

# Review Session

12 Years and 20 Reports  
Tracking Online



Bay View Analytics®

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# Review Session:

## 12 Years and 20 Reports Tracking Online Learning

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# CONTENTS

Foreword .....	1
Introduction .....	2
Impact .....	3
Downloads and Copies Distributed .....	3
Intended Audiences .....	3
Citations.....	4
International .....	4
Key Findings.....	5
Trends in Online Learning Enrollment.....	5
IPEDS Enrollment Data.....	8
Who Offers Online Learning? .....	9
Faculty Acceptance of Online Education .....	10
Barriers to Widespread Adoption of Online Learning .....	11
Is Online Learning Strategic? .....	12
Trends by Institution Type .....	13
Trends by Online Offerings.....	13
Are Learning Outcomes in Online Education Comparable to Face-to-Face?.....	15
Conclusions and Next Steps.....	17
Wisdom of Crowds.....	17
Continued Growth.....	17
It Doesn't Take a Village .....	18
Tipping Point?.....	19
Next Steps: Where Do We Go From Here?.....	21
What we know.....	21
Research gaps and opportunities .....	21
Definitions:.....	22
Methodology .....	24
Reports.....	26
Partners .....	27

# FOREWORD

This year marks the 25th anniversary of the Sloan Consortium / Online Learning Consortium's fall conference, OLC Accelerate 2024. The early conferences, research meetings, and publications provided critical guidance to an embryonic field. In addition to providing newsletters, a research journal, and publishing reports, the Sloan Consortium provided one of the first and largest means for those moving into this new field to meet, compare notes, and learn from each other.

In honor of these accomplishments, Bay View Analytics, with support from the Online Learning Consortium and Science Interactive, is proud to release "*Review Session: 12 Years and 20 Reports Tracking Online Learning*."

This report is a compilation and review of research results and publications on the evolution of online learning in U.S. higher education. This research represents a unique historical record of online learning enrollments and trends from 2002-2015. The project was the only resource tracking and publishing the number of students taking online courses annually in the U.S., eventually leading to the Department of Education tracking these statistics. In addition to monitoring online enrollments, the reports answered critical questions for academic leaders implementing new online offerings for their institutions, including the attitudes of faculty towards online education, how others viewed the quality of online courses, and what barriers their peers faced when launching new online offerings. As online learning grew more common in higher education, the project's research focus and outreach shifted to match developing trends.

While this specific project has ended, current Bay View Analytics and Online Learning Consortium projects have preserved the core research questions. More recent data on online learning trends are available in the Digital Learning Pulse Survey series, Open Education Resources Surveys, and the 50 State Almanac of Digital Learning — all available on Bay View Analytics' website — and through the Online Learning Consortium's learning resources and webinars.

We send a hearty congratulations to Online Learning Consortium for reaching this milestone, and look forward to seeing where the future of online education and research takes us.

Jeff Seaman, Ph.D.  
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# INTRODUCTION

In 2002, Frank Mayadas of the Alfred P. Sloan Foundation asked a simple question: "*How many students are learning online?*" The foundation had been investing in a series of grants as part of its "Anytime, Anyplace Learning" grant program, all aimed at growing quality online offerings for higher education students. However, no existing record of student enrollment by mode of instruction existed, and none appeared to be on the horizon. To address this information vacuum, the foundation approached Dr. I. Elaine Allen, Research Director at the Sloan Consortium, and Dr. Jeff Seaman, Chief Information Officer at the Sloan Consortium, with a request to study the number of students in U.S. Higher Education that were learning online.

The first step in the process was to examine the feasibility of such an undertaking and design the most promising approach for collecting this critical data. The next step was to test potential tracking questions with institutions that had received Foundation grants — the results of which led to several modifications and improvements of the tracking instrument. This was followed by a small-scale trial survey to a more general audience, using a representative sample of all higher education institutions in the U.S. The full-scale data collection effort was undertaken after the successful completion of these initial tests.

The first round of results was published in 2003, and represented nearly a thousand chief academic officers. The immediate feedback from the report made it clear to the researchers, and to the Alfred P. Sloan Foundation, that the need for this information and its underlying dynamics was of continued interest. Throughout the twenty reports in this series the results have shown the number of students taking at least one online course quadrupled, with a steep rise and fall in the percentage of students studying online at for-profit institutions. That said, throughout twelve years of surveys there has been very little change in faculty acceptance of the value and legitimacy of online education.

Eventually, the value of collecting this information from institutions was recognized and another organization stepped in to provide critical data on online (distance) enrollments. The introduction of the National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS) tracking of distance education marked a coming of age for online and distance education. This resource, first available for Fall 2012 enrollments, now provides regular, comprehensive data on the extent of online and distance education further complementing research efforts like this one.

# IMPACT

## Downloads and Copies Distributed

Downloadable PDF files are the primary distribution method for this report series, though printed, hard copy versions were produced for the early reports, typically provided to attendees at academic and online learning conferences. All reports, both printed and PDF, have always been freely shared. Many institutions asked and were granted permission to host the report on their internal campus networks. All of the reports are also mirrored on the [eric.ed.gov](http://eric.ed.gov) website, as well as multiple other sites hosting academic publications. Education researchers outside the U.S. have also translated these reports into their native languages for distribution.

The original series of Sloan Consortium online learning survey reports, beginning with *Sizing the Opportunity* (2003) through *Online Report Card* (2016) represents over 2.7 million downloads from the primary distribution site; this number omits all printed copies and all downloads from mirrored sites. The reports remain popular even today, with a report being downloaded every four minutes. This translates to over 10,000 downloads every month.

## Intended Audiences

The report series was always intended for two audiences: faculty and administrators in higher education, to help them better understand the potential of online education, and the general public, who often knew very little about online education. Distribution to the higher education universe was often done with email announcements or notices on the report's publication in academic newsletters. Just under one-half of all report downloads came from a ".edu" network address. When faculty and academic administrators downloading from their personal accounts are included it appears that about 60% of all U.S. downloads were from persons at U.S. higher education institutions.

Getting the message in front of the general public proved somewhat more difficult, requiring outreach to members of the press. For example, the release of the first report was conducted at the National Press Club in Washington D.C., after which the research team worked with a public relations team to reach out to members of the press on a regular basis. The researchers made multiple presentations to the Education Writers Association to provide them with the background and context for any articles involving online or distance education.

The efforts to reach the general public, while difficult, did result in the findings regularly being included in major national publications, including the *New York Times*, the *Wall Street Journal*, the *Washington Post*, *U.S. News and World Report*, and on television on the NBC nightly news.

