Sizing the Opportunity

The Quality and Extent of Online Education in the United States, 2002 and 2003

The Sloan Consortium
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Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003

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Overview

While there is now some statistical information available on distance education at higher education institutions in the United States, very few if any research surveys have focused on online education. The 2003 Sloan Survey of Online Learning was designed to find answers to some key questions related specifically to online education delivered by higher education institutions in the United States.

When schools first began experimenting with online education over a decade ago, they were faced with a number of fundamental questions. The current study of degree-granting institutions of higher education in the United States allows us to answer a number of these questions, and pose some additional ones that merit further research.

Will students embrace online education as a delivery method?

Background: *While it holds the promise of expanding the time and location boundaries of traditional higher education offerings, online education also dispenses with the familiar classroom setting that everyone (teacher and student alike) is familiar with. Will the time and location advantages, as well as other possible improvements brought about by moving instruction online, be enough to compensate for the traditional in-class experience for students? Will they be willing to sign up for online courses?*

The evidence: The answer to this question is clearly "Yes, students are willing to sign up for online courses". Evidence to support this conclusion from this study includes:

- Over 1.6 million students took at least one online course during Fall 2002.
- Over one-third of these students (578,000) took all of their courses online.
- Among all U.S. higher education students in Fall 2002, 11 percent took at least one online course.
- Among those students at institutions where online courses were offered, 13 percent took at least one online course.
- The number of students taking at least one online course is projected to increase by 19.8 percent over the one-year period from Fall 2002 to Fall 2003, to include a total of 1.9 million students.

Will institutions embrace online education as a delivery method?

Background: Many institutions of higher education have evolved their programs, course offerings, and delivery methods over decades. It will take a significant perceived advantage of a new delivery method to convince a large number of institutions to adopt it.

The evidence: The answer to this question is also yes; institutions are willing to embrace online education. Evidence to support this conclusion includes:

- Eighty-one percent of all institutions of higher education offer at least one fully online or blended course.
- Complete online degree programs are offered by 34 percent of the institutions.
- Among public institutions, the numbers are even more compelling, with 97 percent offering at least one online or blended course and 49 percent offering an online degree program.
- Perhaps most telling, when asked about the role of online education for the future of their institution, 67 percent answered that it is a critical long-term strategy for their institution.

Will faculty embrace online education as a delivery method?

Background: It is the faculty that do the actual teaching, and convincing them of the value of a new and unproven delivery method is a formidable challenge.

The evidence: The findings for faculty are less clear than for either students or institutions. Some, but by no means all, faculty have embraced online education:

- Academic leaders at a majority of institutions (59.6 percent) agree that their faculty accept the value and legitimacy of online education, however, this leaves over 40 percent of institutions that are neutral or disagree with this statement.

Will the quality of online education match that of face-to-face instruction?

Background: One of the most frustrating factors facing the early advocates of online learning was the perception that the quality of these offerings would always be inferior to that of face-to-face instruction. Whether this was based on experience with earlier generation "correspondence courses," or a belief that the essence of teaching is the irreplaceable quality of face-to-face interaction was unclear. What was clear, however, was that the belief that online learning was of lower quality was widely held.

The evidence: The evidence from higher education's academic leaders suggests that the previous question of "can it be as good as" may soon be replaced by "how is it better?" When asked to compare learning outcomes in online courses with those for face-to-face instruction, academic leaders put the two on very close terms today, and expect the online offerings to continue to get better relative to the face-to-face option. Specific evidence from the study includes:

- A majority of academic leaders (57 percent) already believe that the learning outcomes for online education are equal to or superior to those of face-to-face instruction.
- Even more compelling, nearly one-third of these same academic leaders expect that learning outcomes for online education will be superior to face-to-face instruction in three years, and nearly three-quarters of them expect learning outcomes for online education to be equal to or better than face-to-face instruction.
- Every grouping of institutions expects the same relative improvement in the learning outcomes of online compared to face-to-face instruction over the next three years. This holds true both for institutions that offer online education and those that do not.

What's next?

With some clear indicators that both students and institutions have embraced online learning, and evidence that academic leaders believe that the quality of online offerings has either already arrived or soon will, it is now time to turn our attention to other issues surrounding online education:

- Every class of institution expects an improvement in the learning outcomes for online courses relative to those for face-to-face instruction. What aspects of the delivery of online education do they think will bring about this perceived improvement in quality?
- Faculty at some institutions are seen as lagging behind relative to the student and institutional views of the value and legitimacy of online learning? What strategies will institutions use to convince their faculty? Will they be successful?
- While a large number of institutions are engaged in the delivery of online courses, the vast majority of online students are being taught in public institutions. What will be the evolution of the role of online education among private institutions? Will online remain only a niche for them?

Survey Support and Methodology

The 2003 Sloan Survey of Online Learning was supported by a grant from the Sloan Foundation with the collaboration of the Sloan Consortium and the Sloan Center for On-Line Education (SCOLE) co-located at Babson College and Franklin W. Olin College of Engineering.

An e-mail with a link to a web-based survey form was sent to Chief Academic Officers at degree granting institutions of higher education in the United States. In cases where the Chief Academic Officer was responsible for more than one campus, the survey was sent to the primary campus only. If there was no designated Academic Officer, the survey was sent to the President of the institution. In some cases, the survey team was notified by the recipient of another, more appropriate, recipient and the survey was forwarded to this individual. The recipient's e-mail address was linked by IPEDS ID number in order to merge all IPEDS information about a school to the survey response. Of 3,033 surveys sent, 994 responses were received, representing a 32.8% response rate.

