunities in online learning — particularly within the *Pre-Matriculation* and *Post-Graduation Models* — that have potential to enhance institutional revenues while providing greater service to their students and alumni.

ExtensionEngine

Introduction

At ExtensionEngine, we have noted that academia in the United States currently seems to be of two minds with regard to online learning. On the one hand, the administration and faculty of our colleges and universities are increasingly aware of Massive Open Online Courses (MOOCs), Competency-Based Education (CBE), and other types of online learning, and are monitoring their evolution with great interest. At the same time, many remain unconvinced that online learning, especially MOOCs, is suitable for their own institutions even as the number and diversity of online courses continues to expand.

Are these observers wise to delay adopting MOOCs and similar offerings until they are more fully matured? Or are they missing out on critical opportunities to benefit their institutions?

Working with leading institutions of higher education, ExtensionEngine has developed a framework of the online learning landscape in traditional, four-year higher education that identifies four distinct revenue models. Earlier this year we conducted a market study in order to validate aspects of this framework and to examine the prevalence of some of the applications of online learning that are part of our framework.

The four revenue models that compose our framework are:

The For-Credit Model

Online courses are either based on the traditional classroom model where students pay tuition for credit hours or on the competency-based education model delivering learning for targeted skill development.
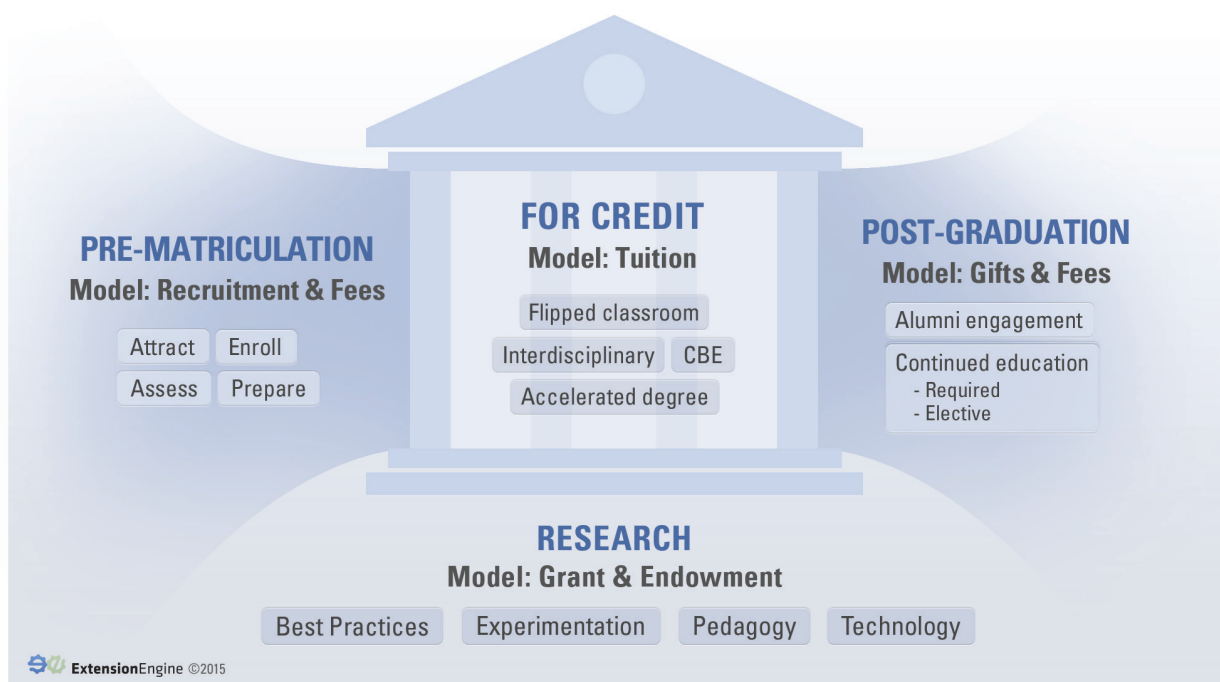
The Research Model

The institution seeks to investigate the best practices, pedagogy, technology, methodology, efficacy, and cost-effectiveness of various approaches to online education. Expenditures on these efforts are typically high and go largely unrecouped.

The Pre-Matriculation Model

Online courses are used to recruit new students, assess potential students or applicants, and provide preparatory or remedial education. Revenue in this model comes from customer acquisition in the form of new students or from fees for participation in the programs.

