2016 ONLINE EDUCATION TRENDS

TRACKING THE INNOVATIONS AND ISSUES CHANGING HIGHER EDUCATION
EXECUTIVE SUMMARY

This report is designed to inform a diverse group of stakeholders in online education. Administrators, instructors, students and parents are faced with an increasing number of online options to consider as they pursue affordability and academic goals. Our goal in conducting the research and conversations that frame this work was to synthesize the current trends in the industry that foster innovative approaches for and impact decisions about online program management. Key issues are identified in three categories.

THE STATE OF ONLINE TEACHING AND LEARNING

How are the demographics of both online learners and online faculty members changing? It’s harder than ever to describe the “typical” online student. The role of the instructor in an online setting and employment trends for faculty members are also evolving. This section also presents a look at the perceived value of an online degree program.

- Support and professional development opportunities are essential for all online faculty.
- Employers are partnering with online programs to develop a ready workforce.
- The need for effective skills training and verification is increasing.

TECHNOLOGY AND TOMORROW’S LEARNING ENVIRONMENTS

The days of academic programs that were exclusively delivered online or on campus are fading. Higher education institutions of all types, for-profit and not-for-profit, face a time of innovation and exploration. New combinations of tools, services and instructional strategies are possible, maximizing the benefits of multiple resources.

- Support and professional development opportunities are essential for all online faculty.
- Employers are partnering with online programs to develop a ready workforce.
- The need for effective skills training and verification is increasing.
THE COST OF ONLINE EDUCATION

Balancing affordability and academic quality is a concern for students and institution alike. As more institutions offer additional online learning options, marketing accurate costs and conveying academic quality will become increasingly important in the competition for prospective students.

• Clear communication about real college costs, and available funding, is critical in recruiting and retention.

• Calculating the ROI of an online education is complex, including quantitative and qualitative aspects of a program’s costs and a student’s desired outcomes.

• Online students expect flexibility, affordability and a high-quality education.
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**The Cost of Online Education**

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THE STATE OF ONLINE TEACHING AND LEARNING

It’s getting harder to generalize about the “typical online student.” This learner was once described as an adult or nontraditional student (i.e., 25 years of age or older) who also worked full-time while enrolled as a full-time student. Older, working students are still enrolling, but as the opportunities to engage in online education expand, the audience swells alongside. Younger students are drawn to the convenient scheduling and access, and more students are unemployed or working part-time than in past years.

The characteristics of online teachers have also shifted, following the trends observed in higher education in general. Courses were once taught by full-time, tenure-track professors; now, the majority of college instructors are part-time employees or contractors. Sometimes they teach at multiple institutions.
WHO IS LEARNING ONLINE?

Student Characteristics

BestColleges.com’s 2015 survey of online learners documents many of the characteristics of today’s online student [1]. Respondents were primarily female (56%) and working full-time (65%). They represented a range of ages with approximately one-third of respondents falling within each of the 18-29, 30-44 and 45-59 age brackets.

Our findings were similar to this year’s Online College Students study from The Learning House [2]. This annual survey captures demographic data from learners who “were recently enrolled, currently enrolled or planning to enroll in the next 12 months” in a fully-online degree, certificate or licensure program. The majority of this group was also female (70%) and employed full-time (65%). However, The Learning House identified several emerging trends since beginning this survey series in 2012:

- 34% of undergraduate online students were 18-24 years old, an increase from 25% of students in 2012.
- The number of graduate students who were unemployed increased from 2012 to 2015, while the number who were working full-time decreased during this time frame.
- 61% were enrolled full-time in 2015, which is an increase from 50% in 2012, but a decline from 65% in 2014.
- 52% of both undergraduate and graduate students chose to enroll in a fully-online program offered by a school located within 50 miles of their home. This reverses an annual trend of enrolling at schools farther away from home.

In a presentation at Connect 2015, the Online College Student report’s authors attributed the consistent majority of female online students to the fact that programs related to traditionally female professional fields (e.g., nursing, education) are widely available online. These fields often require professionals to continuously attend school to stay current with skills and certification and for promotion to advanced positions.

How many students are learning online? Annual surveys from NCES show an increase in online enrollment from 1999 to 2014. In the most recent report, one out of seven of all college students was enrolled in a fully online program, which is an increase of 6.6% since 2012 [3]. Students attending for-profit institutions were more likely to enroll online in 2013, with 58% of undergraduates and 79% of graduate students at these schools choosing online classes [4].
Education and Career Goals

**Why are students going to college?** The primary motivators across populations and studies are career related. In our Best Colleges survey, 63% indicated a desire to “further my career” and another 17% wanted to “change careers.” The Learning House 2015 study also found a career focus, with 75% of students reporting education goals related to changing careers, entering the workforce, advancing in their current fields and improving job-related skills. An annual survey from higher education consultants at Noel-Levitz also found that 88% of online students rated having a “program advisor [who] helps me work toward career goals” as important to their overall satisfaction with online learning [5].

**What do online students want to study?** According to The Learning House, business administration is the most popular field of study for both undergraduate and graduate students [2]. Other popular undergraduate disciplines include health-related professions, computer science and information technology. While these preferences haven’t changed much over the past two years, there are shifts at the graduate level. Far fewer students were enrolled in education and teaching degrees in 2015, while there were increases in computer science, information technology and health-related programs.

**Why do they choose online options?** Each student brings an individual set of needs and expectations to their college choice. We can observe, however, several common themes across recent surveys of online learners. Flexible scheduling is important, but so are affordability and a reputation for high-quality programs.

According to the 2014-15 Noel-Levitz report, convenience, flexible pacing for completing a program and work schedule each contributed to the decisions of more than 90% of students [5]. Our Best Colleges survey found that work schedule obligations was the primary external factor for choosing an online class, as indicated by 62% of respondents. But convenience isn’t the only concern. Twenty percent of students in our survey expressed some regret at ignoring costs and financial aid when making their online college decisions [1]. The Learning House also found that tuition and fees was the most important factor for students, followed by overall school reputation and recognition as a high-quality institution [2]. Understanding the true cost of an online college education means factoring in tuition, as well as researching and applying for funding options that include a wide range of merit- and need-based scholarships and federal financial aid.

