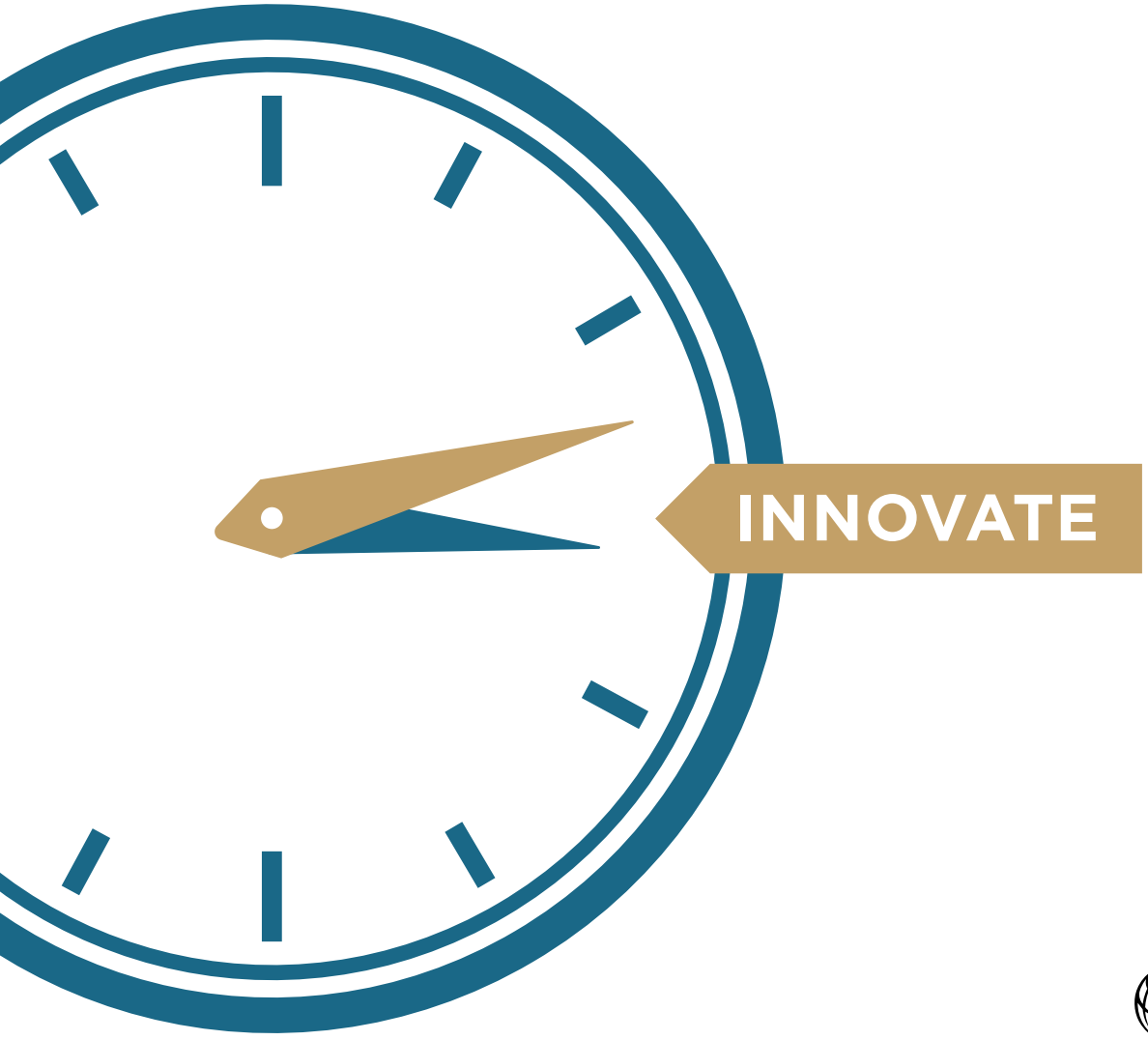
Tyton PARTNERS

TIME FOR CLASS:

LESSONS FOR THE FUTURE OF DIGITAL COURSEWARE IN HIGHER EDUCATION

2017 UPDATE



BABSON Survey Research Group

TABLE OF CONTENTS

INTRODUCTION

The Time for Class *series was first published in 2015 to share findings from Tyton Partners' 2014 surveys of over 2,700 postsecondary faculty and administrators on their use and perceptions of digital courseware. This paper is an update to the* Time for Class *series and includes findings from two fall 2016 surveys of a national sample of 3,500 postsecondary faculty and administrators. The purpose of this series is to illuminate the state of digital learning in higher education and to provide recommendations to the field on opportunities to expand digital learning in service of improved student outcomes.*