## Citations

The primary intent of the report series was to reach as wide an audience as possible, and not as academic papers to be released in peer reviewed journals. However, even outside peer-reviewed journals, they attracted significant interest within the academic community. They have been cited by academic publications more than 23,700 times, with an average of four additional citations each day. Additionally, a multitude of institutions sent requests to the authors for permission to include findings from the report series in their institution's strategic plan, representing a critical audience for the research findings.

The most cited report was the ten-year overview "Changing course: Ten years of tracking online education in the United States," with over 3,500 citations. The next most cited report was 2016's "Online report card: Tracking online education in the United States," with over 1,800 academic paper citations. Academic interest in the entire report series has been substantial, with 12 of the 20 publications garnering over 1,000 academic citations.

## International

There has been considerable international interest from the very first release of the online learning reports. The first report was downloaded in over one hundred countries, with the number of countries increasing every year.

The survey instrument was widely shared with researchers around the globe and translated and modified for use in many languages and different settings. The researchers also worked with international partners to present the results to international audiences. This included live and recorded webinars, with translated slides and narration in the local language. The bulk of the downloads were from the United States, but the reports have been downloaded by 183 different countries. Early reports in the series had most downloads coming from English speaking countries (e.g., U.S, Canada, all the United Kingdom countries). Over time the proportion on non-English countries increased, with greater number coming from Asia and the middle east. China now represents the country with the second most downloads after the U.S.



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# KEY FINDINGS

## Trends in Online Learning Enrollment

Most of the period covered by the online learning reports was marked by increasing levels of overall higher education enrollments, driven by both demographics (an increasing number of persons graduating from high school) and economic factors (where bad economic times are often positive for higher education enrollments). The growth decreased only towards the end of the report series in 2012, when the total number of students enrolled at U.S. higher education institutions dropped.

The softening in the growth of overall enrollments did not impact enrollment trends for students taking at least one online course, which continued to increase at a robust rate. Data from these reports demonstrate that there were 572,000 more online students in 2011 than in 2010, for a new total of 6.7 million students taking at least one online course. This is a slightly larger numeric increase as seen for Fall 2009 to Fall 2010. It is also very close to the average increase seen for each of the previous nine periods (which produced an average growth of 568,000 students annually).

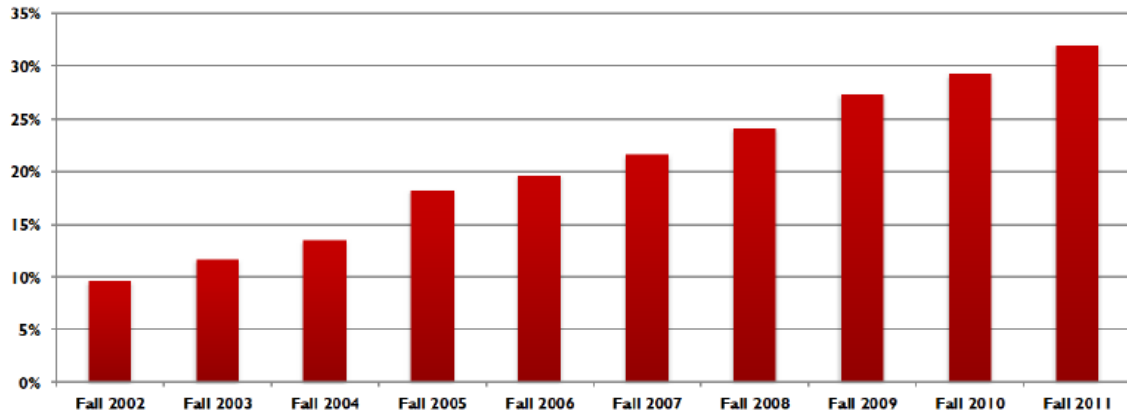
Total and Online Enrollment in Degree-granting Postsecondary Institutions – Fall 2002 through Fall 2011

	Total Enrollment	Annual Growth Rate Total Enrollment	Students Taking at Least One Online Course	Online Enrollment Increase over Previous Year	Annual Growth Rate Online Enrollment	Online Enrollment as a Percentage of Total Enrollment
Fall 2002	16,611,710	NA	1,602,970	NA	NA	9.6%
Fall 2003	16,911,481	1.8%	1,971,397	368,427	23.0%	11.7%
Fall 2004	17,272,043	2.1%	2,329,783	358,386	18.2%	13.5%
Fall 2005	17,487,481	1.2%	3,180,050	850,267	36.5%	18.2%
Fall 2006	17,758,872	1.6%	3,488,381	308,331	9.7%	19.6%
Fall 2007	18,248,133	2.8%	3,938,111	449,730	12.9%	21.6%
Fall 2008	19,102,811	4.7%	4,606,353	668,242	16.9%	24.1%
Fall 2009	20,427,711	6.9%	5,579,022	972,669	21.1%	27.3%
Fall 2010	21,016,126	2.9%	6,142,280	563,258	10.1%	29.2%
Fall 2011	20,994,113	-0.1%	6,714,792	572,512	9.3%	32.0%

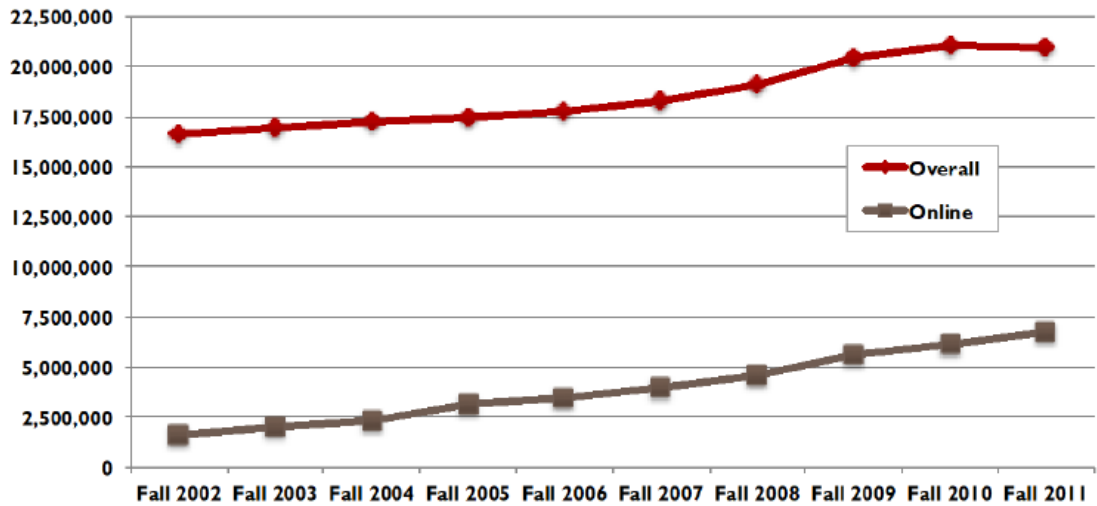
While the absolute number of additional students taking online courses continued to increase year over year, the percentage growth that this represents is lower because the growth was now on a much larger base. The 2011 statistics showed an increase of 9.3% in the number of students taking at least one online course, the lowest rate of growth observed over the study period. While the growth rate was slowing, it was still well in excess of the growth of the overall higher education student body. The increase from 1.6 million students taking at least one online course in fall 2002 to 6.7 million in Fall 2011 represents a compound annual growth rate of 17.3%. For comparison, the overall higher education student body grew at a much lower annual rate of 2.6% during this same period – from 16.6 million in Fall 2002 to 21.0 million for Fall 2011.