The Post-Graduation Model

Institutions use online learning to enhance alumni engagement or offer continuing education to degree holders. Revenue in this model comes from increased donations or from fees for participation in the programs.

Each of these models has its own set of pros and cons:

Revenue Model	Opportunities	Challenges
Pre-Matriculation	Provides an opportunity to innovate outside of the sphere of influence of Luddite faculty Generates a new revenue stream Increase size, diversity, and quality of potential student pool Offers a new dimension for assessing applicants Provides a tool for improving existing key performance indicators like selectivity, yield, and diversity	Has some success as a novel model but lacks a large body of proven metrics At scale, requires additional investment to extend or acquire program infrastructure
For Credit	Typically offers the greatest opportunity to have an impact on an institution Is a proven business model Lowers institutional costs Increases enrollment	Involves many/most faculty and can be politically difficult to implement Perceived lack of quality/rigor
Research	Provides an innovation opportunity for institutions with a particular focus Serves as a possible way for an institution to differentiate itself in the online sphere Provides cheap or free education to a global audience Drives innovation across the industry	Is the most expensive model Requires competing with major institutions for attention and funding
Post-Graduation	Provides an opportunity to innovate outside of the sphere of influence of Luddite faculty Generates new revenue streams Engages alumni, potentially increasing alumni giving Can be highly lucrative as continuing and/or professional education As an emerging model with growing evidence of success, offers a substantial amount of new opportunity	Because programs are designed for alumni, requires buy-in from the office of development and/or alumni relations May require significant effort to differentiate continuing and professional education offerings from existing lower-quality options

A Brief History of Online Learning

Online learning is not a recent development. The first internet-based courses appeared in the 1980's and were text-only, but it wasn't until the first graphical interface (browser) appeared in the early 1990's that online learning became truly accessible to most students.

The Blackboard platform launched in 1997 and soon became host to hundreds of online courses offered by forward-thinking faculty and institutions across the country as well as hundreds more hybrid course components. Other platforms, like Moodle and Sakai soon followed.

This launched ten years of rapid proliferation of online offerings that became increasingly sophisticated in their presentation as the technology advanced to make possible video, animations, and increased interactivity. These offerings were by and large "in-house" — available only to registered students taking the course for credit. Some organizations began to offer entire degree programs online.

In 2008, the online course expanded beyond student registration to the general public, offered at no charge and prompting the acronym MOOC: Massive Open Online Courses. The first MOOC, Connectivism and Connective Knowledge/2008, was based on an actual for-credit course at the University of Manitoba, Canada. True to the course title, it didn't rely on a single platform to teach but reached students via several different channels, including Facebook groups, Wiki pages, RSS, blogs, forums and other resources.[i]

The course enrolled an impressive 2100 students, but it took another four years for MOOCs to become truly massive. That occurred in 2012 when another experiment, a course called Introduction to Artificial Intelligence, was offered free to the public by two Stanford professors, Sebastian Thrun and Peter Norvig. It attracted an unprecedented 160,000 students.

The experiment exceeded expectations enough for Thrun and Norvig to design a business plan for MOOCs, which they launched as the platform Udacity. Coursera and edX soon followed as top institutions partnered to explore the educational possibilities the new technology offered.[ii]

Recently, MOOCs reached a new milestone for enrollment in a single run. FutureLearn's course Understanding IELTS: Techniques for English Language Tests launched in May, 2015 with over 400,000 learners from over 150 countries. [iii]

The Online Learning Revenue Model to Date

MOOCs have seen impressive growth since 2012. However, they have so far failed to revolutionize education.

Of the four revenue models in our framework, the first two, For-Credit and Research, are the most well-established.

Since 2012 higher education has been paying great attention to MOOCs, and their growth has been significant. Class Central, an organization that tracks MOOC statistics, reported the following numbers for 2014:[iv]

- **400 colleges and universities worldwide offer at least one MOOC**
- **16-18 million students were enrolled in 2,400 MOOCs**
- **MOOCs are offered in 13 different languages, although 80 percent of them are in English**
- **Hundreds of people are employed full-time creating MOOCs or supporting faculty members in MOOC creation**
- **Millions of dollars in grants have been dedicated to MOOC developments**
- **MOOCs have generated millions of dollars in revenue as course providers have begun charging for certificates of completion and degree-track credits**

As impressive as this is, it falls short of some early predictions. In fact, some industry analysts have expressed disappointment that MOOCs and other forms of online learning have as of yet failed to revolutionize education.[v] Only a small proportion of registrants actually complete the courses, and the vision of online learning closing down brick-and-mortar institutions seems less imminent.