All institutional descriptive data for the analysis come from IPEDS, described on their web site as:

> "The Integrated Postsecondary Education Data System (IPEDS), established as the core postsecondary education data collection program for the National Center for Education Statistics, is a system of surveys designed to collect data from all primary providers of postsecondary education. IPEDS is a single, comprehensive system designed to encompass all institutions and educational organizations whose primary purpose is to provide postsecondary education. The IPEDS system is built around a series of interrelated surveys to collect institution-level data in such areas as enrollments, program completions, faculty, staff, and finances."

See http://nces.ed.gov/ipeds/ for more information.

After the data were compiled from the surveys and linked to the IPEDS database, the responders and nonresponders were compared to create weights, if necessary, to ensure that the survey results reflected the characteristics of the entire population of schools. The variables used for producing probability weights included size of the institution, public/private, non-profit/for-profit, and Carnegie class of school (Doctoral/Research, Masters, Baccalaureate, Associates, and Specialized). These weights provided a small adjustment to the results allowing for inferences to be made about the entire population of primary campuses for all active United States postsecondary degree granting institutions that are open to the public.

What is Online Learning?

In order to measure the extent of online learning, standard definitions were developed and applied in this survey. An online course is defined as having at least 80% of the course content delivered online. Blended education courses are defined as having between 30% and 80% of the course content delivered online. The survey asked respondents for information on both online and blended education. While there is a great deal of diversity among course delivery methods that individual instructors use, the following is presented to show the prototypical course description that met the course classifications used in this study.

Proportion of content delivered online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used - content is delivered in writing or orally.
1 to 29%	Web facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Might use Blackboard or WebCT to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that is a blend of the online and face-to-face course. Substantial proportion of the content is delivered online, typically uses online discussions, typically has some face-to-face meetings
80+%	Online	A course where the vast bulk of the content is delivered online. Typically has no face-to-face meetings.

Schools may offer online learning in a variety of ways. The survey asked respondents to characterize their online learning into individual classes, certificate programs, or degree programs (PhD, MBA, other Masters, Bachelors, Associate).

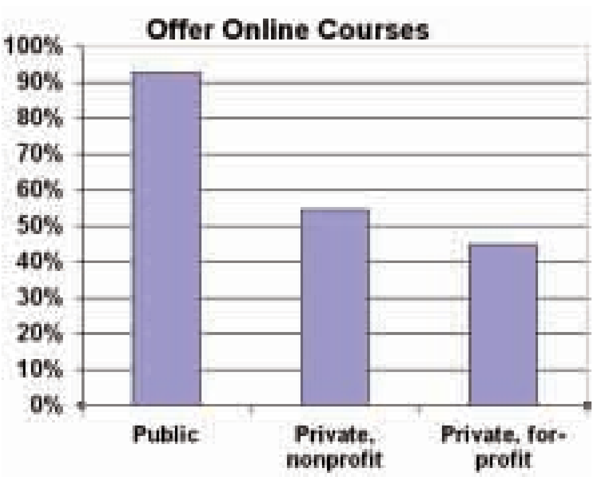
Online learning can be characterized by the percentage of students enrolled at a school taking one, some, or all courses online, or by the extent of the online course or program offerings. The survey attempted to capture information in both categories.

Detailed Survey Findings

Public institutions have a large lead over private institutions in offering both online courses and online degree programs.

Who Offers Courses Online?

Most Public Institutions Offer Courses Online



The Public sector offers the majority of all online courses, with over 90% of all institutions offering at least one online course. This is in contrast to Private institutions, about half of which offer at least one online course. Among the Private institutions, the nonprofits are slightly ahead of the for-profit schools, with 54.5% offering at least one online course as compared to 44.9% of the for-profit institutions.

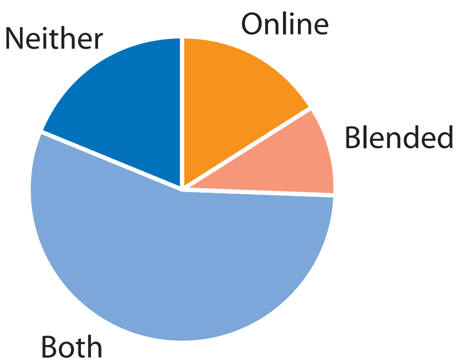
The difference between Public and Private institutions is even more dramatic when online degree programs are examined (i.e., where a student can take at least 80% of their courses for a degree program online). More than twice as many Public schools as Private offer online degrees. Almost half of all schools in the Public sector offer an online degree (48.9%) as compared to slightly more than one-fifth in the Private sector:

Does your School Offer Online Programs for a Degree?

	Public	Private, nonprofit	Private, for-profit	Total
Yes	48.9%	22.1%	20.2%	34.5%
No	51.1%	77.9%	79.8%	65.5%

Online and Blended Learning Go Together

Types of Offerings - All Schools



All schools are more likely to offer a variety of learning paradigms rather than offering only online courses. Instead of offering only online courses or only blended courses, over 80% of Public institutions offer both online and blended courses (see definitions above). This compares to 12.5% offering only online courses and 3.8% offering only blended courses. This pattern is true for Private, nonprofit schools as well. However, Private, for-profit schools are equally likely to offer only online courses and a combination of both online and blended courses.

What Types of Courses are Offered?