Online Learning Experience

There’s a learning curve to adapting to online education, especially for those who are taking online classes for the first time. But, as younger students enter these programs, they are increasingly bringing prior experience with them through a range of activities, from using technology in their physical classrooms and workplaces to requirements for online education and training. The Learning House survey found that 60% of online student respondents entered their current programs with some past experience with online learning.
Through completely online virtual schools, hybrid or blended learning options, and some state-level requirements, K-12 students are entering college with online learning experience. According to the International Association for K-12 Online Learning (iNACOL), online education initiatives can “close achievement gaps and extend access to high-quality learning opportunities” [6]. These opportunities build a skill base for online education decision making and participation.

**Online Enrollment Trends**

The annual Babson Report on online education indicates a fairly steady increase in online enrollment every year since 2003. More college students are choosing to take at least one online course, in numbers that outpace higher education enrollment gains. The latest report, however, notes that the rate of this growth has been decreasing [7]. To help the industry better understand the dynamics, this survey group changed its methodology in 2014 to include data from the Integrated Postsecondary Education Data System (IPEDS).

The trends taking place require a closer look at the data and categories of online enrollment that include for-profit and not-for-profit, public and private, two-year and four-year categories. The changes seen between 2012 and 2013 include:

- Growth in distance enrollment at public (not-for-profit), two-year and four-year institutions
- Steady enrollment in for-profit, two-year schools
- Decreasing enrollment in for-profit, four-year schools [7]

It’s difficult to determine whether online education will grow in public schools. We need to examine how several interrelated factors — growth among academic degree level and disciplines, the demographics of students, the need for online delivery, the impact of federal regulations and the potential impact of economic changes — affect how students pursue higher education.
The Future Online Learner

Much of the research and trends we’ve covered so far divides college students into distinct categories, often based on just one factor. Are your students online or on campus for course delivery? Are they traditional or nontraditional in terms of age? In reality, students are more complex than these categories might indicate, and our academic programs are, too. In 2014, Parthanon-EY strategy consultants conducted a survey of current and prospective undergraduate students. The results suggest that there are six new major types of students enrolling in college today. These types have multifaceted motivations and the need to consider more than just age or delivery platform when planning everything from curriculum and support services to marketing initiatives [8].

- **Aspiring Academics**: high-achieving, high-income recent high school graduates who want the traditional college experience and professional focus, which may include graduate school
- **Coming of Age**: unsure about career goals or major, but trust that college is the way forward
- **Career Starters**: interested in majors that lead to specific careers; focused on researching program costs and placement rates when making college decisions
- **Career Accelerators**: already working full-time and interested in advancing in their existing career field with part-time college options
- **Industry Switchers**: have work experience, but want to change career fields; focused on cost, online and hybrid options, job placement services
- **Academic Wanderers**: often returning to college after a break; unsure about career goals, but focused on finding low-cost higher education options to help them move forward
WHO IS TEACHING ONLINE?

Faculty qualifications are an important component of an academic program’s success and online instructors must be skilled in multiple areas. In addition to subject matter expertise in their field, these faculty members must also effectively facilitate student learning at a distance through a range of strategies and technologies.

While the accreditation process involves standards related to faculty qualification, as well as institutional support of their work, hiring practices are changing. Across higher education, online and on campus, the new normal is a reduction in full-time tenure-track faculty members and an increase in part-time or contract-based instructors in what are often referred to as contingent or adjunct positions.

Faculty Employment Trends

According to the American Association of University Professors (AAUP), “more than 50% of all faculty hold part-time appointments” [9]. This doesn’t mean, however, that they are not working the equivalent of full-time hours or teaching a full-time course load. Almost 75% of faculty are considered “non-tenure track,” meaning that they may work part-time or full-time, but without the support and resources usually available to those in tenure-track positions [10].

These numbers have changed considerably over the past decade. A 2004 study of college faculty conducted by the National Center for Educational Statistics found that 79% of part-time faculty only had one teaching job, and only 35% said they were interested in a full-time teaching position [11]. Many of these adjuncts were working professionals employed in the private sector and other non-academic environments, but teaching on the side. More recent data presented by AAUP indicates that “the majority of contingent faculty do not have professional careers outside of academe” and that many teach concurrently at more than one institution [9]. Studies of online instructors specifically show similar trends as part-time, non-tenure track faculty are hired to teach a growing number of online courses [12].

AAUP attributes the change in faculty hiring practices to administrative decisions about priorities. These decisions include reducing costs during a time of low budgets, but are more likely the result of a shift in spending from instructional resources to facilities and technology upgrades.
Faculty Support and Development

The experience of online teaching can be drastically different from teaching in a traditional campus-based classroom. As institutions began to add online courses to their schedules, the need for specialized preparation for instructors quickly arose. Penn State Online was one of the first to create a list of Faculty Competencies for Online Teaching [13]. These included objectives, guidelines and examples for practice in the following areas:

- **Pedagogy:** mastery of course content, providing student feedback at a distance, monitoring progress and communicating expectations
- **Technical Skills:** using the course learning management system and other communication technologies successfully
- **Administrative Tasks:** adhering to school policies and reporting requirements, reporting grades, revising materials

Faculty support programs and professional development opportunities are essential for online instructors who need to learn these competencies. As new technologies are implemented, such as a change in learning management systems, instructors without proper training and guidance can face administrative and logistical challenges that derail even the best designed courses.

Examples of typical online faculty development activities include new faculty orientations, online teaching certification, coaching or mentoring by experienced online instructors as well as workshop series and webinar presentations. Arizona State University Online’s current calendar includes online and face-to-face learning options for faculty, addressing topics such as quality rubrics, learning management system features and proctoring systems.

The Online Learning Consortium’s Effective Practices database recognizes institutions that excel in faculty support and satisfaction, including the University of Central Florida (UCF) [14]. UCF’s Teaching Online Pedagogical Repository is one example of an ongoing collection of open resources, which include detailed descriptions of instructional strategies along with presentation files, videos and additional material.
Ideas about the value of eLearning options and acceptance of this format as an alternative to a traditional degree program have evolved since the first computer-based courses were introduced in the 1980s [15]. We expect a lot from a college education. A recurring theme at the Connect 2015 conference was the high expectations for bachelor’s graduates — from critical thinking to technical skill development, from a global perspective to career preparation.