Since the initial surveys and research that contributed to the 2015 Time for Class *publications, the dynamic digital learning and courseware product landscape has continued its evolution. This evolution impacts not only the way instructional technology is used in teaching and learning but also the lens through which we examine the market. Notable shifts in the product and distribution ecosystem include the following developments:*

- ***The growing modularization of educational technology is expanding options for digital learning delivery.*** *The market is shifting from one-size-fits-all "course-in-a-box" offerings to increasingly flexible courseware options that enable course delivery through the thoughtful integration of different tools and platforms. Learning management systems are playing a larger role as core infrastructure for some courseware, and vendors are deciding whether to replicate functionality or to design their products for integration with existing tools already in use.*
- ***Authoring and customization tools are increasingly enabling "personalized teaching" in digital environments.*** *Going hand in hand with the increased flexibility afforded by today's implementation models, courseware vendors and digital learning platforms are responding to customer demands by expanding authoring toolsets to allow for increased customization of content and the course experience.*
- ***Open content is gaining share.*** *Open educational resources are now embedded in a range of platforms, including large-publisher and proprietary tools, making them easier to find and adopt. This shift is being fueled by the improved quality and availability of open content as well as the growing dialogue around the cost of postsecondary education and learning materials.*
- ***The methods of accessing and disseminating digital content are diversifying and innovating.*** *Content-agnostic delivery platforms are helping to level the distribution playing field for digital content providers by supporting discoverability, price transparency, and delivery to buyers across institutions. At the same time, through membership in organizations like Unizin, institutions are able to gain buying power and reduce the administrative lift of adopting new learning technology, thereby lowering their switching costs and improving their flexibility to adopt the solutions that best fit their needs at a given time.*

The aperture of our research and analysis in 2016 also reflects an evolution since the first Time for Class *publication. The core change is the expansion of the scope of research from a focus on digital courseware – instructional technology solutions that enable digital learning – to digital learning more broadly. A comparison of the 2014 and 2016 research scope, objectives, and key definitions is provided below.*

	2014	2016
Scope of Study	Postsecondary perspectives on and adoption of digital courseware.	Postsecondary implementation of digital learning, inclusive of digital courseware.
Objectives	To better understand the current level of adoption of digital courseware in US postsecondary education, as well as to collect practitioner perspectives on digital courseware use and barriers to further adoption.	To better understand the current degree of implementation of digital learning, including key organizational factors enabling digital learning implementation, and the extent to which courseware has been adopted as part of digital learning strategies.
Key Definitions	**Digital courseware** is curriculum delivered through purpose-built software to support teaching and learning.	**Digital learning** is the use of instructional technologies to support teaching and learning. Under this definition, digital learning can take place in face-to-face, online, and blended/hybrid environments. **Courseware** is instructional content that is scoped and sequenced to support delivery of **an entire course** through software that is built specifically for educational purposes (e.g., YouTube is not considered courseware). Courseware includes assessments to inform personalization of instruction and is equipped for adoption across a range of institutional types and learning environments (face-to-face, online, and blended/hybrid). Courseware is not a learning management system.

Where possible in this paper, data points that are available from both the 2014 and 2016 surveys are highlighted to demonstrate how faculty and administrator perspectives have changed or, in some cases, stayed the same over that period. A complete set of charts comparing 2014 and 2016 data is provided in Appendix C.

In addition to data from the 2014 and 2016 Tyton Partners / Babson Survey Research Group surveys, this paper references data from the Integrated Postsecondary Education Data System (IPEDS), including information on distance education and institutional type. In this paper, distance education is defined as "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."[1] *The types of institutions referenced include two-year institutions (public and private), four-year private institutions (non-profit and for-profit), and four-year public institutions.*

The data on institutional type and the level of distance education offered at the institutions represented by administrator and faculty respondents to the 2016 surveys was used to classify respondents as belonging to the following segments, referenced throughout this paper:

	2-YEAR, LOW DISTANCE	2-YEAR, HIGH DISTANCE	PUBLIC 4-YEAR, LOW DISTANCE	PUBLIC 4-YEAR, HIGH DISTANCE	PRIVATE 4-YEAR, LOW DISTANCE	PRIVATE 4-YEAR, HIGH DISTANCE
% of Administrators in Sample	6%	15%	20%	19%	33%	6%
% of Faculty in Sample	10%	23%	19%	24%	19%	3%

Note: Institutions where the portion of undergraduate students taking at least one course at a distance is under 25% are considered low-distance, institutions where the portion is 25% or greater are considered high-distance.