While a complete transformation of education within three years might have been an overly ambitious prediction, the question remains: why isn't every college and university turning to online learning?

The answer may lie in the revenue model under which today's online courses have been developed and are being offered.

Initial uses of a new technology often spring from long-established patterns. The first online courses were digital versions of in-class courses or adapted from other types of distance learning, like telecourses. These for-credit online courses are still common and the prevalence of online-only degrees continues to increase. However, the quality of these courses can be extremely varied and in some cases equivalent to filming a play and calling it a movie.

From a revenue perspective, there is no difference between this type of for-credit online learning and traditional classroom courses: revenue is tuition-based and learners pay for credit hours.[1]

Likewise, in terms of instructional design, there are many similarities between for-credit online courses and MOOCs. Most MOOCs continue to replicate the format of a typical semester-long college course. There are some differences, of course, but these are often a matter of medium. For example, MOOCs typically use forums and social media as platforms for interaction among participants, but even this is analogous to classroom discussion.

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1 There are some exceptions to this model, most notably the handful of online competency based education programs at places like Western Governors University, Southern New Hampshire University, and University of Wisconsin, among others. Students in these programs pay tuition for "mastery" or "competence" rather than credit hours.

However, other more subtle differences have begun to emerge as well. Some marketing savvy has begun to appear in MOOCs. Courses like The Music of the Beatles offered by the University of Rochester or Science & Cooking: From Haute Cuisine to Soft Matter Science offered by HarvardX appeal to broad audiences and seem designed to attract attention as much as offer rigorous academic study.

The revenue model for MOOCs is different from that of for-credit online courses. MOOCs are free and open to the general public. Consequently, they can enroll thousands of students. Universities usually absorb the cost of their production and, at least in the case of edX, may pay hundreds of thousands or millions of dollars to join the consortium. These expenditures are often justified as research costs associated with exploring this new learning medium.

For a higher education administrator or faculty member at a college or university considering entry or expansion in the online learning space, it may be challenging to determine what return on investment Harvard or the University of Rochester derive from some of their offerings. As these interested parties ponder their own potential involvement, they may well draw a blank when asking the question: *"What's in it for us to venture into online learning?"*

The question is especially pertinent if the institution has no intention of following the suit of ASU and others who have made online learning an integral part of their course catalog.

Some answers may lie in new directions online learning seems to be taking. At ExtensionEngine, we have noticed that some institutions are beginning to innovate in their application of MOOC technology and other online courses. As they do, they are creating new revenue models that may have greater appeal to the next wave of adopting institutions.

What's in it for us to venture into online learning?

University administrators may find answers to this question in the new directions online learning is taking.
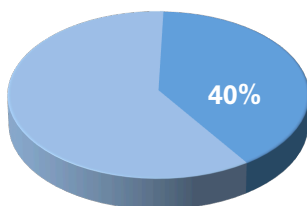
40%

- Motivating factor
- Unaffected

Pre-Matriculation

There are a number of ways online learning could be used in a Pre-Matriculation context.

Student Recruitment and Assessment

As was pointed out in a recent Pittsburgh Post-Gazette article, decisions on student acceptance are based on criteria that may not be the best predictors of student performance. Secondary school grading standards vary wildly, which reduces the value of high school GPAs as an indication of likely future academic achievement. Application essays can be ghostwritten, and even mediocre students can be trained to earn high scores on the ACT or SAT — with those from well-to-do families more likely to have received that training than those from lower socioeconomic brackets.[vi]

Reaching out to prospective students with MOOCs or other online learning opportunities provides an alternative means of assessment, one that may more directly predict a student's success in college. What better indicator is there of a student's ability to perform in a college course than taking an actual college course? Many online courses replicate the reading assignments, homework, assessments, and rigor of their on-campus counterparts. A high school student who excels in a MOOC is more likely to shine as a college student than a student who was tutored to ace the SAT.

These courses can also attract gifted students who otherwise might not be planning to submit applications to a top university for a variety of reasons, not the least of which is that they might consider an institution like MIT, Harvard, or Stanford simply out of their reach academically and/or financially. MOOCs can be a way for institutions to reach out to such students, identify them, and pave the way for their acceptance and enrollment as full-time students.