**Employers**

Colleges and universities have embraced the need to brand themselves through strategic marketing efforts that increase their visibility, not only among prospective students, but also the employers hiring those students after they graduate. The general acceptance of degrees earned in online programs can vary by industry. U.S. News notes that in the field of education, for example, “online master’s degrees ... are so common that employers don’t think of them much at all ... Those in hiring positions who have been to school recently have taken a blended or fully online course, so they know the classes can be just as rigorous as their on-campus counterparts” [16].

**SKILLS TRAINING AND VERIFICATION**

But degree programs are just one option. Students and employers alike are embracing a range of alternatives, many of which focus on job training and are deliverable online in less time than it takes to earn a degree. The following formats will continue to grow in the coming years:

- **Badging Systems:** Mozilla Open Badges and Credly are just two options for documenting skills earned in a variety of contexts from work-based training and informal learning to conferences and professional development activities.

- **Nanodegrees:** Udacity’s Nanodegree programs are designed to provide skills training for specific industries (e.g., web development, data analysis) and can be completed online in less than a year.

- **Certificates:** Certificate programs, offered through colleges and universities, are also designed to be completed in less than a degree. According to the Center on Education and the Workforce, more than one million certificates are earned annually [17].
• **Bootcamps:** Programs offered by organizations like General Assembly and Hack Reactor are short term (e.g., 8-12 week), skill development opportunities, which are often partnered with industry recruiters and job search assistance.

• **MOOCs:** Open online courses have evolved to offer fee-based completion and assessment features that document learners’ achievements and professional development efforts. They are also often an entry point for prospective students thinking about enrolling in certificate and degree programs [7].

**COLLEGE-CORPORATION PARTNERSHIPS**

Career readiness is increasingly viewed as the responsibility of both colleges and employers. Collaboration efforts include the growth of corporate-academic partnerships, where companies help employees achieve their higher education goals. This assistance often includes “free” tuition or a discount for certain areas of study. Through specially-selected and designed programs, students pursue opportunities that also benefit their employers. Examples of ongoing partnerships include:

• **Arizona State University (ASU) and Starbucks:** The Starbucks College Achievement Plan reimburses tuition for full-and part-time employees who are interested in pursuing a bachelor’s degree through ASU Online [18].

• **Walmart and American Public University System:** Walmart provides a partial tuition grant to eligible employees and their family members. Associate, undergraduate and graduate programs are available [19].

• **Southern New Hampshire University (SNHU) and Anthem, Inc.:** SNHU’s competency-based College for America is now partnered with Anthem to provide associate and bachelor’s opportunities for employees [20].

• **Chrysler and Strayer University:** What began as a corporate training partnership now extends to academic degrees. Dealership staff members can pursue online and on-site programs at Strayer as an employer benefit, which includes tuition, fees and textbooks [21].
Academic Administrators and Faculty

What do academics think of online education? It depends who you ask. While acceptance grows among administrators, some faculty members resist the format.

According to the Babson Survey Research Group, “the lack of acceptance of online (education) among faculty has not shown any significant change in over a decade” [7]. In 2003, only 27% of surveyed academic leaders said that their faculty members thought favorably of online learning. In 2014, this number was 28%, with faculty members listing “value and legitimacy” [7] as their main concern. A 2014 faculty study from Inside Higher Ed found similar results with respondents remaining “highly skeptical about the efficacy of online education” [22]. One prominent concern was the use of courses not developed by the faculty members that teach them.

Administrators from Brown University established a list of ways to engage faculty in online education, with a goal of increasing acceptance and adoption [23]:

- **Provide incentives**: these can be monetary, or provide other types of compensation such as time, recognition and rewards initiatives
- **Use a team approach**: provide faculty with access to collaborative development teams that include instructional designers, multimedia tools and other resources
- **Increase training and support**: extend resources available to include ongoing skill development in the many competencies of online teaching, course development, technical assistance and content maintenance.

Prospective Students

Student ideas about online education have not changed as drastically over the years. A study conducted with business students in 1999 revealed a preference for online learning over distance learning (e.g., telecourses, synchronous video conferences) and campus-based options [2]. Students participating in this study also cited schedule flexibility and other time related issues as potential advantages of online learning. Convenience and schedule flexibility remain popular motivators for online students, as found in the 2015 Best Colleges report [1].

PERCEPTION OF ACADEMIC QUALITY

Flexible study schedules are helpful, but students are also aware of the importance of a quality education. In The Learning House’s 2015 study, 78% of students responded that the academic quality of their online courses was “better” or “about the same” as their experiences in traditional classrooms [2]. Having access to college-level educational programs and credentials is important, but students also expect effective course content and instruction, academic support services and administrative processes.
ROLE OF ACCREDITATION

Academic rigor, student support, faculty credentials and administrative resources are all addressed in an accreditation review. Accrediting agencies — national, regional and special program — establish and verify a basic level of quality, and they all review online and on-campus schools and programs with the same sets of standards. The Learning House found that accreditation status is the top indicator online students use to determine a school’s reputation, even though these students did not understand the difference in national and regional accreditation [22].

Accreditation is expected in higher education, and while it is widely accepted as an indication of institutional quality, there are potential gaps in the system. The process itself has come into question in recent years, as accredited schools like Corinthian College are shut down due to poor practices [24]. While accreditation is a positive indicator, and one that students rely on, the process and requirements are opaque to those using it to verify a school or program’s quality.
TECHNOLOGY TRENDS AND TOMORROW’S LEARNING ENVIRONMENTS

The push for innovative tech solutions to the many challenges faced by colleges and universities (e.g., rising costs, maintaining student retention, improving learning opportunities) is driving the future of online education. The exponential nature of technological development has shifted the online education landscape substantially in recent years and further enhancements will continue to alter online learning delivery methods going forward.

As available technologies increase our educational capabilities, the choice of how to pursue higher education can be overwhelming. Stakeholders, ranging from students and faculty to administrators, parents and employers, can expect these changes to impact decisions in their perspective of the industry and the overall student experience.