The percentage of higher education students who took at least one online course in 2012 was 32%. For comparison, the first installment of the report series, published in 2003, found slightly less than 10% of all higher education students taking at least one online course. The proportion continued to increase steadily and almost linearly over the ten years from 2003 to 2012.

**Online Enrollment as a Percent of Total Enrollment: Fall 2002 - Fall 2011**



**Total and Online Enrollment in Degree-granting Postsecondary Institutions: Fall 2002 - Fall 2011**

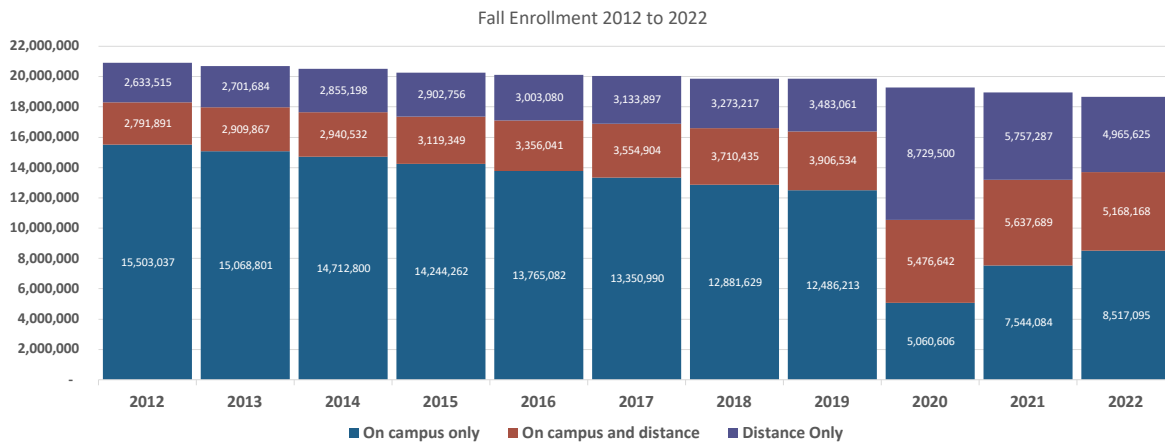


## IPEDS Enrollment Data

In 2003, the Sloan Consortium / Babson Survey Research Group data collection effort was the only source of national-level data on the growth of U.S. higher education online enrollments. All other national data collection efforts, including those from the National Center for Educational Statistics (NCES), did not track enrollment by teaching mode. This changed in 2012, when NCES added a distance education classification to their Fall enrollment data collection. The NCES data typically had long delays before being released (often more than a year), so it was not as timely as the Sloan Consortium data. Still, it was comprehensive, covering all degree-granting higher education institutions.

Babson Survey Research Group ceased collecting online enrollment data after 2012, in light of the now-comprehensive data being collected and released by NCES. However, this did not mark the end of all data collection. Additional years of data collection and reports followed, using the NCES data for enrollments, and augmenting those results with questions about institutional strategies, faculty attitudes, and opinions about online course quality, and how online education might play a role in institutional futures.

Data from IPEDS show that the next ten years were distinctly different. The drop in overall enrollment found in Fall 2010 to Fall 2011 continued: there was a decrease in total enrollment year over year, with an increasing percentage of students taking online courses, especially following the Covid-19 pandemic. Tracking online education also became more nuanced, as the collected data differentiated between students who are enrolled fully online (no on-campus courses), those who took courses completely in-person, on-campus, and those with a mix of courses.



## Who Offers Online Learning?

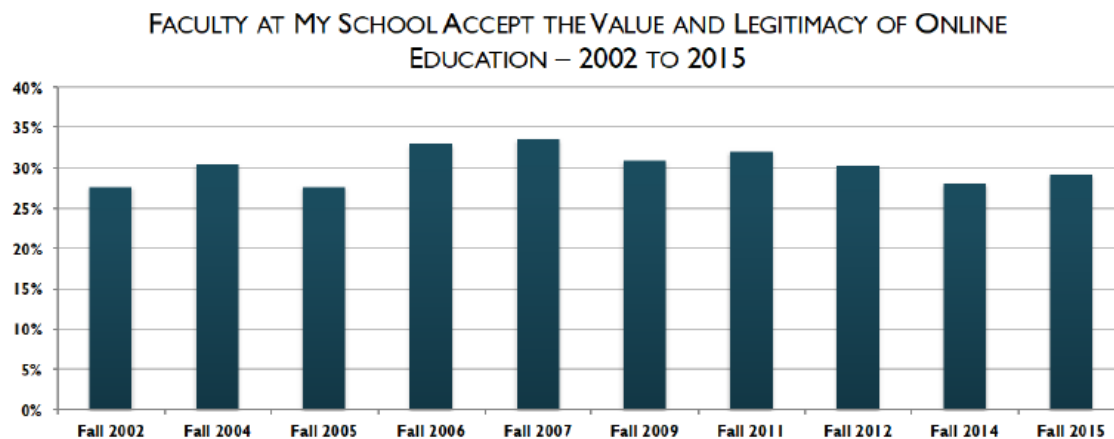
The first report in this series measured 1.6 million higher education students taking at least one of their courses online in 2002. That number increased substantially every year from then until this report series ceased tracking in 2012, and NCES IPEDS data show the trend continuing, with the proportion of students taking at least one online course growing through fall 2022.

Even in 2002, most higher education institutions (71.7%) offered some form of online course, leaving only 28.3% without any offerings. The number of institutions without online courses dropped to less than half of this number by 2012 (13.5%). A significant change also occurred in the nature of the online offerings: a far larger proportion of institutions moved from offering only select online courses, to providing complete online programs (62.4% in 2012 compared to 34.5% in 2002).

Virtually all public institutions had online offerings in 2002, so the overall growth by 2012 was small. One significant change for these schools was the big gain in the proportion that offered complete online programs: 48.9% in 2002, and 70.6% in 2012. The number of private, non-profit institutions with online offerings significantly increased as well, doubling the proportion with fully online programs from 22.1% in 2002, to 48.4% in 2012.