This research was undertaken in partnership with the Babson Survey Research Group and with funding from the Bill & Melinda Gates Foundation.

1. Integrated Postsecondary Education Data System, "2016-17 Survey Materials: Glossary," August 2016, ***https://surveys.nces.ed.gov/ipeds/Downloads/Forms/IPEDSGlossary.pdf***

EXECUTIVE SUMMARY

The changing face of the US college student presents both new opportunities and new challenges for higher education institutions and a system designed to serve the traditional student of the past. Many institutions are under pressure to provide flexible, affordable, and workforce-relevant educational offerings, with scaffolding to enable all of today's diverse learners to succeed, yet colleges and universities are constrained by regulatory and institutional structures that limit their ability to adapt to this new reality. Furthermore, the perceived and actual costs of change – in regard to finances, time, institutional culture, and reputation – are significant and together present a daunting price tag for an uncertain return in terms of student and institutional benefit.

While a few dozen institutions have developed digital learning programs that have become beacons of success in the uncertain and often troubled waters of educational technology adoption, evidence of the impacts of digital learning across the higher education market more broadly is limited, and many decision-makers remain skeptical. We believe that quality digital learning programs can deliver flexible and personalized education that meets the needs of today's learners and institutions, and this paper provides a few data points to help build the emerging case for expanded implementation of digital learning.

Despite the potential benefits, faculty and administrators report that digital learning has not been implemented consistently at their institutions, and several impediments stand in the way of scaled and effective implementation. From the survey responses of 3,500 faculty and administrators, four market realities emerged that provide insight into the issues slowing or halting scaled digital learning and limiting its benefits from being realized:

1. **The planning and execution of digital learning initiatives is falling short of "strategic" at many institutions.** While institutions generally present their digital learning programs as being a strategic lever to achieve institutional goals, perceptions of the execution and impacts of digital learning vary significantly. This gap presents significant issues for digital learning success in terms of stakeholder buy-in and achieving and measuring impact.

2. **Faculty are a linchpin in digital learning success, yet they are woefully undersupported.** The majority of surveyed administrators agreed that faculty are crucial to the success of digital learning initiatives – serving as both a bolster and a barrier to implementation success. Yet reports from both administrators and faculty suggest that the resources to support faculty to implement digital learning are lacking.

3. **Digital learning decision-making is decentralized.** When administrators and faculty were asked about the influencers of two critical decision points in digital learning implementation, it became apparent that implementation at scale requires engagement with several decision-makers. While not without benefit, the decentralized decision-making structures in place at most institutions today generally slow the adoption of teaching and learning technologies by increasing the "cost of sale" for institutions and vendors.