Besides revealing academic talent, successfully completing a MOOC on one's own time can reveal another important characteristic of the most successful students: the love of learning. While a student may proclaim a love of learning in a college application essay, enrolling in a MOOC and performing well actively demonstrates it.

These courses could also benefit the applicants themselves in their college search. Many high school students spend significant time researching colleges and universities to identify those that are most appealing and the best fit for their personalities as well as life goals. Much of this research is done online. Taking an online course provides an experience of the institution that extends beyond brochures and websites, particularly if the course includes interaction with faculty. In this regard, online courses are already de facto recruitment tools.

From a revenue perspective, these kinds of programs have the potential to pay for themselves through eventual tuition dollars from enrolled students. 70% of public universities are missing their initial recruiting goals, so these institutions should be able to benefit from improved recruitment efforts.[viii] They may also see benefits from these kinds of efforts through increased recruitment of out of state and international students.

Another way in which Pre-Matriculation programs could help with customer acquisition (with students being the customers) is by promoting a university's brand. Additionally, a university may be able to increase its selectivity and diversity by both gaining access to a larger pool of applicants as well as having better and more varied information about each applicant.

Introductory and Remedial Learning

Even with high grades and a college prep program, there is no guarantee that a student is ready for college-level work. According to the National Center for Education Statistics, as of 2008 (the last year for which statistics are available), 20 percent of entering four-year college students and 24 percent of entering community college students were required to take at least one remedial course before being allowed to enroll in that subject's college-credit course.[vix]

The issue here is that substantial time and resources are being devoted to learning that should have been accomplished during high school. Offering remedial courses online rather than on campus has the potential to provide time and cost savings. Low-performing students could take remedial courses to prepare them for their freshman year. With better preparation for the rigors of college academics, such students are more likely to succeed and complete their degrees.

Likewise, some colleges and universities require students to pass courses in topics like critical thinking as part of their freshman year in preparation for specialized academic study later. Such courses could be offered in online form to expand the resources of an institution while providing students with the foundation they need to achieve.

These opportunities are not restricted to undergraduate institutions. Graduate and professional schools will also derive benefits from using online learning to identify and recruit students, level-set knowledge among incoming classes, and provide required core coursework.

Post-Graduation

In the Post-Graduation context, a number of existing and emerging applications of online learning have begun to emerge.

Alumni Enrichment

The importance of alumni to a college or university cannot be overstated. An alum is more than a former student; he or she is a potential mentor for new graduates, a link in a professional network, a champion for the institution and, not insignificantly, a source of funds.

A substantial proportion of an institution's endowment is derived from alumni giving, which is so critical that U.S. News and World Report include it as a metric in its annual college rankings.[x] Consequently, colleges and universities make significant investments in developing active alumni associations and strong alumni networks, the most successful of which foster a lifelong relationship with graduates by cultivating an ongoing sense of pride in and commitment to the alma mater.

Traditionally, this has been accomplished through alumni newsletters, on-campus programs, and sponsored events. However, alumni associations are increasingly turning to digital media as well. Many have launched their own Facebook pages and LinkedIn groups in an effort to stay in touch with their members.[xi]

MOOCs and other types of online learning are natural, digital extensions of the in-person educational experience that is at the core of the relationship between an institution and its students. As such, online courses have the potential to help build and nurture connections between alumni and schools with more depth than social media like Facebook or LinkedIn.

Online courses and programs for alumni offer the opportunity to re-engage intellectually with an alma mater and perhaps give an opportunity revive lost connections with fellow alumni.

An additional benefit to alumni courses is that the course forums and other discussions provide an opportunity for more intellectually challenging and meaningful interaction than the average social networking platform provides. Without disregarding the value of social networks built through alumni association Facebook pages and LinkedIn groups, the interactions that take place within an online course are likely to be a richer, more stimulating experience that can deepen connections among alumni living continents apart.

These courses are also an excellent opportunity for alumni associations to drive traffic to their websites and gather contact information and demographic data on participating alumni.

When the courses are also open to undergraduates, another benefit emerges: the course can become a recruiting tool for future alumni. Undergrads interacting with alumni in a relatively casual academic setting may find this an excellent opportunity to find a mentor or a job lead. Students who have positive experiences in reaching out to alumni might be more likely to become active in alumni associations themselves after graduation.

Optional and Required Continuing Education

Continuing education for degree holders is another expanding area for online education. Only a few decades ago, college graduates could rest assured that their class work was, by and large, sufficient to sustain a lifelong career. Today, a professional knowledge base is more fluid, and it is no longer possible to stay current in most fields by spending a few hours a month with a journal or by attending a yearly conference.