Because three-quarters of all higher education institutions were already offering some form of online education in 2002, the growth in online enrollments did not come from an influx of new schools with online offerings. The only institutions to enter the market were among the very smallest (less than 1,500 total enrollments) and thus had little impact on the overall online enrollment totals. The continued growth in online enrollments came from the transition of institutions with only a few online courses moving to offer fully online programs, and from institutions with online programs expanding their offerings and building their enrollments.

## Faculty Acceptance of Online Education



For advocates of online education, the continued resistance among many faculty members is a significant cause for concern. Between 2002 and 2007, the proportion of institutions reporting that their faculty accepted the value and legitimacy of online education increased by barely six percentage points. This was followed by a slight drop in 2009, an increase in 2011, and another drop in 2012. The proportion of academic leaders that reported their faculty accepted the value and legitimacy of online education in 2012 was at the same level as in 2004. There was a further drop in 2014, with a slight rebound in 2015. Results from more recent projects like the Digital Learning Pulse Surveys of faculty show a wide acceptance of using digital materials in courses, but no marked increase in acceptance of online education.

While there was little change in the overall perceived acceptance rate by faculty, results did show wide variations between schools with online and those without such offerings. Only about 10% of chief academic officers at institutions with no online offering report that their faculty accepted online education's value and legitimacy. About one-fifth (20.4% in 2011 and 18.6% in 2012) of academic leaders at institutions that offer online courses, but not fully online programs, report their faculty accept online education. Even among those institutions with fully online programs, fewer than 50% of chief academic officers said their faculty fully accept online education.

Academic leaders continued to have concerns about the level of faculty acceptance of online education and believed this lack of acceptance is critical. When asked if the faculty's lack of acceptance of online instruction was an important barrier to the widespread adoption of online education, a large majority rated it as "Important" or "Very Important."

Between 2007 and 2012, chief academic officers' concern that faculty's lack of acceptance of online education represented a barrier to its widespread adoption slightly increased. The total number reported as "Important" or "Very Important" grew from 61% in 2007 to 67% by 2012.

## Barriers to Widespread Adoption of Online Learning

The reports in this series track the opinions of chief academic officers, who are primarily responsible for conducting and planning their schools' educational offerings. While these academic leaders were often very positive about online education, and increasing numbers reported that it was critical for their institutions' long-term strategy and steadily growing online enrollments, they continued to harbor reservations.

One area of concern for academic leaders was their belief that online learning might only be appropriate for some students. In 2007, just over 80% reported that "Students need more discipline to succeed in online courses" was an "Important" or "Very Important" barrier to the widespread adoption of online education. More experience with online education only strengthened this view: the proportion of academic leaders who reported "Students need more discipline to succeed in online courses" is "Important" or "Very Important" increased to 88.8% by 2012.

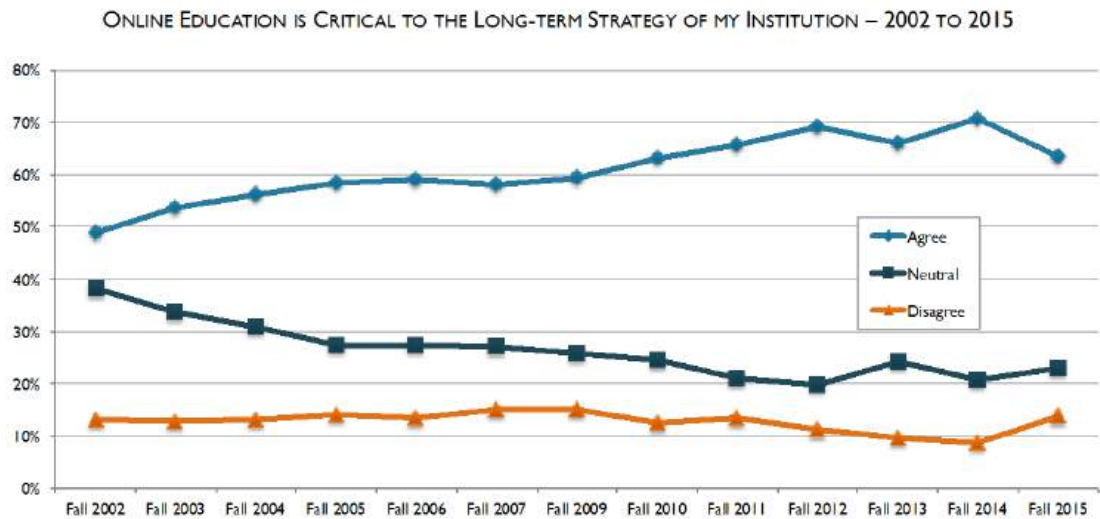
Another continuing concern among academic leaders at all types of institutions was their belief that lower retention rates in online courses were a barrier to the growth of online instruction. This was noted as an "Important" or "Very Important" barrier by over half (56.1%) of chief academic officers in 2007. This proportion increased by another five percentage points the following year (61.9% for 2008). The results for 2012 reflected another increase – nearly three-quarters (73.5%) rated lower retention rates for online courses as an "Important" or "Very Important" barrier to growth.



## Is Online Learning Strategic?

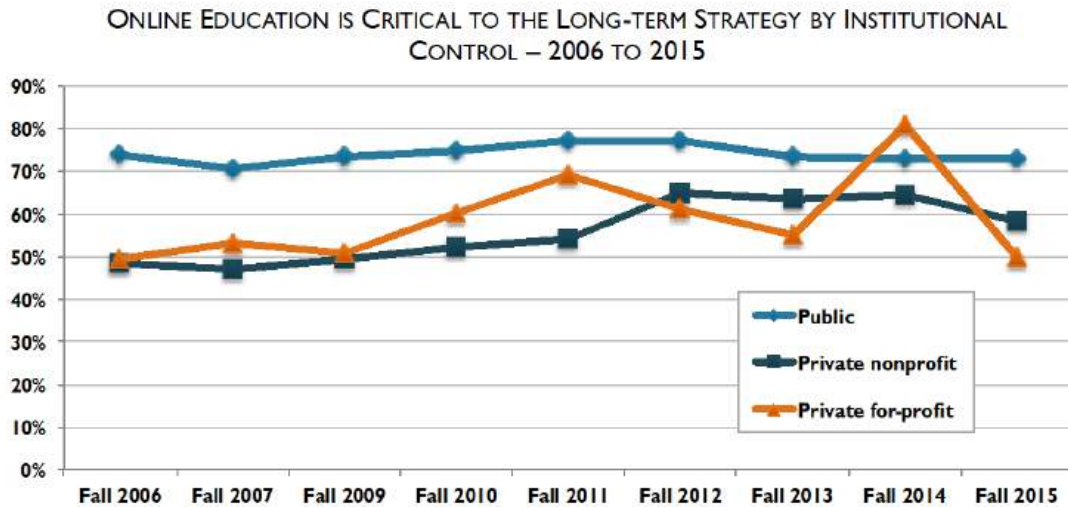
Key to the Alfred P. Sloan Foundation's goal of encouraging "Anytime, Anyplace Learning" was understanding whether higher education institutions considered online education a part of their long-term strategy. Accordingly, all chief academic officers were asked about their level of agreement with the statement, "Online education is critical to the long-term strategy of my institution."