	Public	Private, nonprofit	Private, for-profit	Total
Both Online and Blended	80.2%	36.7%	21.2%	55.6%
Online Only	12.5%	17.8%	23.7%	16.0%
Blended Only	3.8%	17.1%	6.6%	9.6%
Neither	3.4%	28.4%	48.5%	18.8%

It may be the case that Public and Private nonprofit institutions offered blended courses as an initial 'first step' prior to offering online courses while Private for-profit institutions are moving directly into online courses.

Given that nearly all Public institutions have adopted online learning in one form or another, further research might focus on adoption patterns at a more granular level, including patterns of adoption by discipline area, program level (Associates, Bachelor's, etc.), and delivery type (online vs. blended). Given that a sizable percentage of Private institutions still do not offer online learning in any form, further research on this group might focus on the above factors relative to new adoptions of online learning.

Strategy, Quality of Online Learning and Perceptions of Faculty Acceptance

Two-thirds of all schools believe that online learning is critical to their long term strategy and a majority believe that the learning outcomes in online education are the same or somewhat superior to face-to-face education.

Schools Believe Online Learning is a Critical Long-term Strategy

Overall, fewer than 20% of all schools surveyed believe online education is NOT part of their long-term strategy. However, when examined by type of school, it is the schools in the Public sector that believe most strongly that online education is a critical strategy, while Private, nonprofit and for-profit schools are quite similar in their degree of agreement with this statement.

Online education is critical to long-term strategy

	Public	Private, nonprofit	Private, for-profit	Total
Agree	85.7%	52.9%	54.6%	66.8%
Neutral	6.6%	18.0%	16.1%	12.7%
Disagree	7.7%	29.0%	29.3%	19.5%

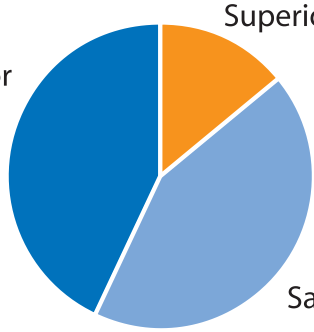
When examined by Carnegie class of school, there is no clear trend or pattern regarding the belief that online education is critical to long-term strategy. Associates and Doctoral schools show the strongest belief that online education is a critical strategy. Less than half the Baccalaureate institutions find online education to be a critical component. Perhaps because they are smaller and traditionally offer face-to-face learning, fewer Baccalaureate institutions believe online education is a critical component of their long-term strategy.

Online education is critical to long-term strategy

	Doctoral/ Research	Masters	Baccalaureate	Associates	Specialized	Total
Agree	72.9%	69.5%	46.5%	76.9%	60.2%	66.8%
Neutral	12.9%	17.6%	13.7%	8.6%	16.1%	12.7%
Disagree	14.1%	12.9%	38.7%	14.3%	23.7%	19.5%

Quality Will Be Equal to Face-to-Face Learning Within 3 Years

Learning outcomes online educaton today

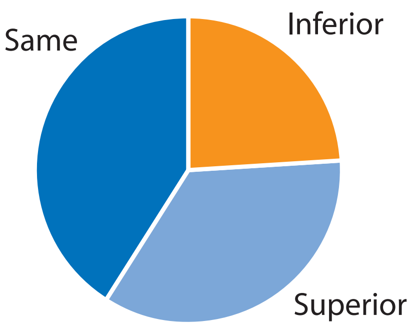


Each respondent was asked to compare the learning outcomes for online education to those of face-to-face instruction for both the current offerings and their expectations of what the situation would be in three years. The choices presented were Superior, Somewhat Superior, The Same, Somewhat Inferior, or Inferior. A majority of academic leaders at institutions in the Public sector already rank learning outcomes for online courses very close to those in face-to-face courses while a majority of leaders at all institutions agree that online learning outcomes will equal or surpass those of face-to-face courses within three years. Leaders at the Private, nonprofit schools expect a dramatic change over the next three years, moving from less than 40 percent ranking online learning outcomes as the same as or superior to face-to-face to over 60 percent of these schools ranking online learning outcomes as the same as or superior to face-to-face learning outcomes.

Compared to face-to-face, learning outcomes in online education are currently

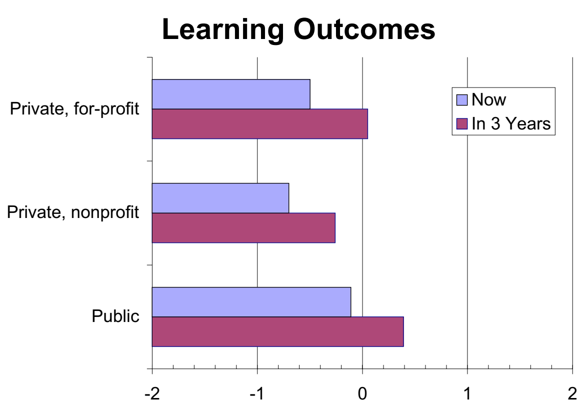
	Public	Private, nonprofit	Private, for-profit	Total
Superior	17.4%	7.0%	12.0%	12.3%
Same	57.6%	32.8%	39.6%	44.9%
Inferior	24.9%	60.3%	48.5%	42.8%

Learning outcomes online in 3 years



Only one quarter of the respondents at all schools surveyed expect online learning to be inferior to face-to-face learning in three years. Considerable variation remains by institutional type: almost 40% of leaders at Private, nonprofit schools expect that face-to-face learning will be superior, as compared to only 12% of leaders at Public sector institutions. The percentage of leaders at Private schools expecting online learning to be superior to face-to-face learning in three years almost triples relative to the present from 7% in Fall, 2002 to 20.4% in Fall, 2005 in the nonprofit sector and from 12% in Fall, 2002 to 34.3% in Fall, 2005 for the for-profit sector. It is unclear whether this projected improvement in the quality of learning outcomes in online education is due to an optimistic stance that quality of online education is improving to such a degree that schools feel comfortable making it part of their offerings, or whether it is due to some other factor.