Continuing education can be divided into two camps. In the first, optional continuing education, learners seek opportunities to expand their knowledge beyond their degree, usually in an effort to advance a career. Executive education provided by business schools is one example of this. The second camp involves compulsory continuing education where

learners must fulfill requirements imposed by governing bodies in their field of employment, most commonly law and medicine.

The revenue model in both cases can be lucrative and is based on fees paid by learners or their employers. However, the in-person courses common in optional continuing education are often custom created and difficult to scale, and required continuing education is often paper-based or simple audio or video recordings that produce a learning experience of dubious quality.

The unevenness of these offerings creates an opportunity for undergraduate institutions to launch online programs in this area. Online continuing education courses targeted specifically at alumni and designed with the objective of continually updating their knowledge base or skills — and perhaps offering CE credit, where applicable — is a viable way to maintain the relationship originally built during their undergraduate years. Many alumni might prefer to update their skills through their alma mater with faculty they recognize over continuing education offered by a less familiar institution. A similar opportunity exists with executive education and other types of professional development.

Among graduate and professional schools, continuing education has traditionally been more common, and many of these institutions are actively experimenting with online programs. For example, Harvard Business School recently initiated its much-publicized online continuing education platform, HBX. Industry-wide, however, these are still emerging efforts.

It is also worth noting that while tertiary education has traditionally been the exclusive domain of higher education institutions, online learning is enabling for-profit companies and corporations to make more significant forays into this area, specifically focused on continuing education. Notable recent efforts include McKinsey Academy [xiii] and LinkedIn's acquisition of Lynda.com.[xiv]

Research Methodology

The initial round of research described in this white paper focused on undergraduate institutions. For the Pre-Matriculation revenue model, we focused on programs provided to pre-college students. For the Post-Graduation model, we focused on programs provided exclusively to alumni of the institution.

Our sample was composed of the top 50 national universities, according to US News and World Report, as well as the top 100 US colleges and universities by enrollment. This resulted in a sample of 136 schools; some schools appeared on both lists. We chose to focus our initial round of research on undergraduate institutions. Future research will examine graduate and professional schools (more information in the Conclusions and Further Research section below). It is also important to note that this sample skews the data toward traditional students; there are many other solutions targeting non-traditional students.

We compiled basic demographic information about each of the schools, including US News Top 50 ranking (if any), endowment, total enrollment, and whether the school was public or private. Next, a team of three graduate students and one instructional designer investigated each school's website to discover — and tally — whether the school offered courses or programming in any or all of four categories.[1]

The categories investigated were:

- **In-person courses or academic programming for high school students (often called pre-college programming) that is designed specifically for this age group. Courses or programs designed for other audiences but open to pre-college students were not included.**

- **Online courses or academic programming for high school students that is designed specifically for this age group (including MOOCs). Courses or programs designed for other audiences but open to pre-college students were not included. Online degree-granting high schools run by universities were not included.**

- **In-person courses or academic programming offered to alumni of the school that are not available to the general public.**

- **Online courses or academic programming offered to alumni of the school that are not available to the general public.**

We also noted whether the institution was currently offering MOOCs on any platform. This was used as an indicator of interest in the Research Model of online learning as one motivation for investing in MOOCs is to explore applications of this new technology and learn about the behavior of large groups of learners. We also noted whether each institution offered online or hybrid types of courses for credit. These offerings are representative of the For-Credit Model.

After compiling this data set, we totalled the number of schools with offerings in each category. We also looked at the data from three dimensions described below: institution endowment, enrollment, and public/private status.

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1 This method may undercount schools that do not have programs listed on their website. It also does not take into account the number of programs being offered by each school, only whether or not they offer at least one in the given category.

Research Results

Prevalence of Online Learning

Our research indicates that most colleges and universities are already involved in online learning. 71 percent of our sample offered online or hybrid courses to their student populations for credit. 58 percent offered a MOOC to the general public.

The results indicate that institutions in our sample are interested in online learning and have substantial experience in designing and offering courses for credit and, to a lesser extent, to the general public as MOOCs. The question then becomes not whether colleges and universities are interested in online learning, but what other uses for this form of education might emerge.