A clear pattern emerged, with small year-to-year increases in the proportion believing that online education was critical to their long-term strategy, a steady decline among those who were neutral, and a consistent group that disagreed. This pattern changed somewhat in 2013 and on, where the proportions of each group became relatively consistent year over year, with just small changes up or down each year.



The 2015 decline in proportion agreeing raised a critical question: did the drop in the percentage of institutions saying that online education was crucial for their long-term strategy mean that institutions are turning away from online education and eliminating online courses and programs? A detailed examination of the pattern of responses made it clear that this was not the case. The decrease between 2012 and 2013 and again between 2014 and 2015 was entirely due to institutions without online offerings. The change of opinion among institutions that no longer aspired to add online courses had no impact on the growth of the distance education universe. These institutions were among the smallest and enrolled only 2.1% of all students.

The issue was not surprising; a common theme throughout these reports was that the smallest institutions had consistently reported an inability to add distance programs because of resource limitations.



## Trends by Institution Type

Public institutions began offering online courses and programs sooner than private non-profit or private for-profit institutions, and consistently maintained that these programs were critical to their long-term strategy.

Private, for-profit institutions showed the greatest volatility. After several years at a level similar to that of private non-profits, their agreement that online education is critical for their long-term strategy increased for a few years, dropped back in 2012 and 2013, and then bounced back in 2014. The 2014 results seemed a bit of false optimism, as 2015 responses showed a huge decrease in private for-profit institutions reporting that online education is critical for their long-term strategy.

## Trends by Online Offerings

A large majority of all institutions with online students reported that online education is critical to their long-term strategy. In 2015, the proportion ranged from 76% at institutions with less than 2,500 online students, to 90% at institutions with over 10,000 online students. A much smaller number of schools with no current online enrollments (20%) report aspirations for adding this type of program.

Not all institutions reporting that online education is critical to their long-term strategy had incorporated this belief into their formal strategic plans. This gap was an important issue across all higher education institutions.

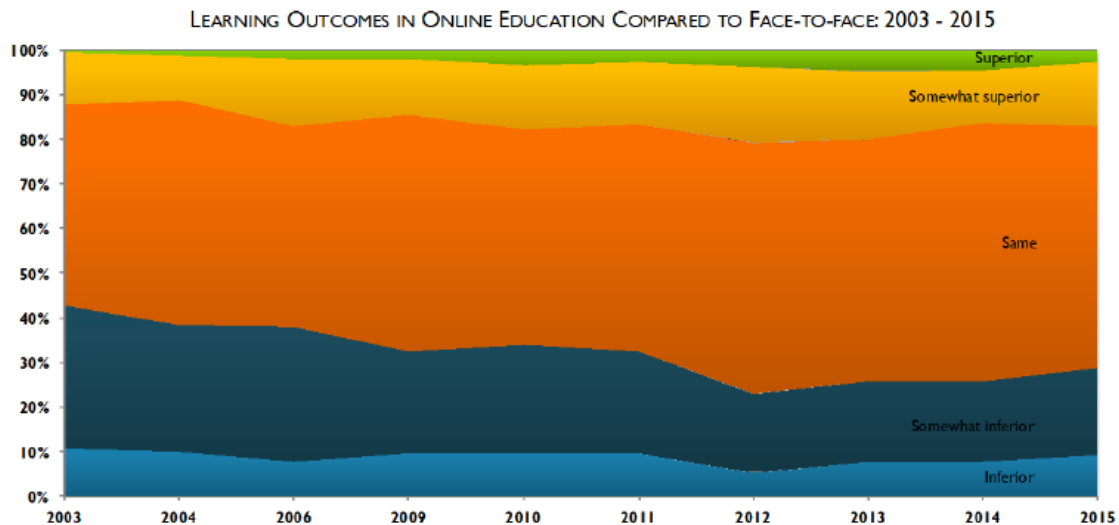
Little change occurred over the report period, with the 2015 responses confirming that the gap continued. Only 41.3% of all institutions reported including it in their formal strategic plans.

The picture is very different when focusing on the institutions with the greatest online student enrollment. While they represented less than 2% of all higher education institutions, they commanded the lion's share of online enrollments (29.8%), and all reported significant inclusion in their formal strategic plan. In contrast, less than one-half of schools with lower levels of distance enrollment say that it is included in their plan, with only 17.4% of those with no current distance enrollments reporting that they were planning for them.

## Are Learning Outcomes in Online Education Comparable to Face-to-Face?

It is always hard to judge the quality of something without a universally agreed-upon metric. This is especially true for education, where there is no single measure of quality for either face-to-face or online education. This report series examined the issue by asking academic leaders to rate the relative quality of learning outcomes for online courses as compared to those of comparable face-to-face courses at their institution.

The view that online education was "just as good as" face-to-face instruction was decidedly mixed. The period from 2003 through 2009 displayed a slight decrease in the proportion of chief academic officers reporting the learning outcomes for online education were 'Inferior' or "Somewhat Inferior" to those for comparable face-to-face courses. The proportion was relatively steady between 2009 and 2011, with substantial improvement in the opinion of academic leaders in 2012. Results after 2012 were less positive, with the results for 2015 showing only 71.4% rating online as good or better.



Even with the increase in the proportion of academic leaders who have a positive view of the relative quality of the learning outcomes for online courses, a sizable minority continued to see online as inferior. Over three-quarters of academic leaders believe online is "just as good as" or better than face-to-face instruction. However, this means almost one-quarter of all such leaders continue to believe that online courses' learning outcomes are inferior to face-to-face instruction.

Over the ten years of these reports, a consistent finding is the strong positive relationship of academic leaders at institutions with online offerings who hold the most favorable opinion of online learning outcomes. In 2012, for example, chief academic officers at institutions without online offerings were five times as likely as those with fully online programs to report online learning outcomes as "Inferior" or "Somewhat Inferior" to those for comparable face-to-face courses. The more extensive the online offerings at an institution, the more positive their leaders rate the relative quality of online learning outcomes.

It is essential to understand that chief academic officers report their individual perceptions about the relative quality of online and face-to-face instruction. Sometimes, these leaders can base their opinions on a detailed analysis of their institutions' offerings. For others, the opinion may derive from conversations with peers, what they have read in the press, or any number of other sources. Regardless of how the opinion is formed, quality of online instruction is an ongoing concern.