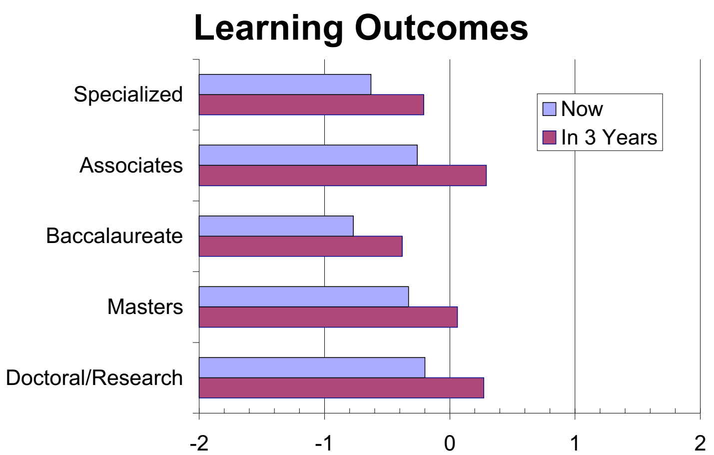
To look more deeply at this perception, the five-point scale used for ranking was converted to a numeric scale ranging from –2 ("Inferior") to +2 ("Superior", with zero equivalent to a ranking of "The Same"), and an average (mean) was calculated for each group within our study. An average value greater than zero (positive) for a particular group on this scale indicates that the respondents rated, on average, learning outcomes for online as superior to those for face-to-face, and correspondingly, a value below zero (negative) indicates that online was viewed as inferior to face-to-face. The analysis examines the respondent's assessment of the comparison of learning outcomes for online education with those of face-to-face instruction.



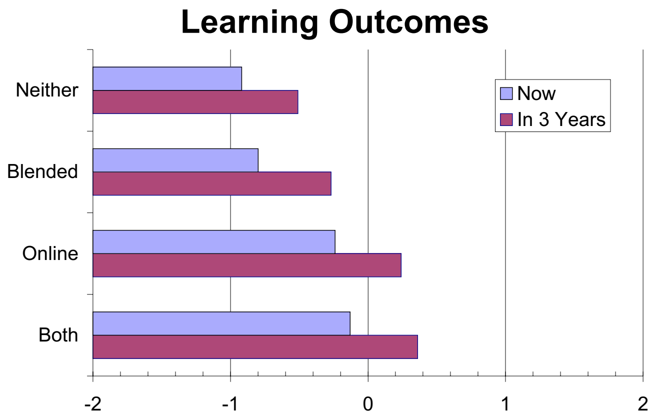
Every group, even Public institutions where over 80% are offering online courses, rate the current learning outcomes of online courses, on average, as somewhat inferior to those of face-to-face instruction. However, given the amount of discussion about perceived lower quality of online offerings, these results are not as negative as might have been expected. The values reported indicate that the average rating was between "The Same" and "Somewhat Inferior", with Public institutions very close to "The Same", Private, nonprofits about midway between the two points, and Private, for-profit institutions much closer to the "Somewhat Inferior" point.

However, when the question is posed for three years in the future, two of the groups (Public and Private, for-profit) move to a positive value, indicating that, on average, they view the learning outcomes for online as superior to those for face-to-face instruction. Private, nonprofit institutions also believe that the relative learning outcomes for online courses will improve, but they do not quite reach the point that they feel them to be superior to face-to-face.

When examined by Carnegie class, three groups (Associates, Masters and Doctoral/Research institutions) all hold a slightly positive view of future online learning outcomes compared to face-to-face instruction. As expected from the earlier results, Baccalaureate institutions are the least likely to rank online learning outcomes as equal to or superior to face-to-face education currently (63.5% finding current online education offerings inferior or somewhat inferior to face-to-face). However, within three years these same institutions believe that the quality of online learning will improve and only 45.1% still believe it to be inferior or somewhat inferior to face-to-face learning. Even among Baccalaureate institutions, 7.6% believe online learning to already be superior or somewhat superior to face-to-face education and 18.3% believe this will be true within three years. The only other group that does not expect online learning outcomes to be superior within three years are the Specialized institutions. A small majority (56%) of academic leaders at schools offering Specialized degrees hold the opinion that learning outcomes for online learning are currently inferior to face-to-face instruction. When asked about the comparison in three years, the percentage drops to 37.1%. Notable, however, is that institutions in every Carnegie class expect the learning outcomes for online courses to improve over the three-year period.



As might be expected, institutions that offer online or blended courses have a higher opinion of the online learning outcomes then those that do not. Institutions that offer only online courses or both online and blended courses rate the current learning outcomes for online courses as slightly inferior to those for face-to-face instruction. Those that offer only blended courses rate online less favorability, and those that do not offer either type of instruction rate online learning outcomes the lowest in comparison to face-to-face instruction. Every group, even those who do not currently offer any blended or online courses, expect that online courses will improve relative to face-to-face instruction over the three years period. The two groups that currently offer online courses, either along or in combination with blended, expect that the learning outcomes for online courses will be superior to those for face-to-face.