Prevalence of Online Learning (All Institutions)
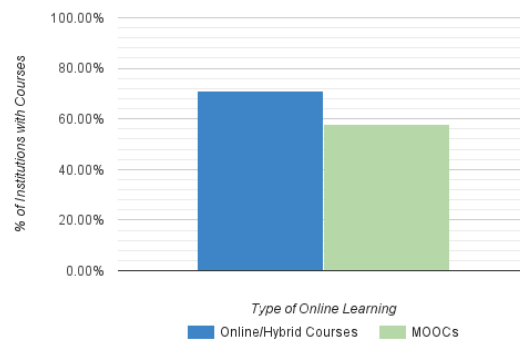
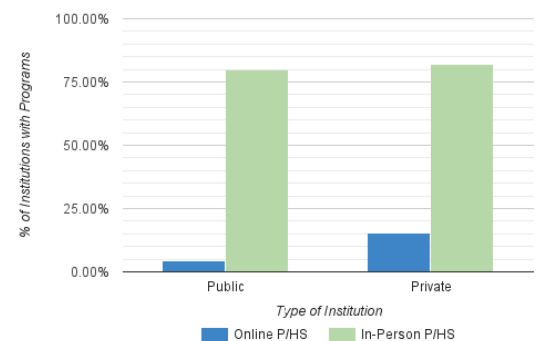
The Pre-Matriculation Model

Pre-Matriculation is the most novel of the four online learning models in our study, a fact reflected by the small number of institutions who offer online programs dedicated to this purpose. Of the schools we researched, only 10 percent offered online programming to pre-matriculated students compared to the 81 percent offering in-person programs.

Prevalence of Pre-College Programs (All Institutions)
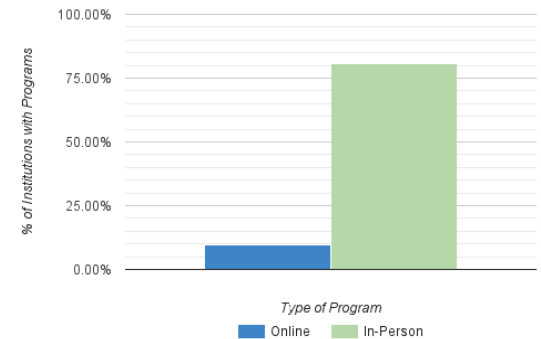
When analyzed by type of institution (below), the proportion of in-person programs held steady at around 80 percent for both private and public schools, but there was a significant difference between the two types of institutions when it came to offering an online program — only about 4.3 percent of public colleges and universities have ventured into this new territory compared to 15.2 percent of private institutions.

Prevalence of Pre-College Programs by Public/Private Institutions

In other words, private institutions were over three times more likely to offer a pre-matriculation program than public institutions. This may be due to the fact that private universities typically have greater financial resources and thus a greater ability to experiment with unproven ideas such as this. Additionally, private institutions may be more motivated to find new ways to attract high quality students because they have more at stake than the more affordable, publicly funded universities.

A similar gap between in-person and online programs appears when analyzing research results based on the size of the institution's endowment (below). The proportion ranges from 2.6 percent at the bottom end to a peak of 18.76 percent for institutions with $1-5 billion in endowments — and then actually a slight drop (to 11.1 percent) for institutions with the largest endowments.
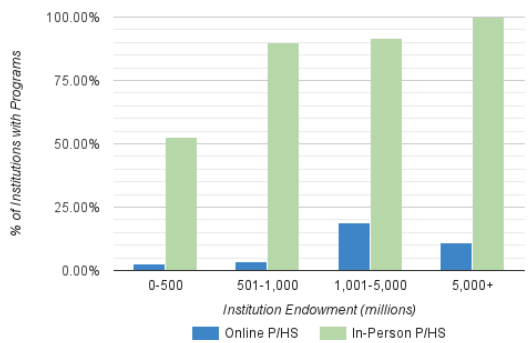
This pattern seems to indicate that the availability of resources may play a role in an institution's willingness to experiment with pre-college programs, although those with endowments of $1-5 billion are more likely to do so than the wealthiest institutions.

The proportion of colleges and universities offering online pre-college programs (below) also tended to increase with enrollment — with an anomalous dip among those institutions with 30-40,000 enrolled students (6.3 percent) compared to institutions with 20-30,000 students (11.1 percent) and to those with over 40,000 (12.5 percent). Interestingly, in-person pre-college programs show the same dip in this category of institutions.