# CONCLUSIONS AND NEXT STEPS

## Wisdom of Crowds

The report series' results over time demonstrate that understanding the overall sense of optimism and pessimism among chief academic officers about the future direction of online enrollments was a powerful tool in understanding and predicting future growth.

Each year of the online learning report asked institutions for the number of students that were taking at least one online course for both the present term and for the previous term. This allowed us to calculate growth rates for individual institutions, as well as for the overall total across all higher education. For many of the early years of the report period, we also asked institutions to predict what their online enrollments would be for the upcoming year.

When we went back to these same institutions the following year, we were then able to compare their predicted online enrollment with the newly reported online enrollment. We quickly determined that the predicted growth rates and actual growth rates often diverged, with many being far higher or far lower than the reported rate the following year. While most institutions' reported enrollments were reasonably close to those they predicted, a sizeable proportion were off by a considerable amount. The results indicated that individual institutional expectations of future online enrollments were not a reliable predictor of their actual future enrollments.

Interestingly, when we summed the predicted enrollments for the following year, and then summed the actual reported enrollments for that year, the match was very close (within a few percent) year after year. Combining all the predictions across all our higher education respondents created a very accurate predictor of both the overall sentiment towards online education futures and the resulting year over year enrollment growth rate.

## Continued Growth

Analyzing predicted growth rates for online enrollments across all institutions was an excellent predictor of online enrollments for the following year, and for every year of the report series this indicator predicted continued growth. Most of this period was also a time of continued growth in the total number of students enrolled in higher education. Academic leaders planning for the future of their institution were trying to understand how these patterns would continue to play out over time. The question the researchers were asked more than any other was "When will online enrollments plateau?"

One reason for the concern was the belief that a sizable fraction of the growth in overall enrollments was directly related to the growing numbers of online students. Institutions believed that online offerings were reaching a new segment of students, those who would not or could not come to campus for their education.

Estimates of how much of the overall growth was due to new online offerings were imprecise at best, but ranged between one-quarter to one-half being directly attributable to online offerings. The question on the minds of those planning for their institutions was how big this new group of potential students was, and whether they would be able to entice those students to register at their institution.

The report series tracked administrator optimism about future online enrollment growth, both for their own institution and for higher education overall. The results were mixed, with those most engaged in online having the most favorable view of future growth. However, even these academic leaders often had a “Plan B” in mind, in case that growth did not appear.

In hindsight, it turns out that much of the worry about online enrollment growth was unnecessary. There has been a steady decline in overall higher education enrollment, but this stems mostly from a loss in students that are taking only on-campus courses as online course enrollment grew.

## It Doesn't Take a Village

One of the ongoing challenges of these reports was making sense of the continued growth in the number of online students, when so many institutions were reporting that their faculty did not accept the value and legitimacy of online education. Between 2003 and 2012 the number of students taking at least one online course grew more than four-fold, to the point where nearly one of every three students had some engagement with online education. During this same period, chief academic officers reported no significant changes in faculty attitudes toward online education. How were institutions able to grow their online offering in the face of continued faculty resistance?

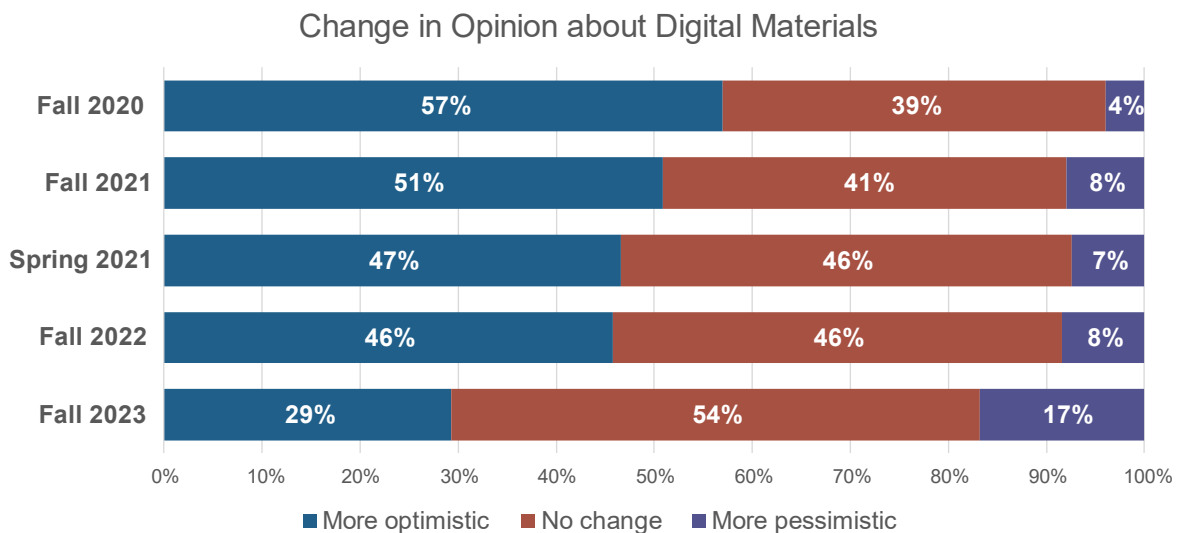
Detailed examination of the patterns of enrollment growth and faculty attitudes, chief academic officer comments in the surveys, and interviews with academic leaders suggested two overlapping explanations. The first was that while faculty attitudes across all of higher education were largely negative about online education, the pattern was somewhat different at specific types of institutions. Faculty attitudes were more positive at larger institutions. They were also more positive at public institutions, than at private or for-profit ones. Because most online enrollments came from these large and public institutions, the overall pattern was not as much of a barrier as might be suggested by looking at only the national totals.

However, even the institutions with the largest and fastest growing online enrollments continued to report concerning levels of faculty distrust of online education. How were they able to grow online enrollments to thousands, or even tens of thousands, of new students without strong faculty acceptance?

When we probed academic leaders at these institutions about this very issue, they were clear: many (or even most) of their faculty did not respect online education, but a sizeable proportion did, and that was all that was required to build their online offerings. These leaders also reported that a critical factor in building faculty acceptance was faculty exposure to online education. The greater the number of faculty teaching online, the greater the likelihood that faculty would learn from the peers and perhaps grow more accepting of online education.