There is a strong relationship between institutional size and its relative ranking of online learning outcomes: the larger the institution, the more likely a favorable response to online learning. This pattern also holds true with rankings of learning outcomes in three years, where larger institutions are also more likely to rate the learning outcomes for online courses as superior to those for face-to-face instruction. As with other institutional groupings, institutions of all sizes expect about the same degree of improvement in online learning outcomes over the next three years.

Taken as a whole, these findings are truly remarkable: as a group, nearly one-fifth of all academic leaders surveyed anticipate that the quality of online learning will improve from “inferior” to “superior” to face-to-face learning in the next three years. On the individual level, many if not most of these responses represent the perception that online learning will improve from “inferior” to “same” or from “same” to “superior”. Nevertheless, as a collective response, this represents a sea change in the perception of the quality of online learning. There is not a single group examined that did not expect an improvement in the relative learning outcomes of online courses to those of face-to-face instruction.

These findings suggest that it would be highly useful to find out more about why academic leaders believe that the relative quality of online learning will improve so dramatically in the next three years. Their answers to this question, for example, may reveal much about elements of quality, which can be adopted relatively easily by other institutions. Similarly, perceptions from leaders in one type of institution may be beneficial to other leaders at the same type of institution. For instance, more skeptical leaders at Baccalaureate institutions may benefit from learning why some of their counterparts at peer institutions are less skeptical about the quality of online learning.

Faculty Perceived as Lagging in Acceptance of Online Education

Academic leaders were also asked about their perceptions of the degree to which faculty accept the value and legitimacy of online education. Respondents were asked to rate this variable on a seven-point scale where 5-7 = Agree (7 = "Strongly Agree"), 4 = Neutral, and 1-3 = Disagree (1 = "Strongly Disagree"). Over one quarter of the academic leaders at Private, nonprofit schools state that their faculty question the value and legitimacy of online learning. Here again, leaders at Private institutions are similar in that close to 50% say their faculty agree that online education has value, but many more of the Private, for-profit institutions are neutral than the other two groups. The high rate of acceptance in the Public sector may be due to the longer experience that these schools have in delivering online courses and programs.

Faculty accept the value and legitimacy of online education

	Public	Private, nonprofit	Private, for-profit	Total
Agree	70.5%	50.9%	51.4%	59.6%
Neutral	18.3%	21.5%	31.5%	21.3%
Disagree	11.3%	27.6%	16.0%	18.7%

Similar to their opinion on long-term strategy, Baccalaureate institutions are the least likely to say that their faculty accept the value and legitimacy of online learning with only 38% supporting the statement. Among all other classifications, Specialized and Associates institutions offer the greatest support (60.6% and 60.2%, respectively) followed closely by 55% for Masters and 54.6% for Doctoral/Research institutions.

Faculty accept the value and legitimacy of online education

	Doctoral/ Research	Masters	Baccalaureate	Associates	Specialized	Total
Agree	54.6%	55.0%	38.0%	60.2%	60.6%	59.6%
Neutral	28.2%	25.1%	21.2%	18.0%	22.2%	21.3%
Disagree	17.3%	19.9%	40.9%	11.9%	17.2%	18.7%

Characteristics of Online Learners

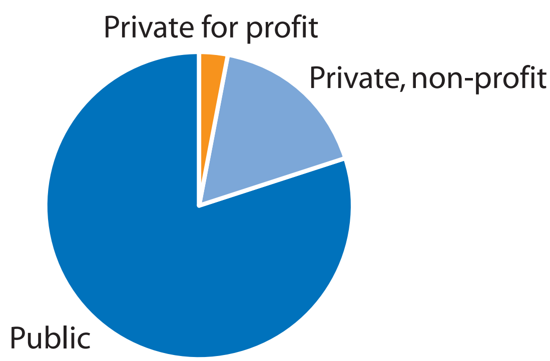
The number of students learning online topped 1.6 Million in Fall 2002, with over 578,000 of these students taking all of their courses online.

Over One and One Half Million Students taking Courses Online

Based on reported online learning enrollments and total enrollments from survey respondents as a whole, over 11% of all students at responding institutions took online courses during Fall 2002 (mean total enrollment = 4,457; mean online learning enrollment = 497). Extrapolating the survey results to the entire US yields a total online enrollment of slightly more than 1.6 million students. At respondent institutions that offer online courses, 13% of all enrolled students took at least one course online in Fall 2002 (mean online learning enrollment = 713).

Public Institutions Lead the Way for Online Learners

Numbers of Online Students



In terms of sheer numbers of students, the overwhelming majority of online students are at Public institutions. Public colleges and universities had approximately 1.325 million students taking courses in Fall 2002, while online Private, nonprofit, schools had approximately 240,000 students, and Private, for-profit schools account for a much smaller number of students (approximately 37,000).