“IT’S TAKEN DECADES, BUT EDUCATIONAL TECHNOLOGY IS FINALLY BEGINNING TO CHANGE THE WAY WE THINK ABOUT EDUCATION ITSELF -- NOT JUST THE WAY WE DELIVER IT.”

- Peter Stokes, Going Online, Being Digital, Inside Higher Ed
The higher education experience is no longer “online” or “on campus.” Hybrid, or blended, learning options have been used for years. This approach typically uses both in-person and online activities during a course. A blended course might, for example, require students to attend face-to-face lectures or hands-on laboratory sessions, as well as participate in online discussion forums and study groups.

Mixed Pathways

This model is quickly evolving to include not only class interactions, but also access to support services and other learning experiences, such as internships. Online students appreciate in-person connections with faculty and staff, and on-campus students also benefit from the convenience of online access to a variety of support systems.

Offering mixed pathways to a degree also provides flexibility for individual students, allowing them to customize their experience through different delivery modes throughout their degree programs. A recent presentation at the Connect 2015 conference shared the experience of a UCF student who completed her degree through a combination of on-campus, online and hybrid offerings. She was able to choose the best path for her goals and schedule, and her individualized program plan helped put her on a track to graduation.

Digital Strategies

Technology is not just for online courses. In fact, the term “online education” is undergoing its own innovation as technology gets integrated in a wider range of college experience. The student-centered strategies reported at the Online Learning Consortium’s 2015 annual conference include traditional computer labs in which students work independently to reach learning goals using assistance provided by adaptive software, their peers and supplemental web-based resources, as well as on-site instructors and teaching assistants [25]. Technology can change teaching and learning in more ways than just the location of students and faculty.

Education consultant Peter Stokes recently called for a switch in language and approach. Online learning has become synonymous with “tuition streams” and “content development,” and perhaps a specific type of degree program. Stokes recommends replacing this term with digital strategy. This all-encompassing term more accurately describes not only delivery mode and administrative decisions, but also “pedagogy”, “market relevance” and the use of educational technology in on-campus programs as well [26]. This broader focus represents the reality of today’s higher education system, which increases student access to college while improving the overall learning experience.
Instructors have used blogs and personal Twitter accounts to connect with students outside of class for years now. Students have also taken advantage of Google Hangouts and Facebook Groups to create their own study sessions and collaborate on group assignments. Once rare, expansive social communication is now widespread throughout higher education.

**College Adoption**

While digital media isn’t employed universally in higher education, its use is increasing as college administrators embrace technical tools and integrate them into learning management systems (LMS). In a survey conducted by the eLearning Guild, the association’s members rated the importance of social features in an LMS [27]. The top features in order of importance were:

- Knowledge bases
- Discussions
- Online Communities
- User Ratings
- Wikis
- Blogs

A study of social media in teaching by Pearson Learning Solutions found an increased use of blogs, wikis and podcasts [28]. Many of these social elements are now standard in academic systems. Blackboard, for example, allows users to create a profile that includes an image and brief bio. Canvas, another LMS, integrates outside tools through apps that allow instructors to embed streams from social platforms, such as YouTube and Twitter.

Social tools help all participants personalize the learning experience and maintain a presence in online courses. The benefits of social interaction are also evident at the institutional level. Universities, academic programs, and support service offices (e.g., career centers, libraries) are establishing their own accounts as an alternative way to communicate with a larger audience that can include prospective and current students, as well as alumni and employers.
The Council for Advancement and Support of Education (CASE) Circle of Excellence Awards recognize the “best uses of social media” in four categories: alumni relations, fundraising, public relations and marketing and student life. The 2015 winners included a variety of college-based initiatives [29]. Examples include:

- Washington and Lee University’s “for students, by students” approach, which features a team of students serving in paid roles as “social media managers, content strategists and content creators/curators” in their work with the school’s office of Communications and Public Relations.

- The Massachusetts Institute of Technology Alumni Association continued its “tradition of hacking,” creating a March Madness inspired contest that featured historic school images and stories, carried out on Facebook.

- Colorado State University professor Temple Grandin’s participation in Reddit’s Ask Me Anything series was recognized both by CASE and the Webby Awards [30].
Students and Social Media

Platform preferences change over time. Today’s college students use a variety of social networks to connect with friends and family, and increasingly with work and school. The Pew Research Center’s social networking research shows that 74% of adults who use the internet also use social media [31]. These sites are most popular among 18 to 29 year olds, followed by the 30 to 34 age group.

Higher education consultants from Ruffalo Noel Levitz are tracking technology use among prospective college students. In the latest E-Expectations Report the group found that, among college-bound high school students, 75% use Facebook, 73% use YouTube and 40% use Twitter [32]. About half (51%) of the students surveyed reported visiting a college’s Facebook page, as did about 30% of their parents.
Evolving Learning Management Systems

Social media integration isn’t the only thing changing the online learning landscape. Learning Management Systems, like other types of software application, are constantly improving. These once-limited course sites, which once consisted of little more than text-based content and threaded discussion boards, are now broad multimedia platforms that students can access from a range of devices. According to Edutechonica.com’s spring 2015 report, Blackboard, Moodle and Canvas are the three most popular systems found across higher education. Some of the most recent developments include:

- **Advanced Options and Interfaces:** Blackboard recently announced an improved experience it calls “Ultra,” which promises a host of improvements in editing, rubrics, multimedia and more. Blackboard is also updating data collection and analytics features to provide instructors and institutions with more insight into student retention.

- **Customization:** Among the user-centric reasons California State University Fullerton cites for choosing Moodle are an “easier to use interface” and “better integration with social networking sites.” This open-source platform is one of several systems offering a long list of customization options. With more than 1,000 plugins in 20 categories (e.g., activities, course formats, text editors, reports) administrators and instructors can modify the look, feel and function of the learning environment to meet the needs of each school and course.

- **Mobile Apps and Mobile-ready Sites:** The iOS and Android apps available to Canvas users provide easy access to course content and discussions, as well as administrative grading and student feedback tools. Champlain College lauds the system’s goal of allowing students to “complete an entire course on your phone.” Champlain also lists “screen size” and mobile operating systems as prospective computer specifications that could help online students.