## Tipping Point?

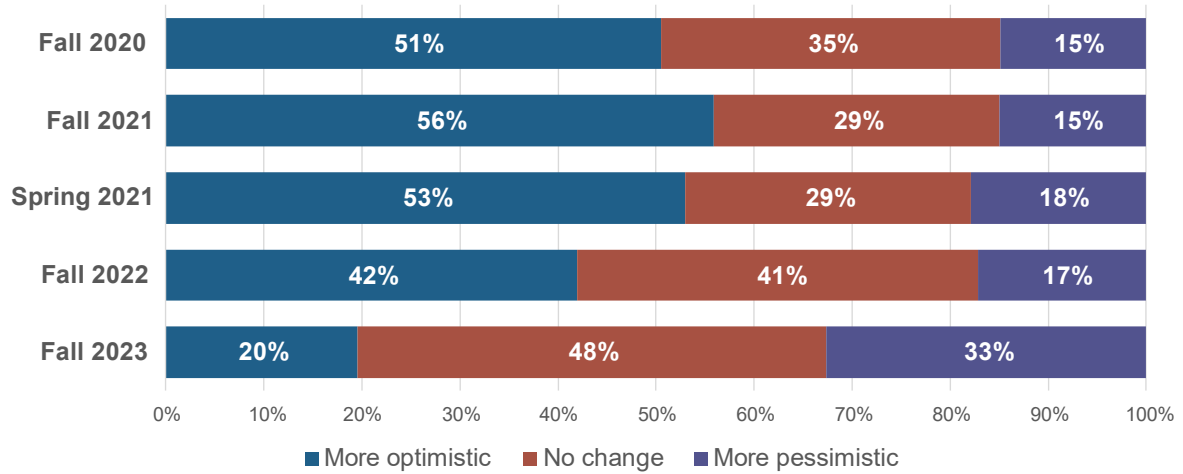
The need to move courses online during the COVID-19 pandemic provided many faculty with their first taste of online education. The pressure to convert courses made this emergency move stressful for both the faculty and their students. However, once faculty had the time to sit back and reflect on what they had done and on the potential for online education in general, the result was a much greater acceptance of online education as a delivery method than before the pandemic.



Data from a regular series of pulse surveys conducted by Bay View Analytics beginning immediately after the pandemic reflected these changed attitudes, with many faculty reporting that they were now more optimistic about both digital materials and online learning. This optimism continued for several years from 2020 to 2022, but an important change was noted in 2023, where the level of optimism among faculty dropped for both the use of digital materials and online education. Does this indicate that we have reached some sort of tipping point?



### Change in Opinion about Online Learning



What impact will this change in faculty optimism have on the future of online learning for U.S. higher education? While it is clear that the massive move to online courses immediately post-pandemic would not have been possible without considerable effort on the part of faculty, we also know that from 2003 to 2013 institutions were able to grow their online enrollment more than four-fold even while reporting that most of their faculty did not accept the value and legitimacy of online education. Will institutions now be able to continue expanding their online offering even in the face this change in faculty attitudes?

# NEXT STEPS: WHERE DO WE GO FROM HERE?

Over these last two decades, online education experienced a paradigm shift, from a new strategic opportunity for delivering courses and programs, to legitimacy as part of most institution's normal operations. This is highlighted by the implementation of nationally coordinated IPEDS data collection and reporting for online course statistics across higher education institutions.

Reflecting on these reports, there have been clear trends in opinions and perceptions towards the acceptance of online learning over time. However, the adoption and growth of student online enrollments shows much higher rates than might have been expected from the administrator and faculty results. This suggests institutions may have adopted online offerings despite personal beliefs to meet student preferences and/or stay competitive with other academic institutions.

## What we know:

- Tracking online learning enrollment and perceptions has been very useful to understanding the current, past, and future trends in higher education.
- Online education is here to stay: over 50% of enrolled students take at least one online course, and almost every institution offers some form of online instruction.
- Online education is no longer a new strategy for institutions, but part of their overall plan for education. Over the last decade, institutions have built up the infrastructure, support, and training to provide these courses.
- The move to fully online courses during COVID-19 accelerated the use and acceptance of online materials and course offerings.

## Research gaps and opportunities:

- What do we know about the diversity of students in online education? Previous research has focused on administrators and faculty. What do we know about the student satisfaction and acceptance of online education and use of online materials?
- Are there differences by discipline in course and program online offerings? With the ability to add 'hands-on' virtual labs in STEM, are hard sciences being taught online?
- What do we know about the comparative cost effectiveness for the institution, the faculty, and the students for online vs. face-to-face courses and programs?

# DEFINITIONS

The definition of an online course remained consistent throughout the thirteen-year series of these national reports. The definitions were presented to the respondents at the beginning of the survey and repeated in the body of individual questions where appropriate.

Initial survey tests defined an "online course" as 100% online, requiring all course content to be delivered online. However, because online courses were relatively new for higher education, and there were no reporting requirements by delivery method, very few schools tracked student enrollments in this manner. In testing, chief academic officers reported that they might know which courses did not require an on-campus classroom assignment but could not be sure that 100% of the content was delivered online. Typical questions were "What if we send them a physical book?" or "What if the course requires them to do some field work?" Multiple alternative definitions were tested, with a decision to relax the 100% requirement to one of 80% of the online content. We conducted a follow-up investigation in the third year of the report series to estimate the proportion of "online" courses that were less than 100% online, concluding that it was, at most, 1% or 2% and the results would have been virtually identical if we had selected 90% or 95% as the cutoff values.

The report series used the following course classifications for all reports in the series.

<i>Proportion of Content Delivered Online</i>	<i>Type of Course</i>	<i>Typical Description</i>
0%	Traditional	Course where no online technology used — content is delivered in writing or orally.
1 to 29%	Web Facilitated	Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a learning management system (LMS) or web pages to post the syllabus and assignments.
30 to 79%	Blended/Hybrid	Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings.
80+%	Online	A course where most or all the content is delivered online. Typically have no face-to-face meetings.

The Integrated Postsecondary Education Data System (IPEDS) surveys, conducted annually by the National Center for Education Statistics, added questions about "distance education" in their 2012 round (released in 2014). The IPEDS definition of a distance education course was "a course in which the instructional content is delivered exclusively via distance education. Requirements for coming to campus for orientation, testing, or academic support services do not exclude a course from being classified as distance education."

According to IPEDS, Distance Education is:

*“Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously.*

*Technologies used for instruction may include the following: Internet; one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband lines, fiber optics, satellite or wireless communication devices; audio conferencing; and video cassette, DVDs, and CD-ROMs, if the cassette, DVDs, and CD-ROMs are used in a course in conjunction with the technologies listed above.”*

# METHODOLOGY

The analysis universe for the report series was all active, degree-granting institutions of higher education in the United States. The number of these varied as new institutions emerged, merged, and sometimes closed.

The Babson Survey Research Group collected data for all the reports, and beginning in 2006, the College Board partnered in the data collection effort and included questions for this series as part of its extensive data collection effort for its Annual Survey of Colleges. Babson Survey Research Group and the College Board coordinated survey instruments and sample outreach. Each respondent institution received identically worded questions, and those who responded to one survey were not asked to respond to the same questions on the other.

All sampled schools were sent an invitation email and multiple reminders, inviting their participation and assuring them that no individual responses would be released. All survey respondents were promised to be notified when the report was released and receive a copy.