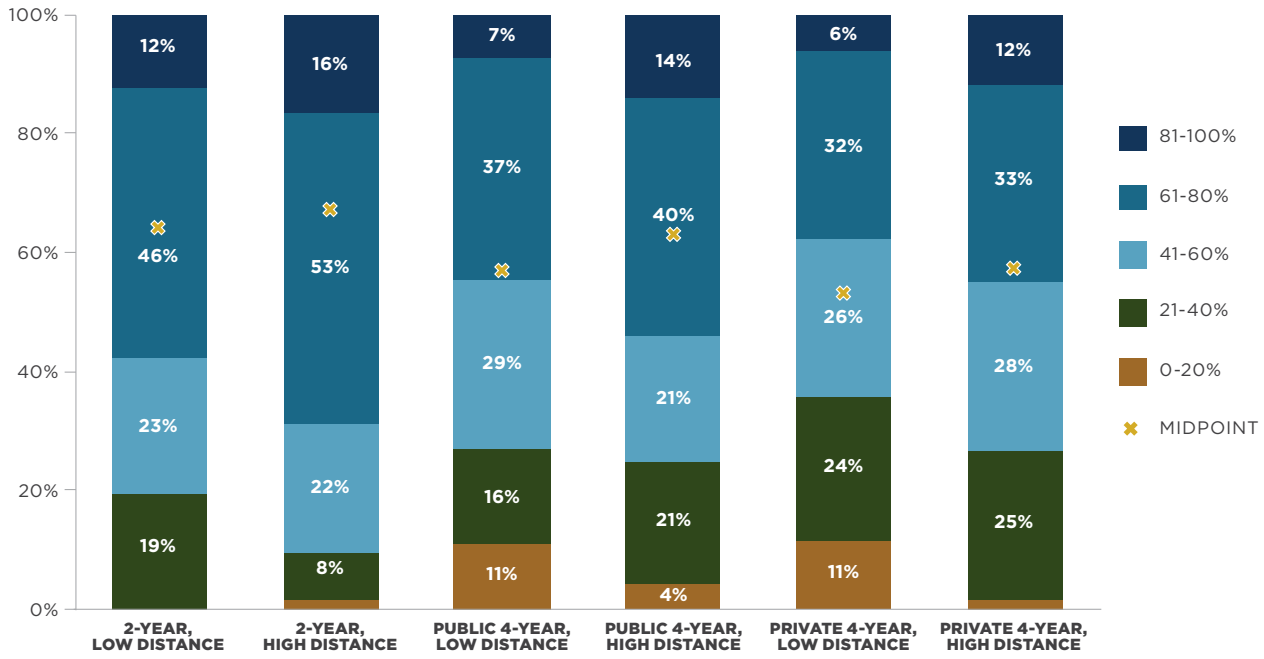
4. **Low courseware product satisfaction inhibits larger-scale adoption.** Peer recommendations are the most frequently cited resource for product discovery among administrators surveyed in 2016. This implies that good products should gain adoption relatively easily through word of mouth and that those products that miss the mark should not expand in use. Unfortunately, faculty and administrator perspectives on the digital courseware products in use at their institutions today reflect dissatisfaction and an unwillingness to recommend to peers.

Opportunities exist for all stakeholders in the postsecondary ecosystem to dismantle the impediments to broader, more effective digital learning adoption and its impacts on student and institutional success. This paper helps to build a case for expanded digital learning and delves into the four market realities, described above, that today slow or prevent scaled implementation. It also provides recommendations for three types of stakeholders – institutions, vendors, and partners – to work toward building the conditions for digital learning success.

BUILDING THE CASE FOR DIGITAL LEARNING

Despite the efforts of vendors, researchers, and many institutions, the evidence articulating the benefits of digital learning is generally considered incomplete, and this lack of broadly available and applicable evidence has implications. One implication is that many decision-makers remain skeptical of the value that digital learning can deliver in higher education, though perceptions have improved since 2014. Another, potentially related, implication is that many institutions are slow to implement and scale digital learning initiatives. Some instead undertake repeated, small-scale pilots and evaluations to establish their own evidence for expanding adoption. Others dabble in digital learning to test the waters, implementing without specific goals or alignment to a strategic vision. In classic chicken-and-egg fashion, the result is that many implementations remain incomplete, lacking the stakeholder alignment and investment in support resources and practice change that would enable successful and impactful implementations.

PROGRESS TOWARD DIGITAL LEARNING IMPLEMENTATION RELATIVE TO STRATEGIC PLAN (ADMINISTRATOR)



Administrator Survey Question: How far along is your institution toward implementing digital learning in relation to its strategic plan? (On a scale of 0-100%)

In 2014, 20% of faculty respondents reported being "skeptical about the efficacy of digital courseware," and another 28% were neutral about its potential for impact. In 2016, 16% of faculty reported being skeptical, and 21% were neutral on courseware's potential for impact. Though progress has been made toward converting skeptics and non-believers, this gap must be closed before key decision-makers are consistently confident in courseware's potential to improve student outcomes.

(Appendix B, Figure 1)

Uncertainty about the impacts of digital learning extend to its financial impacts. In 2014, only 23% of administrators and 27% of faculty agreed that courseware "reduces the cost of instruction." In 2016, 53% of administrators reported that digital learning had been implemented in pursuit of more cost-effective course development and delivery, and 61% reported that digital learning had been implemented to help identify new or alternative revenue streams for their institution. Among those administrators, less than half of each group reported that the impact of their digital learning implementation has met or exceeded their expectations in either of those areas.