What’s next for learning management systems? Soon after launching new features at its annual BBWorld Conference, Blackboard, Inc. hit the open market. This is just one platform, but it is used in more than 100 countries and the system is in the midst of making major upgrades. A new owner could bring unanticipated changes for a significant number of users. Meanwhile, the emergence of other customizable systems (e.g., Jenzabar, ed2go) and platforms that can be modified to provide a similar experience (e.g., SharePoint) provide institutions with more choices than ever, increasing competition in the industry while also complicating selection decisions.
# LEARNING MANAGEMENT SYSTEMS

## Canvas

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<th>PAID OR FREE</th>
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<th>TECH SUPPORT PROVIDED?</th>
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<td>AGPLv3; commercial license also available for purchase</td>
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<th>SYSTEM TRAINING</th>
<th>FREE TRIAL</th>
<th>FEATURES</th>
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<td>Online tutorials and step-by-step process for installation and customization</td>
<td>Yes; free two-week, pre-built trial account. Or users can simply build their own virtual classroom using the free code.</td>
<td>iOS &amp; Android appsOpen APIMobile readyCustomizable</td>
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## Moodle

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<tr>
<td>GNU General Public License</td>
<td>Schools and/or instructors; users can work with one of the Moodle Partners to install and customize the LMS.</td>
<td>No; users can purchase support from one of Sakai’s affiliates. Tech support is community-driven.</td>
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<td>Free, pre-built trials available from Sakai Partners, or users can build their own course demo.</td>
<td>CollaborationePortfolio Customizable using extensions and tools</td>
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### Sakai

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<td>Commercial Affiliate deploys and</td>
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<th>OPEN SOURCE LICENSE</th>
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<th>TECH SUPPORT PROVIDED?</th>
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<tbody>
<tr>
<td>Apache License, v2.0</td>
<td>Schools and/or instructors; users can pay a commercial affiliate to download, install and customize Sakai.</td>
<td>No; users can purchase support from one of Sakai’s affiliates. Tech support is community-driven.</td>
</tr>
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<table>
<thead>
<tr>
<th>SYSTEM TRAINING</th>
<th>FREE TRIAL</th>
<th>FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Free, pre-built trials available from Sakai Partners, or users can build their own course demo.</td>
<td>CollaborationePortfolio Customizable using extensions and tools</td>
</tr>
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### Blackboard

<table>
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<th>PAID OR FREE</th>
<th>AVAILABLE PACKAGES</th>
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<tr>
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<td>Internet2 Net+ Solution</td>
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<td>Learning Insight &amp; Student Retention</td>
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<td>BB Analytics BB Mobile</td>
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<td></td>
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<td>BB Collaborate BB ParentLink</td>
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<td>BB Connect BB Schoolwiers</td>
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<td></td>
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<td>BB Learn BB Sociability</td>
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<td>BB Transact BB Student Services</td>
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## Brightspace by Desire2Learn (D2L)

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<table>
<thead>
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<th><strong>TECH SUPPORT PROVIDED?</strong></th>
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<tbody>
<tr>
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<td>Setup and maintenance by Brightspace. Depends on which services are purchased.</td>
<td>Yes, based on which services are purchased.</td>
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<tr>
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<th><strong>FREE TRIAL</strong></th>
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<tbody>
<tr>
<td>Yes, based on which services are purchased.</td>
<td>Yes; 30 Day Free Trial</td>
<td>Core Learning Analytics Customizable through use of apps and extensions</td>
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</table>
ENHANCING PRACTICAL LEARNING EXPERIENCES

As reported by students responding to our Best Colleges survey [1] and The Learning House annual study [2], jobs and careers inspire many students to enroll in higher education. Whether they are entering the workforce for the first time, trying to advance in their field or planning a career change, the value of a college education includes work preparation. Online degree and certificate programs are called to fulfill this need, and many are answering with practical-learning opportunities.

Work-based Learning

How can online students apply what they learn in class before they graduate? This type of work-based learning experience benefits students as they explore career options and make decisions about their future goals. Adding this component to online programs increases logistical challenges but, with careful coordination, can add value to the learning environment.

Internships, practicum courses, service learning and co-op experiences are part of many online degree curricula at the undergraduate and graduate levels. These are usually credit-bearing and may require a final report from students as well as documented supervision from faculty or work site coordinators. This approach adds a hands-on, in-the-workplace component to what may otherwise be a completely online degree. Online class assignments can bring this component to existing courses through student interview assignments, self-guided field trips and job shadowing opportunities.

Researchers from Troy University and DeSales University identified four models for combining instruction and service-learning, one of which delivers both experiences online. With this approach, students complete typical coursework online while also participating in applied experiences at a distance [40]. The examples provided include:

- review and update policies of a non-profit organization to ensure regulatory compliance (healthcare)
- design and develop advertising materials for local humane society (business/marketing)
- conduct policy analysis and identify best practices for reaching at-risk population (public health)

These activities were conducted in collaboration with clients and community organizations through a host of technology tools, including real-time communication via web conferencing systems.
Multimedia Interaction and Simulations

Technology opens other options for gaining applied experience at a distance. Using online activities, which range from animated graphics to game-like interactions and fully-immersive virtual environments, schools can improve learning and student engagement in several ways. Examples of online learning activities include:

- **Harvard Business Publishing** provides educator access to web-based simulation materials covering a range of topics from entrepreneurship and finance to operations management and organizational behavior.
- Students can review common patient symptoms, treatments and care challenges with LearningNurse.org’s game and quiz series.
- The University of Colorado Boulder’s PhET Interactive Simulations allow students to visually explore concepts (such as balancing a chemical equation and Faraday’s Law) in physics, biology, chemistry and more.

These tools help students understand complex concepts and processes. They can experience real-world situations and the ramifications of their decisions and actions within scenario parameters. Future advances in platform capabilities will lead to more affordable products with high-fidelity experiences.

Career Literacy

Learning about what the workplace will be like after graduation benefits not only students, but also employers interested in hiring new people. Through applied experiences, whether on-site or simulated, students learn to make better decisions about their careers. This skill is part of the concept of career literacy, presented by William Symonds, Global Pathways Institute, at the 2015 National Career Development Association conference [41].