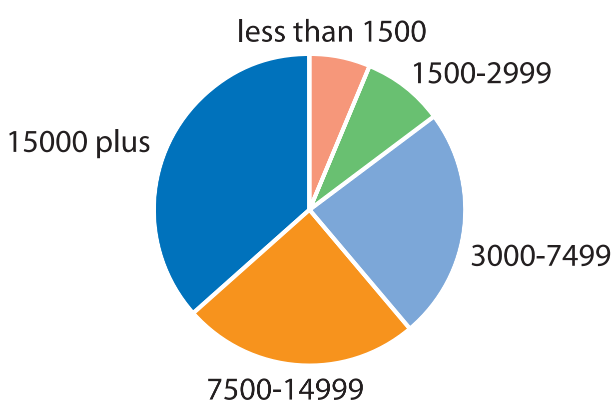
Among Private schools, the percentage of online students at nonprofit and for-profit institutions is comparable. Public institutions as a whole also hold a sizable advantage in terms of percentage of students taking online courses. Almost 11% of students in Public colleges and universities are taking online courses, as compared to 7.1% in Private, non-profit schools and 8.7% in Private, for-profit schools.

However, this picture changes dramatically when looking only at those schools that offer online courses: for this group, the percentage of students learning online is 11.8% in Public schools, 13.6% in Private nonprofit schools, and 23.7% in Private, for-profit schools. What accounts for this discrepancy is that online courses are being offered at most Public colleges (as evidenced by the small gain from 10.9% to 11.8% when schools without online courses are eliminated), whereas very few Private, for-profit schools, offer online courses.

This indicates that, while Private for-profit schools comprise the smallest percentage of students enrolled in Fall 2002, a larger proportion of these students are taking advantage of online courses when they are offered. It may be that some for-profit schools see online education as a part of their unique business model, allowing them to reach students who are unable to attend classes on campus, or perhaps because they believe that online education is ultimately more cost effective than face-to-face courses.

Large Schools Continue to Enroll More Online Learners but Small Schools have the Largest Percentage of Online Learners

Online Students - Enrollment



As might be expected, the institutions with the largest overall enrollments have the largest average online enrollments; however, significant numbers of students are taking their courses at the mid-sized schools and small to mid-sized schools have the largest percentage of students taking at least one course online as a percentage of all students enrolled.

Among all schools, the smallest schools have the smallest percentage of online learners. However, among schools that offer online courses, small schools have the largest percentage of students learning online. This indicates that while the largest schools have the largest number of online learners by virtue of their size, small schools that offer online courses are enrolling a greater proportion of their student body in online courses, whether by moving existing on-campus students or by attracting new students with new online course and program offerings.

In the table below, an increasing trend in the percent of online learners is evident when moving from the largest to the smallest sized schools for those schools offering online courses. Size of institution may be a proxy for Public/Private status as the percent of online learners in all the largest schools (15000+ students) and in only those offering courses online, is almost identical (8.7% and 8.9%, respectively). Large institutions are more likely to be Public institutions. Of the 262 schools in the United States in our sample with greater than 15,000 students, 231 (88.2%) are Public schools and 83.4% of schools with between 7,500 and 14,999 students are Public schools.

Number and Percentage of Students Taking at Least One Online Course: Fall 2002

Size	Percentage of Students (in all schools)	Percentage of Students (in schools offering online classes)	Total Students Taking an Online Course
Under 1500	7.2%	17.6%	82,009
1500 to 2999	10.1%	12.9%	110,214
3000 to 7499	11.5%	12.7%	313,318
7500 to 14999	9.9%	10.3%	320,241
15000+	8.7%	8.9%	475,990

Associates Institutions have the Most Online Students

It is the institutions classified as Associates that educate by far the largest proportion of online students, with over one-third of the 1.6 million total in these programs. With the exception of Specialized Schools (i.e., theological, medical, etc.), each type of institution has at least 100,000 students taking online courses. The fewest online learners are in Baccalaureate (105,917 students), about an equal number in Masters and Doctoral/Research (272,096 and 209,512, respectively), and the largest number in Associates (653,600). Specialized schools enrolled only 58,123 students in online courses but a larger percentage of students (16.3%) were taking courses online in those programs that offered online courses. The schools with the largest percentage of online learners were the Private, for-profit schools but, unlike the relationship between large schools and public colleges where one appears to be a proxy for the other, only 11% of the Specialized schools are Private, for-profit. This indicates an independent effect of Carnegie class and of public/private status.

When the percentage of online learners is examined in only schools offering online courses rather than all schools, Specialized schools have the largest percent of students taking online courses (16.3%) programs, followed by Associates schools (13.3%), Baccalaureate (12.0%), Masters (10.6%) and Doctoral/Research (7.0%).

Number and Percentage of Students Taking at Least One Online Course: Fall 2002

Carnegie Classification	Percentage of Students (in all schools)	Percentage of Students (in schools offering online classes)	Total Students Taking an Online Course
Doctoral/Research	6.3%	7.0%	209,512
Masters	8.5%	10.6%	272,096
Baccalaureate	6.3%	12.0%	105,917
Associates	10.8%	13.3%	653,600
Specialized	6.8%	16.3%	58,123

Characteristics of Students Taking All Their Courses Online

Of the 1.6 million students taking courses online, over one-third, (578,986) took all their courses online in the Fall of 2002. This represents 2.6% of all enrolled students and 3.8% of all students enrolled in schools offering online courses.

More Students at Public Schools, Large Schools Take All Courses Online

Similar to the pattern seen among students taking any courses online, many more students at Public colleges and universities and at large schools are taking ALL of their courses online. The pattern is similar to that for students taking any courses online; the differences between type of school and size of school are consistent with those discussed in the earlier section. Little change is seen in the percentage of students at Public schools when moving from all schools to only those with online courses (2.6% vs. 2.8%) reflecting the fact that the vast majority of Public schools offer online courses. However, for Private, nonprofit schools, overall only 3% of students take all courses online, but this almost doubles (to 5.7%) in those schools offering online courses. A similar increase, from 1.4% to 3.7%, is seen in Private, for-profit schools.