Fortunately, a case for digital learning is being built, piece by piece, as institutions share stories of their successes, as researchers publish their analyses, and as individual educators see the impacts of digital learning on their learners and programs. In this section, we seek to contribute to the growing evidence base by sharing a handful of data points that demonstrate where digital learning is having a positive impact in support of select institutional goals.

One area where administrators report seeing the impact of digital learning is in improved access and scheduling flexibility for students. 72% of administrators responding to the 2016 survey selected "improve access and scheduling flexibility for students" as a strategic priority that is being supported by digital learning at their institution. Of those, 65% reported that the impact of digital learning in this area was meeting or exceeding their expectations, while another 10% said it is too early to tell. The impacts were particularly strongly felt at two-year institutions, where 75% of administrators who indicated that digital learning had been implemented in support of improved access and flexibility reported impacts that met or exceeded their expectations. Improved scheduling flexibility and access has meaningful potential to support improved student and institutional success by providing greater potential for learners to take the courses that they need when they need them. This is particularly important to support completion by the over 70% of college students who work while enrolled and the 19% of those working learners who are balancing school, jobs, and children.[2]

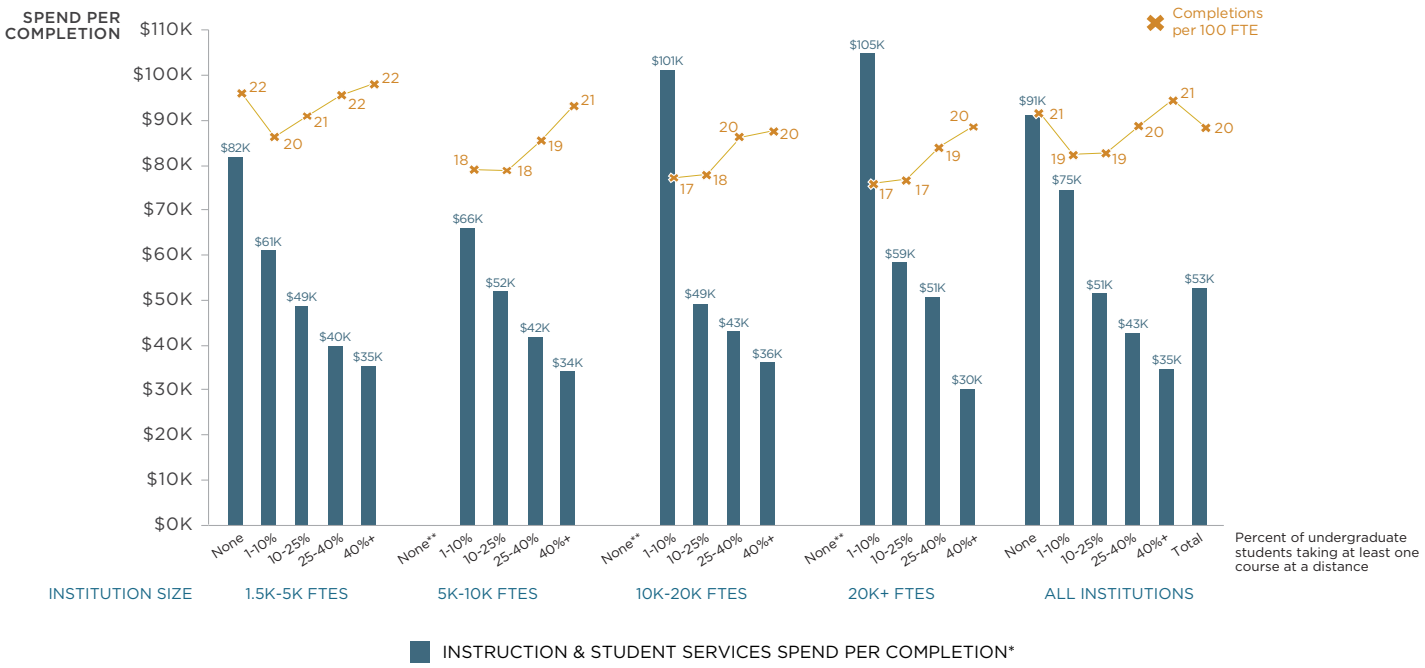
Additionally, 69% of administrators surveyed indicated that digital learning had been implemented at their institutions in pursuit of the goal of encouraging faculty to implement innovative instructional methods. Of those, 59% reported that the progress toward goals in that area met or exceeded their expectations, and again, the impacts were felt most strongly at two-year institutions. While encouraging innovation in instruction does not necessarily result in better outcomes for students or institutions, the progress reported toward goals in this area is another indication of the potential positive impacts of digital learning implementation.