“MANY STUDENTS DON’T HAVE THE INFORMATION NEEDED TO MAKE GOOD DECISIONS ABOUT THEIR FUTURE. THE RESULT: MANY MAKE POOR CHOICES ABOUT COLLEGE AND CAREER. MANY COLLEGE STUDENTS ARE JUST WANDERING THROUGH THE SYSTEM, AND THIS IS A KEY CAUSE OF THE UNDEREMPLOYMENT EPIDEMIC.”

- William Symonds, Global Pathways Institute

Symonds wants to “make career guidance a central focus of education.” The integration of work-based learning and applied learning initiatives is one way to move forward while ensuring that students are prepared for the workforce and capable of making purposeful and realistic decisions about their future goals.
Higher education in general, and online education more specifically, is experiencing the effects of changing student characteristics and needs. New approaches to curriculum design, development and delivery will also impact the future of online teaching and learning.

Rethinking Instructional Strategies

Beyond traditional degree programs, however they are offered, learning opportunities are increasingly available both inside and outside the college classroom. The world of instructional technology and its evolving capabilities expand students’ educational options. In addition to the skills development options presented previously, the following strategies are expected to gain popularity in the coming year.

COMPETENCY-BASED LEARNING

Western Governors University [42] and Southern New Hampshire University’s College for America [43] are two high-profile examples of competency-based education schools. Students enrolled in these formal programs work closely with those in support roles (e.g., academic coaches, coordinators, advisors, mentors) to build and establish their knowledge and skills. Courses are designed with specific learning outcomes or goals, and students are assessed through a combination of tests, projects, presentations and other activities, but without the traditional structure of lectures and class time.

Related to competency-based approaches, prior learning assessment initiatives help students assess their education and work backgrounds to establish mastery in specific areas aligning with academic objectives. Through testing and portfolio development, students can earn academic credit and apply it toward a degree program. Benefits include a shorter time to completion schedules, reduced total costs for students and documented verification of knowledge and skills.
PERSONALIZED LEARNING

Online students are increasingly interacting with virtual classrooms that not only track their progress, but also adapt content presentation to their individual abilities. This approach is not new; the technology available to enhance instruction is simply changing student possibilities. Through periodic assessment of understanding and skill, additional practice exercises may be presented to help struggling students.

The Association of Public and Land-Grant Universities (APLU) has established a Personalized Learning Consortium to help schools interpret student learning data, and to develop initiatives that support learners with adaptive methods [44]. Personal and adaptive learning techniques can show instructors which students are struggling with particular concepts, provide additional practice with complex materials and suggest specific interventions for individual students.

Whether it happens in a formal college setting or in a range of professional development activities, there is a need for continued learning throughout one’s career. These approaches encourage prospective and current students to make the most of their existing skills sets and pursue education formats that match their individual abilities and help them reach their goals.

Outsourcing Curriculum Development and Evaluation

The growth of online education has changed the way that individual courses are created. The traditional model centers on the college professor, who designs and delivers their own class with little outside assistance. While each faculty member brings expertise in the field, there may not be consistency across sections of a course or from semester to semester. A focus on establishing program and course learning outcomes has led to the standardization of development and delivery, which increasingly includes teams of experts (e.g., faculty members, instructional designers, multimedia specialists, educational technologists, editors), and complex review processes.

TECHNOLOGY TOOLS AND SERVICES

Outsourcing course and program development is also gaining ground through the use of educational technology vendors that offer a variety of services ranging from adaptive learning tools, learning management systems and recruiting to data analysis, videoconferencing software and full program development. According to Eduventures, higher education institutions spent “between $20 and $25 billion on technology and services” in 2014 [45]. These tools and services provide not only expertise and interactions that might not have been possible with in-house resources, but also a faster way to complete online course development. Ed tech vendors will continue to be influential and coveted in the future.
ASSURING AND ASSESSING QUALITY ONLINE

The question of value or level of quality emerges as more people, in and out of the institution, help create academic programs. Accreditation provides one source of evaluation, and many schools are developing their own processes to ensure that courses are academically rigorous and consistently delivered. Online programs face additional challenges, as technology selection, implementation and maintenance must be monitored as well.

Quality assessment measures specifically designed for online teaching and learning are growing in popularity. The non-profit organizations Quality Matters [46] and Online Learning Consortium [47] are just two of several evaluatory bodies. Additional tools, such as UCF’s UDOIT: Universal Design Online Content Inspection Tool [48] and the Illinois Online Network’s Quality Online Course Initiative Rubric and Checklist [49] help individual instructors and institution administrators plan for and monitor course-level quality. Online educators face the constant challenge of identifying “best” or “leading” strategies, while keeping context (i.e., students, goals, resources, mission) in mind. Schools are encouraged to share the lessons they’ve learned and their success stories in quality assessment and design.

Enhancing Online Student Support

Just like residential students, online learners require support systems. While digital libraries and career centers have long been available, additional resources serve a wider range of student demographics and needs, and many are benefiting students regardless of their enrollment status.

PERSONNEL

An academic advisor’s role traditionally covers course selection, academic policy interpretation and degree planning. In some schools, this role expands to include more frequent contact with students and progress tracking, while other schools are establishing new positions with roles that complement those of traditional advisors. Student mentors, success coaches and learning consultants provide not only encouragement and resource referrals, but also continual risk assessment and intervention designed to improve student success rates. At Connect 2015, King University’s enrollment management office shared how the addition of success coaches and program coordinators enhanced retention and allowed the school to identify and intervene with struggling students [50].
ACCESS

Online students aren’t always able to visit campus to meet with advisors and counselors during regular business hours, even though more than 50% of online undergraduate and graduate students live less than 50 miles from campus, as reported by The Learning House [2]. In response, most schools have established robust websites with links to recorded tutorials, helpful references and how-to checklists. Likewise, online library databases are available 24 hours a day, seven days a week.

Having web-based access to support services is beneficial to both distance learners and on-campus students, who may also appreciate the convenience of “after hours” access. Penn State World Campus is just one example of a traditional school serving both online and residential learners, providing detailed online profiles of academic advisors and career counselors with contact information and technology-based appointment options. The school also encourages students who want to meet face-to-face with campus representatives to do so.
Balancing affordability and academic quality is a concern for students and institutions alike. As the return on investment (ROI) of a college degree comes under increased scrutiny, institutions must communicate exact financial costs and provide details about the learning experience and expected student outcomes.