Prevalence of Pre-College Programs by Institution Endowment

Prevalence of Pre-College Programs by Institution Enrollment
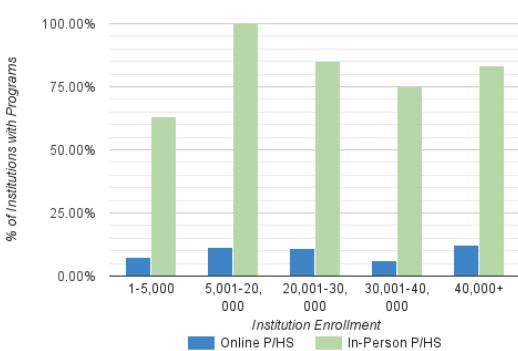
Implications

At ExtensionEngine, we would categorize Pre-Matriculation programs as a "novel" use of the technology, one that is not yet widely used but that may have significant potential for colleges and universities wishing to inter-act efficiently and effectively with new and prospective students.
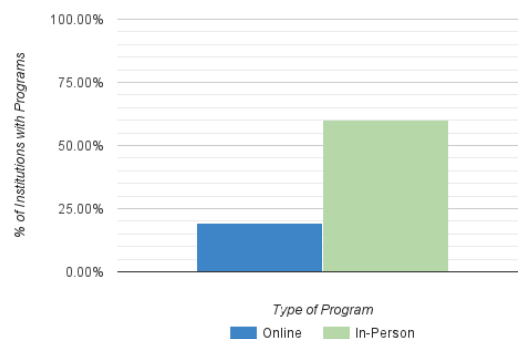
With the focus on for-credit courses domi-nating the online learning universe, only a few schools have begun to investigate how this technology could help them to connect with prospective and enter-ing students — with private institutions more willing to experiment than public schools, especially those private schools with larger endowments and enrollments.

The Post-Graduation Model

Online learning for alumni has been more widely adopted than for prospective students but still lags far behind the other two models. Almost 19.3 percent of the colleges and universities researched offered alumni some sort of academic online program designed specifically for them. Only 60 percent offered in-person programs, significantly fewer than the 80 percent of institutions that had pre-college in-person programs.

Analyzed by type of institution, private colleges and universities were significantly more likely to have in-person alumni programs (76.9 percent) than were public institutions (45.7 percent), but the percentage offering online alumni programs showed less variance (17.1 percent for public vs. 21.5 percent for private).

Prevalence of Academic Programs for Alumni by Public/Private Institutions

**Prevalence of Academic Programs for Alumni (All Institutions)**
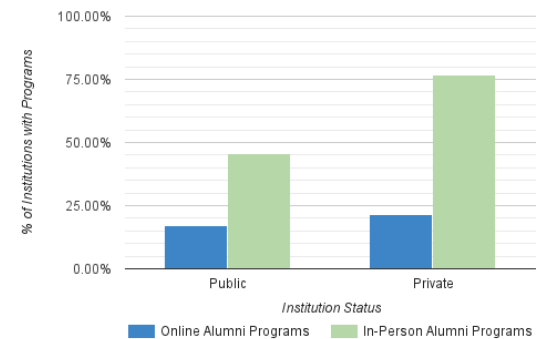
It seems that, while public institutions were less likely to have alumni programs, when they did offer one, it was more likely to have an online component than programs at private institutions. This is in contrast to our results with pre-college programs where private colleges and universities were much more likely than public institutions to offer an online program.

Prevalence of Academic Programs for Alumni by Institution Endowment
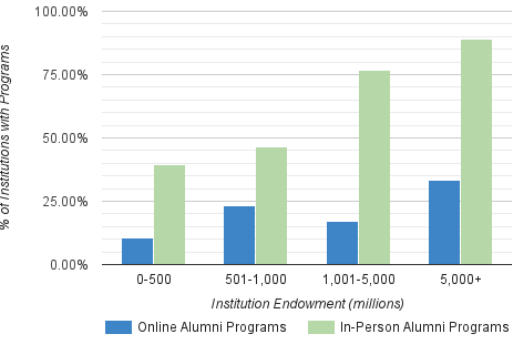
As with pre-college programs, the greater an institution's endowment, the more likely it was to have an in-person alumni program. However, the frequency of online programs did not vary directly with endowment size; there was a dip among institutions receiving $1-5 billion in endowments.