In addition to the survey data, analysis of IPEDS data on US degree-granting institutions, though imperfect, is valuable to help identify impacts and trends in digital learning that may not be perceived at the individual or institutional level. Using the most recent data available on distance learning, institutional spending, and completion, we found that

2. Anthony P. Carnevale, Nicole Smith, Michelle Melton, and Eric W. Price, "Learning While Earning: The New Normal," Georgetown Center on Education and the Workforce, 2015, ***https://cew.georgetown.edu/cew-reports/workinglearners***

institutions where a greater proportion of undergraduate students take at least one course at a distance spend less on instruction and student support and at the same time show comparable or greater completion rates relative to institutions with a lower proportion of distance learners.[3] Though distance learning is not the same as digital learning, we believe that looking at the percentage of students taking at least one course at a distance provides a valuable proxy for the scale of digital learning implementation at an institution. The takeaway from this analysis is that greater scale in digital learning is associated with lower costs and consistent or improved rates of completion, as measured by IPEDS data across US institutions.

AVERAGE INSTRUCTION AND STUDENT SERVICES SPENDING PER COMPLETION; AND AVERAGE COMPLETIONS PER 100 FTES, BY INSTITUTION SIZE AND PERCENT TAKING COURSES AT A DISTANCE (UNDERGRADUATE)



* Completions included in analysis are associates degrees, bachelors degrees, and certificates of at least one year

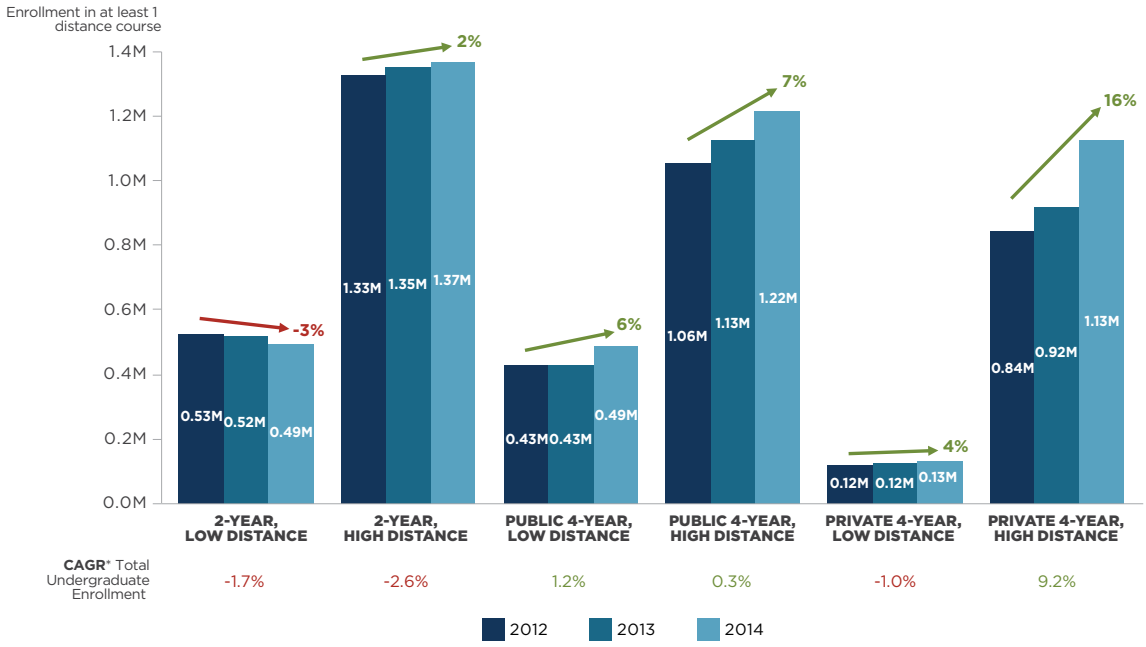
** Excluded, low n

Sources: Babson Survey Research Group, IPEDS, Tyton Partners analysis

3. Analysis includes degree-granting institutions with at least 1,500 undergraduate full-time enrollment equivalents as of fall 2014 and includes the following IPEDS and calculated variables: completions; instructional and student support costs; and FTEs (estimated undergraduate full-time enrollment equivalents) for fall 2014.