Large institutions have the greatest number of students taking all their courses online, but the smallest schools have the highest percentage of students taking all their courses online, as indicated in the table below.

Number and Percentage of Students Taking All Their Courses Online: Fall 2002

Size	Percentage of Students (in all schools)	Percentage of Students (in schools offering online classes)	Total Students Taking All Courses Online
Under 1500	2.5%	6.1%	30,936
1500 to 2999	3.3%	4.2%	25,910
3000 to 7499	2.1%	2.3%	65,552
7500 to 14999	2.3%	2.4%	71,932
15000+	2.6%	2.7%	136,502

More Students at Master's Institutions Taking All Courses Online

More students in Master's institutions are taking ALL their courses online than any other group. This differs from the numbers of students taking ANY online courses. Over 100,000 students (109,250) at Master's schools take all their courses online as compared to 92,832 at Associates, 30,494 at Baccalaureate, and 67,743 in Doctoral. Far fewer students at Specialized schools (23,716) are taking all courses online but this group has a much smaller pool of students overall. However, within the sub-group of those institutions that offer online courses, Specialized institutions have the largest percentage of students who are taking all their courses online (6.7%) as compared to just 3.1% in Masters, 3.1% in Baccalaureate, 2.7% in Doctoral, and 1.8% in Associates.

Growth Forecasts in Online Learning

Using each institution's current online enrollment and their own projection of the change in that enrollment, enrollment for the Fall of 2003 is expected to exceed 1.9 million students, or a one-year enrollment growth rate of close to 20%. No previous surveys of strictly online learners (as apart from 'distance' learners) exist for direct comparison.

Students Taking at Least One Online Course: Fall 2002 and projected Fall 2003

	Total Students Fall 2002	Projected Students Fall 2003	Percentage Growth
Total	1,602,970	1,920,734	19.8%

However, one earlier estimate, using Federal data which lists the use of the internet as part of distance learning (Sloan-C View, Volume 2, Issue 1, 2003) yields approximately 744,000 students taking at least one course online in Fall 1999. Given the current estimate for Fall 2002, this represents an annual compound growth rate of over 25% for the three-year period. Given the magnitude of continued anticipated growth, it is clear an upward growth trend is continuing and the peak in online learning enrollment is probably some years away. As discussed below, some sectors of higher education expect an annual growth rate exceeding 25% in online learners.

Largest Percentage Growth Anticipated for Schools in the For-profit Sector

All types of schools expect to see growth in their online enrollments over the next year, with Private, for-profit schools anticipating the largest percentage increase. Schools in the Public sector expect 18.6% average growth, Private, nonprofit schools anticipate 23.4% growth, and Private, for-profit schools look to 42.2% growth between Fall, 2002 and Fall, 2003. In total numbers, however, Public schools expect to educate the largest number of students online, moving from 1.3 million today to almost 1.6 million students taking at least one course online in Fall, 2003.

Less than 1% of the schools surveyed expected online education enrollment to decrease and over three-quarters of all schools polled expect an increase:

Anticipated Change in Enrollment, Fall 2002 to Fall 2003

	Public	Private, nonprofit	Private, for-profit	Total
Grow	87.2%	66.0%	87.0%	79.4%
Same	12.1%	33.0%	13.0%	19.8%
Decrease	0.7%	1.0%	0.0%	0.8%

Midsize Schools Forecast the Largest Percentage Increase

Schools of all sizes forecast double digit growth in online learners, from 16.6% in the largest schools (>15,000 students) followed by 19% in schools between 7,500 and 14,900 students, 20.7% in the smallest schools (<1500 students), 24% in schools between 1,500 and 2,999 students, and the largest increase, 26.8%, forecast in schools with between 3,000 and 7,499 students. This is a significant trend moving from largest to smallest size of school. With large schools being mostly Public institutions, this smaller growth rate is possibly partly due to the maturity of their online programs. Large schools do anticipate the largest growth in the number of students taking courses online, an increase of over 75,000 students over the next three years.

Institutions Offering Baccalaureate Programs Anticipate Highest Growth

While Associates institutions will retain the largest share of students taking online courses, the largest rate of growth is expected to be at Baccalaureate institutions. As discussed above, Baccalaureate institutions had the smallest number of students taking an online course in the Fall of 2002. While not surpassing any of the other types of institutions over the next three years, but perhaps recognizing the opportunity in the lack of offerings at present, Baccalaureate institutions are forecasting an almost 30% rate of growth during this period. Masters institutions, second only to Associates in the number of students now taking courses online, and first in the number of students taking all their courses online, expect 21.6% growth during the same period. Slightly lower rates are seen in the other three institution types: Associates (19.8% growth), Doctoral (17.1% growth) and Specialized (16.8% growth).

Online Education in 2003: A Summary of the Findings

- Attitudes towards the quality of the courses offered online are changing and a majority of Academic Officers believe the learning outcomes in online courses will equal or exceed that of face-to-face courses within three years.

- An overall growth rate of almost 20% is expected in the number of students studying online from Fall 2002 to Fall 2003.

- For-profit institutions expect to grow their online learning component faster than any other institutions of higher education, expecting growth rates greater than 40%.

- Private, nonprofit institutions are entering online education at a slower rate than Public institutions, and often leveraging their entry with blended courses.