- Online College Students, The Learning House
STUDENT EXPENSES

We’ve all heard about the rising cost of a college education, but comparing the cost of different programs is a challenge when schools use different models. While tuition at some schools decreases, the number of fees may increase. While tuition at other schools increases, more grants may be available to offset costs to students. There is also no standard method for setting tuition rates, and online programs employ several different pricing mechanisms, charging by the credit hour, course or semester and at in-state and out-of-state rates.

Overall, attending college is expensive and it’s important for each institution and program to be transparent about costs so that students have enough information to make the best possible decisions about their education. Prospective students must also carefully consider their budgets for online learning and research the types of college costs (i.e., tuition and fees, living expenses, books and supplies, personal costs) they’ll encounter once enrolled.

Tuition and Fees

Tuition is the charge associated with enrolling in classes. The term fee is used to describe additional costs, covering everything from laboratory equipment and student support activities to administrative expenses. Administrators decide how tuition revenue will be applied; depending on the school, it can range from paying for the costs of operating a campus, to faculty and staff payroll and athletic expenses. The National Conference of State Legislatures notes that “tuition setting is ... an inherently political process, and in most states, often involved many people who have varying levels of influence and control over the process.”

Tuition rates can be affected by enrollment numbers and changes in the economy, as well as other opaque variables. Some schools, such as Virginia Commonwealth University (VCU), provide some information to students, addressing how tuition is set and how their money is spent. VCU’s tuition decisions, for example, are based on projected enrollment, required resources and state revenues, among other factors.

According to The College Board, the average annual tuition and fees at public four-year institutions has risen to $9,139 in 2014-15 from $2,505 in 1971-72. Why is college so expensive today? Colleges enrollments are up approximately 50% since 1995 across undergraduate, graduate and professional programs. The result is higher spending on resources required to serve this growing number of students and an increase in the number of administrative positions supporting them.
There are also various tuition rate structures to consider, which can make comparing the costs of more than one program confusing. Public or state schools, for example, traditionally have less expensive rates for in-state residents and higher rates for out-of-state students. But the differences can also include online vs. on campus courses and part-time or full-time enrollment. Tiered rates, like those offered by Penn State World Campus, are increasingly common, encouraging students to enroll in more courses simultaneously, potentially reducing their costs and decreasing their time to graduation.

It’s not just tuition that must be considered when pricing a college education. From the time a prospective student submits his or her first application, the fees begin. The total cost of attending a program escalates quickly as schools charge tuition and a range of additional fees, from lab costs to parking fees. Fees are determined by each school and can be vague, such as the “globalization fees,” “student enhancement fees” and “freshman entering fees” documented by ProPublica [56]. Many schools list “tuition and fees” as a total amount, while others provide an itemized list.

**Student Loans**

Most students don’t pay the full “sticker price” of a college education, relying heavily on funding sources that includes a mix of scholarships, grants, federal financial aid and federal or private loans. A concept known as discounting, more common at private nonprofit institutions, reduces the total amount paid through grants given by the colleges themselves, and was received by 77% of undergraduates in 2014-2015 [57]. This doesn’t necessarily make college more affordable, however, as evidenced by the amount owed in student loan debt.

According to the Institute for College Access and Success, “7 in 10 seniors (69%) who graduated from public and nonprofit colleges in 2013 had student debt, with an average of $28,400 per borrower” [58]. Graduate students and online students are also borrowing money for college. The Brookings Institution recently conducted a study of student loans, and the findings indicate a pattern in the types of institutions where students default on loan payments. Of the top 10 schools students owe the most debt, eight are for-profit institutions, many of which offer online programs [59].

**HOUSEHOLD DEBTS AND CREDITS**

![1.16 TRILLION HOUSEHOLD DEBTS AND CREDITS](chart.png)

- **10% STUDENT LOAN DEBT**
- **90% TOTAL DEBT**
The Department of Education’s National Postsecondary Student Aid Study takes place every three to four years, and tracks how students are funding their college education. A review of the two most recent reports, published in 2007-2008 [60] and 2011-2012 [61], reveals an increase in reliance on federal student aid and loans among undergraduate students. A slight increase in grants received, including scholarships, was observed. The average amount of grants received also increased, from $4,900 to $6,200.

### Calculating ROI

Return (outcome based on personal and professional goals) must be defined by each student, as compared to the investment (time, money, effort and resources) he or she will commit to a college education. For a majority of students, return is related to employment [1] [2]. Calculating the cost of attendance is just the beginning. Students must also understand the realities of repaying loans after graduation and how their debts compare to potential earnings. There is plenty of advice out there, and each prospective student is best served by conducting careful research and setting realistic expectations before making decisions about how to pay for college.

\[
ROI = \frac{\text{Annual Expected Salary} - \text{Annual Loan Repayment}}{\text{[Annual Education Cost} - \text{(Grants + Scholarships)}]} \times \text{Years to Graduate}
\]

### POSTSECONDARY STUDENT AID STUDY

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<td>ANY FINANCIAL AID</td>
<td>66%</td>
<td>71%</td>
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<td>FEDERAL STUDENT AID</td>
<td>47%</td>
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<tr>
<td>LOANS</td>
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COMPLETION RATES

Student retention is critical to most colleges and universities whether they offer programs online, on campus or through multiple delivery formats. Prospective students are increasingly aware of this data. Most traditional schools track the percentage of full-time, first-time, first-year undergraduate students that enroll in the following year: this measure is their retention rate. Likewise, completion and graduation rates track the number of these students who graduate within six years of beginning their programs.

Most online students, however, do not readily fit the description of full-time, first-time, first-year undergraduate. With a wide range of student demographics, previous learning experience and work and family responsibilities, online students are still graduating, but their paths differ from traditional campus-based students. While completion rates for online students may seem lower when compared side-by-side with on-campus students, a study from the WICHE Cooperative for Educational Technologies (WCET) found that the differences are smaller than expected. This group looked at course completion rates at 200 schools finding on-campus completion rates were only 3%-5% better than online\(^{[62]}\).