IPEDS data on enrollment also shows that distance learning growth outpaced enrollment growth overall from 2012 to 2014. This data is particularly relevant for institutions that have enrollment or revenue growth goals and are considering starting or expanding digital learning programs.

UNDERGRADUATE DISTANCE LEARNING OVER TIME



Sources: IPEDS, Tyton Partners analysis

* CAGR stands for compound annual growth rate

While work remains to further validate the impacts of digital learning, the case for digital learning is beginning to be built, and its potential benefits should not be ignored.

In summary, scaling digital learning enables institutions to accomplish the following:

1. **Improved access and scheduling flexibility, benefiting students who are older and working while in school in particular.**
2. **Faculty engagement and experimentation with innovative teaching practices.**
3. **Higher rates of degree completion at lower instructional costs.**
4. **Enrollment growth at a time when the market overall is flat or declining.**

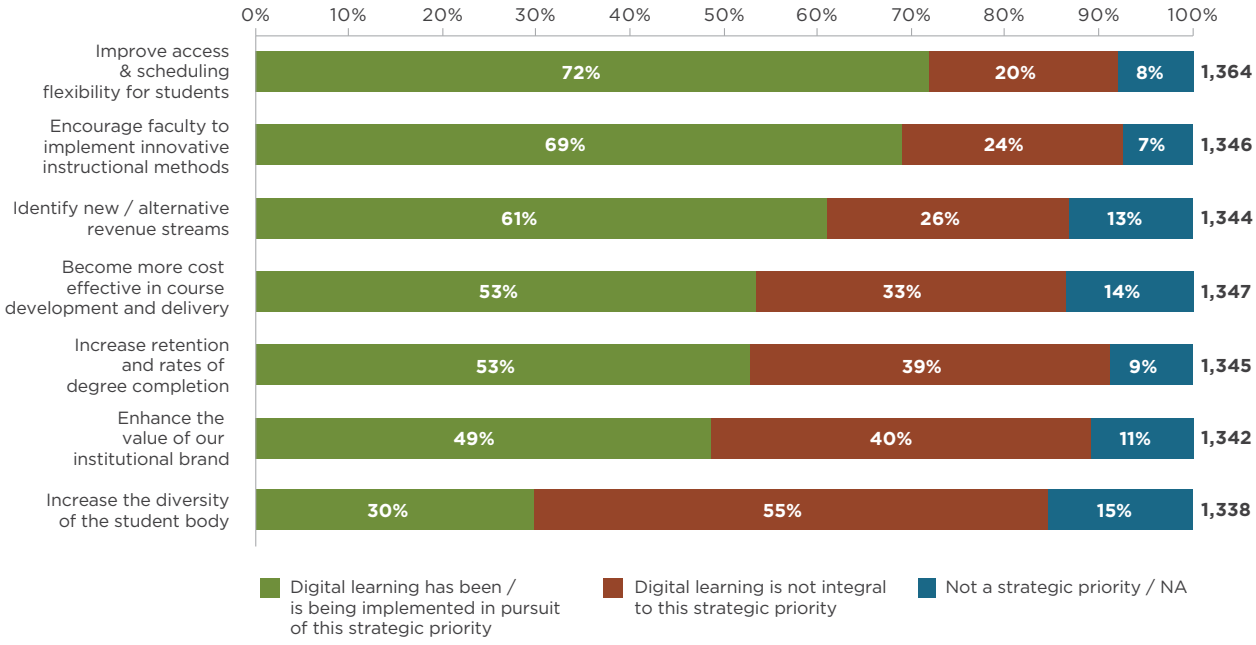
THE STATE OF THE FIELD: FACING HEADWINDS

Enabling effective digital learning and the benefits it can deliver requires understanding the impediments that stand in its way today. The 2016 administrator and faculty surveys included questions on organizational factors influencing digital learning implementation, extent of use, the goals for digital learning, and barriers that stand in the way of success. Through the surveys, we also sought to collect faculty and administrator attitudes toward digital learning and perspectives on digital learning products, including courseware. Through analysis of the survey data, four institutional and market realities emerged that shine light on the issues hindering effective implementation of digital learning at many institutions today.