Because non-responding institutions were predominately those with the smallest enrollments, survey responses represented a larger percentage of higher education enrollments than institutions themselves (e.g., in 2013, responses represented 60% of all institutions in our sample universe, but 81% of all higher education enrollments). Each year's survey responses were merged with the data from the previous survey years (994 responses in 2003, 1,170 in 2004, 1,025 in 2005, 2,251 in 2006, 2,504 in 2007, 2,577 in 2008, 2,590 in 2009, 2,583 in 2010, 2,512 in 2011, 2,820 in 2012, and 2,831 in 2013) for examination of changes over time.

Institutional descriptive data came from the College Board Annual Survey of Colleges and from the National Center for Educational Statistics' IPEDS database. After the data was compiled and merged with the College Board Annual College Survey and IPEDS database, 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 responses were compared for 35 unique categories based on the 2010 Carnegie Classification of Institutions of Higher Education. These weights provide a slight adjustment to the results, allowing for inferences to be made about the entire population of active, degree-granting institutions of higher education in the United States.

The online enrollment estimates were derived in a multiple-stage process, which was employed for every year of the reports to ensure consistency of estimation methods. Estimated growth rates were calculated separately for each of the 35

unique categories of institutions based on Carnegie classification, control (public, private, for-profit), and overall enrollment size.

Three estimates were produced for each subgroup: using data from the most recent year, using pooled data from the most recent two years, and by applying growth percentages for similar schools present in the most recent two years. Corrections were applied for non-responses and for potential response bias. All data was checked against previous years, similar schools in that category, and for overly large changes. Follow-ups with institutions with suspect data often resulted in them providing corrected data.

An early test of this process examined the ability of the sampling and estimation technique to reproduce the known overall enrolment number and produced a result only 0.3% different from the actual number reported by IPEDS.

# REPORTS

The online learning reports in this series were:

- [Grade Level: Tracking Online Education in the United States](#)
- [Grade Change: Tracking Online Education in the United States](#)
- [Changing Course: Ten Years of Tracking Online Education in the United States](#)
- [Going the Distance: Online Education in the United States, 2011](#)
- [Class Differences: Online Education in the United States, 2010](#)
- [Learning on Demand: Online Education in the United States, 2009](#)
- [Staying The Course - Online Education in the United States, 2008](#)
- [Online Nation: Five Years of Growth in Online Learning](#)
- [Making the Grade: Online Education in the United States, 2006](#)
- [Making the Grade: Online Education in the United States, 2006 - Midwestern Edition](#)
- [Making the Grade: Online Education in the United States, 2006 - Southern Edition](#)
- [Blending In: The Extent and Promise of Blended Education in the United States](#)
- [Growing by Degrees: Online Education in the United States, 2005](#)
- [Growing by Degrees: Online Education in the United States, 2005 - Southern Edition](#)
- [Entering the Mainstream: The Quality and Extent of Online Education in the United States, 2003 and 2004](#)
- [Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003](#)

All reports are available for download at [www.bayviewanalytics.com](http://www.bayviewanalytics.com)

# PARTNERS

The report series would not have been possible without the encouragement and support of multiple partners. Some of these organizations provided critical endorsements when the project began, informing their members about the survey and encouraging their participation. Others offered monetary support to fund the data collection, analysis, and publication efforts. Still, others played a critical role in designing the topic selection process to ensure that the subjects being examined were of the greatest interest to the higher education community.

The founding sponsor, the Alfred P. Sloan Foundation, and the research team designed the project with the understanding that all respondents would be provided complete privacy, and no individual-level data would be shared publicly or with any of the partners. The research team also had complete editorial control of the survey design, data collection, and report production. Every partner that provided any support for the project also embraced this approach.

The organizations that made the report series possible were:

**The Alfred P. Sloan Foundation.** The Foundation provided the impetus that began the series and the primary support for the first eight years of the reports. They were an excellent partner, providing guidance where needed and external support, including a PR firm to aid in publicity and distribution, while taking a hands-off approach to the research itself.

**Sloan Consortium / Online Learning Consortium.** All the reports were done in partnership with Sloan-C. The initial testing before publishing the first report was done with Sloan-C members. They also coordinated all publication and distribution activities. They produced and distributed physical printed copies of the early reports.

**The College Board.** After publishing the first two reports, the College Board approached the research team and offered to partner in the data collection efforts. They endorsed the project to all their members and included the online enrollment questions as part of their College Board Annual Survey of College effort. The outreach and survey responses greatly expanded, allowing for much better enrollment and growth estimates.



**Pearson.** When the Alfred P. Sloan Foundation's Anytime, Anyplace Learning funding effort was coming to a close, the initial decision was to end the report series after the eight years. Pearson then approached the research team and offered to continue support for the project under the same hands-off agreement that the Foundation had employed. Their support for the production of the reports and the publicity and distribution allowed the project to continue for an additional four years.

**Tyton Partners.** Tyton Partners produced a series of higher education reports supported by the Gates Foundation. Babson Survey Research Group provided survey design, data collection, and analysis efforts for these projects. Tyton Partners provided expertise, outreach support, and joint publicity for this online learning report series.

**WCET and e-literate.** At the end of the report series and the transition from data collected by Babson Survey Research Group to that collected by NCES IPEDS, there was a need to understand what this transition implied for those tracking online over time. WCET and e-literate provided an independent analysis.

**Kaplan University.** Kaplan provided additional financial support for the critical transition from the Alfred P. Sloan Foundation to commercial support.

**Southern Regional Education Board (SREB).** SREB provided support for two special reports covering their sixteen-state region. They endorsed the survey to the member institutions and assisted in the outreach effort to build response rates in their states

**Midwestern Higher Education Compact (MHEC).** MHEC provided support for a special report covering their region. They endorsed the survey to the member institutions and assisted in the outreach effort to build response rates in their states.

**Eduventures.** A special issue in the report series covered blended learning, courses that combined both online and face-to-face elements. Eduventures co-authored this report and helped in its design and distribution.

**Inside Higher Ed.** Inside Higher Ed consistently provided extensive coverage of the report findings in the publication. They also stepped in to help with survey topic selection and publicity to all their subscribers to help build survey response rates.

**Study Portals.** As the report series evolved, different types of deliverables were released. Study Portals partner with the Babson Survey Research Group on an interactive data presentation of the initial IPEDS data as a demonstration of how to make the results more accessible to those in higher education.

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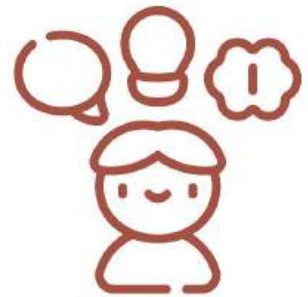
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