EXPECTED SALARIES

Many variables impact what a student can expect to earn after graduation. In addition to education and experience levels, there are regional trends in salary and compensation as well as differences across industries hiring students with similar backgrounds. Students can search for data by job title to reveal average annual wages and salary rates by industry, state and metropolitan area. The U.S. Bureau of Labor Statistics Occupational Employment Statistics program is one source of information available free and online. Other sources, such as PayScale, provide salary information by college, undergraduate major, graduate program and career field.
GAINFUL EMPLOYMENT

At the heart of the modern student loan crisis is the issue of students borrowing more than they can repay upon graduation. Academic expenses and value are connected and have drawn more attention from government agencies in recent years. The rules, guidance and influence that these agencies impart on higher education will dictate the future of online education costs and quality.

There’s more to consider beyond finances, as the academic value of a program is part of the overall equation. The question prospective students must answer when researching programs is not just, “will I be able to make enough money to repay my student loans after graduation?” but also “will I gain the skills and knowledge I need in college to make me a competitive applicant when applying for jobs after graduation?” This is the crux of gainful employment regulations affecting colleges and students.

The latest ruling in July 2015 aims to block federal financial aid currently received by an institution if its graduates are not able to afford their loan payments. This regulation stipulates that students should not have to spend more than 8% of their total income, or 20% of discretionary income, on loan repayment [63]. This rule began affecting career and vocational programs in July, 2015. According to the U.S. Department of Education (DOE), for-profit institutions have the most to lose when their graduates are not gainfully employed. Currently, “more than 80% of students at for-profits borrow federal student loans to pay for college” and they “represent … 44% of all federal student loan defaults” [63].

The DOE issued initial guidelines in 2011 to help schools prepare for the new regulations [64]. Data at that time showed that only 35% of programs successfully met the three standards then used to measure gainful employment:

- **Loan repayment rate:** At least 35% of former students actively repaying their loans
- **Debt-to-earnings ratio:** Estimated annual loan repayment amounts not to exceed 12% of total earnings
- **Debt-to-discretionary-earnings ratio:** Estimated annual loan repayment not to exceed 30% of discretionary income.

Potential Impact

As a result of the new rules, prospective students may encounter more selective admissions processes. They may have to meet minimum GPA or test score requirements, for example, to be eligible to enroll at programs that were once more accessible.
They could also see a reduction in the number of programs available as schools make decisions about which certificate and degree programs they can maintain under the new rules. Career colleges affected by the gainful employment rules may also decide to decrease tuition rates, which would in turn decrease the amount of federal aid received, and make career services and job search assistance a priority service for students [65][66].

**New Funding Opportunities**

There is a nationwide call for better ways to financially support students who want to attend college. Changes are happening, particularly at the two-year program level. The College Promise Advisory Board, a new coalition of stakeholders from community colleges, legislators, businesses and foundations, is taking on an “initiative to make two years of community college free” [67]. Several states, including Tennessee, Oregon and Minnesota are already offering similar programs. In other states, change is happening at local levels. The Tulsa Achieves program, for example, offers up to 63 credits of free tuition to Tulsa County high school residents [68]. Additionally, Milwaukee Technical College recently announced a new initiative to support low-income students with tuition-free programs [69].

But there’s more to be done to avoid heavy amounts of student loan debt at four-year schools, as well as in graduate and professional programs. College access and affordability is emerging as a priority topic in the 2016 presidential campaigns. The proposed changes include tax and government funding changes to provide free tuition at public colleges and universities, lower interest rates on student loans and enacting more affordable loan payment plans [70][71].

The decision to enroll in a college degree program, online or on-campus, is an individual one. Each student must carefully assess the combined costs of attending school, and his or her resources for funding and completing a program. For those who pursue higher education with career and employment goals in mind, an estimate of future earnings potential must also affect where they choose to study, especially as it relates to repaying anticipated student loans.
As more traditional, campus-based colleges and universities develop online courses and fully online programs, there is more selection than ever for distance learners. The competition for these students is also increasing and schools now find themselves in the position to actively market their programs and attract prospective students.

Traditional Universities and Online Learning

In the latest report on online education from the Babson Group, 70% of academic leaders surveyed said that “online learning is critical to their institution’s long-term strategy” [7]. Each institution must weigh the pros and cons of offering online programs carefully, and many are choosing to offer not only web courses, but also full degrees. While the initial design and development of these academic opportunities can be time consuming and expensive, they ultimately provide access to new student populations.

Competition for Online Students

According to the 2014 Babson report, 70% of degree granting institutions offer some kind of distance learning option [7]. This provides online students with many fields of study to choose from. The colleges and universities offering these options must create effective marketing campaigns and relay the unique and beneficial components of their programs to prospective students.

The Online College Students 2015 report includes feedback about the kind of information students want to receive [2]. The five most appealing marketing messages to students surveyed were:

1. Affordable tuition (36%)
2. Free textbooks (31%)
3. High job placement rate (27%)
4. Earn your degree in one year (21%)
5. First course free (19%)
These messages address both the costs associated with online learning (i.e., tuition, textbooks and time to completion) and desired outcomes (i.e., employment after graduation). Students already know that online programs are convenient. In making a selection among many comparable programs they want to know more specifics about what the experience will be like and how it will impact their future [72].

In a separate study from Noel Levitz, 93% of online students said it was “important” that their “tuition paid is a worthwhile investment” [73]. Since the Online College Students survey also found that students only consider two or three programs before selecting a school, conducting outreach to share information with prospective students is also a critical part of recruitment [2].
CONCLUSION

Enrollment in online courses and programs is increasing, even as overall college enrollment begins to show some decline. The prospective online student is increasingly savvy about a college choice, factoring in not only personal goals and interests, but also program costs and educational quality. Online access is allowing a wider range of participation in educational programs often designed with careers and employer expectations in mind. As the technology available to communicate at a distance improves, so will the ability to teach and learn effectively using new formats. It will be up to the many stakeholders in higher education, from administrators and faculty to students and parents, to navigate the fast-paced changes to these learning environments and make the best possible decisions for the future.
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