Prevalence of Academic Programs for Alumni by Institution Enrollment
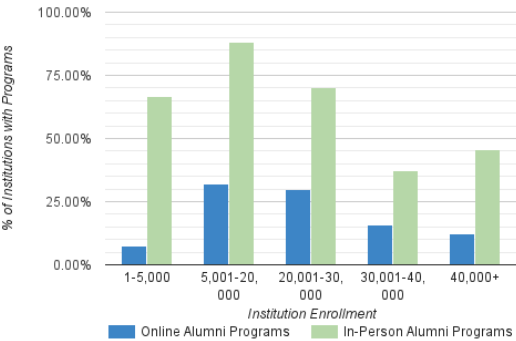
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The prevalence of academic programs for alumni shows more variability when analyzing the data by enrollment. Mid-sized institutions with an enrollment between 5,001 and 20,000 were the most likely to have an in-person program; they were also the most likely to have an online program. Larger institutions were less likely to have in-person programs, and the smallest colleges were the least likely to have online programs.

This is a puzzling result until one considers the types of institutions that dominate each of these enrollment categories. 98 percent of the schools with an enrollment below 20,000 (those most likely to have alumni programs) are private whereas 83 percent of colleges and universities with enrollments exceeding 20,000 (and least likely to have alumni programs) are public. The data reflect the greater attention private schools pay to alumni programs than is paid to them by public institutions.

Implications

We see the Post-Graduation Model for online learning as "emerging." There has been considerably more experimentation in designing courses for alumni than there has for prospective and entering students. However, this model is still in an early stage of development.

Private institutions seem to be investing more in their alumni programs than are public institutions. This may be due to private institutions being more dependent on alumni giving for their survival and prosperity.

The positive correlation between endowment size and numbers of alumni programs, both in-person and online, could mean that strong alumni programs generate increased endowment funding — although the reverse could be argued as an institution with a larger endowment has more to spend on alumni programs and so is more likely to offer one.

This alternative argument might also explain why the number of alumni programs decreases as enrollment increases; the larger schools are mostly public institutions with fewer resources, and possibly motivation, to develop active alumni programs.

However, when it comes to online programs for alumni, public institutions seem to have an edge. One third of public institutions with alumni programs include online courses as a component whereas 27.5 percent of private institutions with alumni programs do so. It may be that the cost-effectiveness of online alumni courses makes it possible for public schools to reach out to alumni in ways they never before could afford.

Conclusions and Further Research

At ExtensionEngine, we believe that this research is a significant step in validating our framework for online learning revenue models. It shows that two of the models, For-Credit and Research, are now well-established, with the majority of institutions in our sample participating in both of these.

The other two models, Pre-Matriculation and Post-Graduation, are much less established, though there have been attempts to explore online learning's potential in these areas. These areas are worth considering in greater detail

given their revenue models and potential benefits to a university. Furthermore, given the relatively high levels of in-person programs in these two areas, it seems likely that there would be interest in extending these offerings to the online space where there is the opportunity for greater scalability and deeper insights.

We are continuing to explore the online learning landscape and validate our framework for online learning revenue models. The research cited here has focused on undergraduate institutions. The logical next step,

currently underway, is to focus on offerings from the top US graduate and professional schools. Among these schools, we are currently investigating the prevalence of:

- **Pre-Matriculation programs that prepare students for grad school, orient them to this level of work, or assist students on a non-traditional path to these schools by preparing them for their experience (e.g., a philosophy major applying to business school)**

- **Post-graduation programs in career development, continuing education, and executive education for alumni and the general public**

- **Online or hybrid courses for credit toward degree completion**

- **MOOCs created by faculty from these schools**

We also plan to investigate online learning initiatives among two-year community colleges. These institutions face increasing scrutiny due to their roles as bridges to four-year schools, as well as their low degree completion rates. As a result we believe there may be interesting opportunities in this space as well.

Our research into online learning operating models will continue to shed insight on the landscape for this rapidly diversifying space in the higher education industry.

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The ExtensionEngine Mission

Many of the world's major problems stem from ignorance, poverty or prejudice. War. Disease. Racism. Many of the ultimate solutions to these problems involve education. At ExtensionEngine, we don't have a mission statement. We have a mission.

We're on a mission to help every person get a great education, which ultimately will make the world a better place. We want to see dramatic improvements in K-12, higher education and corporate / lifelong learning.

- 7,000 students drop out of K-12 in America every day. We can do better.

- Less than 7% of the world's population has a college degree. We want the other 93% to have access.

- Even in the US, just 40% of adults obtain a college degree. Everyone should have access to education beyond high school.

- 70% of universities believe their graduates are adequately prepared to compete in today's job market, but less than half of employers think they are prepared. Let's close this gap!

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