- When given an option to take a course online, students will enroll. On average, over 13% of students per institution that had online offerings took an online course in Fall 2002.

- Overall, attitudes of Faculty at all schools (as perceived by academic leaders at those institutions) remain more conservative with regard to the quality of online education and its ability to equal face-to-face learning

Appendix

Offerings

	Public	Private, nonprofit	Private, for-profit	Total

Types of Courses offered

	Public	Private, nonprofit	Private, for-profit	Total
Both Online and Blended	80.2%	36.7%	21.2%	55.6%
Online Only	12.5%	17.8%	23.7%	16.0%
Blended Only	3.8%	17.1%	6.6%	9.6%
Neither	3.4%	28.4%	48.5%	18.8%

Types of Courses offered - Online

	Public	Private, nonprofit	Private, for-profit	Total
Online (with or without blended)	92.8%	54.5%	44.9%	71.7%
No Online	7.2%	45.5%	55.1%	28.3%

Offers totally online programs for degree:

	Public	Private, nonprofit	Private, for-profit	Total
Offers online programs for degree	48.9%	22.1%	20.2%	34.5%
No programs	51.1%	77.9%	79.8%	65.5%

Growth Expectations

	Public	Private, nonprofit	Private, for-profit	Total

Estimated Change in Student Enrollment in online and blended courses Fall 2002 to Fall 2003:

	Public	Private, nonprofit	Private, for-profit	Total
Grow	87.2%	66.0%	87.0%	79.4%
Stay the Same	12.1%	33.0%	13.0%	19.8%
Decrease	0.7%	1.0%	0.0%	0.8%

Opinions

Online education is critical to long-term strategy:

	Public	Private, nonprofit	Private, for-profit	Total
Strongly Agree: 7	40.8%	19.9%	17.8%	29.0%
6	26.0%	15.0%	13.4%	19.8%
5	18.9%	18.0%	23.4%	19.0%
Neutral: 4	6.6%	18.0%	16.1%	12.7%
3	3.3%	9.8%	6.1%	6.4%
2	2.4%	7.1%	11.5%	5.6%
Strongly Disagree: 1	2.0%	12.1%	11.7%	7.5%

Faculty accept the value online education:

	Public	Private, nonprofit	Private, for-profit	Total
Strongly Agree: 7	8.2%	6.2%	7.8%	7.3%
6	26.0%	14.0%	21.0%	20.3%
5	36.3%	30.7%	23.6%	32.3%
Neutral: 4	18.3%	21.5%	31.5%	21.3%
3	8.6%	15.4%	8.2%	11.5%
2	2.2%	7.1%	3.9%	4.5%
Strongly Disagree: 1	0.5%	5.1%	3.9%	2.9%

Hybrid courses hold more promise than online:

	Public	Private, nonprofit	Private, for-profit	Total
Strongly Agree: 7	21.2%	24.8%	23.9%	23.1%
6	21.2%	24.4%	23.0%	22.8%
5	18.9%	22.9%	25.9%	21.5%
Neutral: 4	21.7%	18.2%	9.6%	18.7%
3	8.5%	4.7%	8.7%	6.9%
2	6.2%	2.8%	2.0%	4.2%
Strongly Disagree: 1	2.2%	2.2%	7.0%	2.8%

Comparing Learning Outcomes

Compared to face-to-face, learning outcomes in online education are currently:

	Public	Private, nonprofit	Private, for-profit	Total
Superior	0.5%	0.3%	2.0%	0.6%
Somewhat Superior	16.9%	6.7%	10.0%	11.7%
The Same	57.6%	32.8%	39.6%	44.9%
Somewhat Inferior	21.0%	43.8%	32.6%	32.1%
Inferior	3.9%	16.5%	15.9%	10.7%

Compared to face-to-face, learning outcomes in online education in three years will be:

	Public	Private, nonprofit	Private, for-profit	Total
Superior	9.4%	3.5%	4.1%	6.2%
Somewhat Superior	33.4%	16.9%	30.2%	26.0%
The Same	45.6%	40.4%	38.3%	42.5%
Somewhat Inferior	10.6%	29.0%	21.7%	19.7%
Inferior	1.1%	10.3%	5.7%	5.5%

Sloan-C has its administrative home at the Sloan Center for OnLine Education (SCOLE) at Olin and Babson Colleges. SCOLE has been established as a center that spans the two campus of Olin College and Babson College. SCOLE's purpose is to support the activities of the Sloan Consortium, a consortium of higher-education providers sharing the common bonds of understanding, supporting and delivering education via asynchronous learning networks (ALNs). With the mission of providing learning to anyone anywhere, SCOLE seeks to provide new levels of learning capability to people seeking higher and continuing education. For more information about SCOLE, visit www.scole.olin-babson.org.

For more information about Olin and Babson Colleges, visit www.olin.edu and www.babson.edu.

While there is now some statistical information available on distance education at higher education institutions in the United States, very few if any research surveys have focused on online education. The 2003 Sloan Survey of Online Learning was designed to find answers to some key questions related specifically to online:

- Will students embrace online education as a delivery method?
- Will institutions embrace online education as a delivery method?
- Will faculty embrace online education as a delivery method?
- Will the quality of online education match that of face-to-face instruction?

The survey analysis is based on a comprehensive nation sample of primary campuses for all active United States postsecondary degree granting institutions that are open to the public.

Franklin W. Olin College of Engineering

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