THE PLANNING AND EXECUTION OF DIGITAL LEARNING INITIATIVES IS FALLING SHORT OF "STRATEGIC" AT MANY INSTITUTIONS

Strong strategic vision and execution is crucial to the success of potentially transformative digital learning initiatives at a postsecondary institution. At first glance, it appears that most institutions are thinking and acting strategically with regard to digital learning: the majority of administrators across institutional segments reported that digital learning is included in their institution's strategic plan, and 25% said that it is a core component of the plan. Furthermore, digital learning initiatives are being implemented in pursuit of a range of strategic priorities, including institutional and student-focused goals. *(Appendix B, Figures 2, 3, and 4)*. When asked whether their institution's digital learning initiatives were implemented in support of any of seven strategic priorities, administrators on average indicated that digital learning at their institution was implemented in pursuit of three or four of the priorities listed.

EXTENT OF DIGITAL LEARNING IMPLEMENTATION IN SUPPORT OF INSTITUTIONAL STRATEGIC PRIORITIES (ADMINISTRATOR)



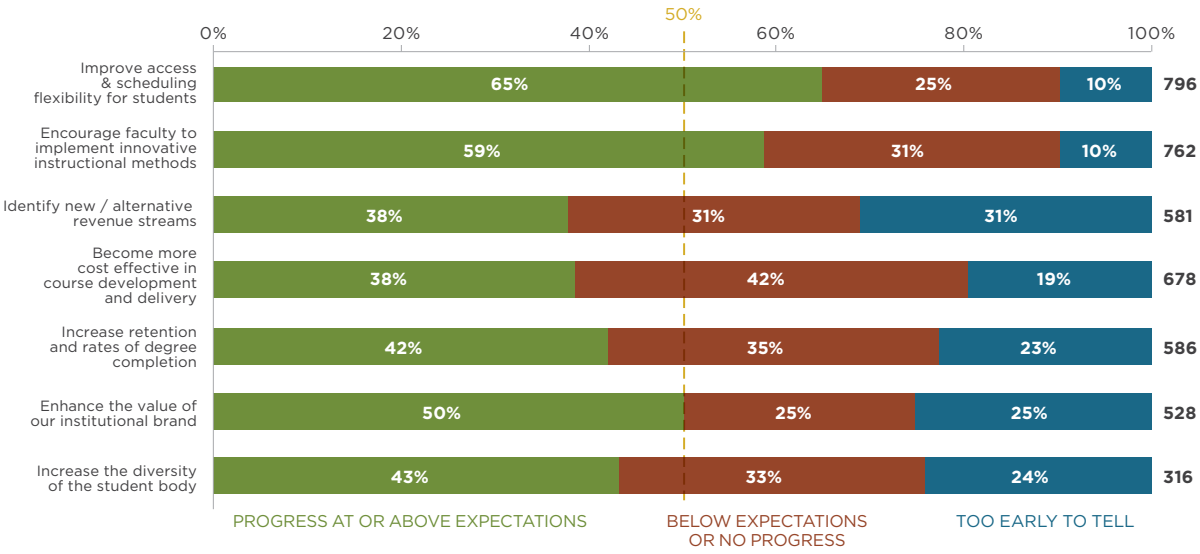
n=1,338-1,347

Administrator Survey Question: Is the use of digital learning at your institution important to helping achieve any of the following strategic priorities?

Better articulation of how digital learning supports institutional goals improves perceived success, according to administrator responses; the greater the number of strategic priorities that an administrator indicated are supported by their institution's digital learning initiatives, the more ideal they perceived the digital learning environment to be at their institution. (Appendix B, Figure 5)

And yet, though two-thirds of administrators agreed that digital learning is viewed as a strategic lever to achieve institutional goals, the perceived impacts of digital learning initiatives on strategic priorities are quite mixed. Particularly in areas like cost reduction and revenue generation, many administrators reported that digital learning has not met their expectations for impact.

PROGRESS TOWARD GOALS AS A RESULT OF DIGITAL LEARNING IMPLEMENTATION (ADMINISTRATOR)



n=316-796

Note: Respondents for each strategic priority above include only those who indicated that digital learning has been / is being implemented in pursuit of this strategic priority in a prior question

Administrator survey question: has your institution demonstrated progress toward its goals In your strategic priority area as a result of implementing digital learning technology?

Compared to the IPEDS data analysis suggesting that higher levels of distance education are associated with lower instructional delivery costs[4] and equal or improved rates of completion, administrator responses suggest a disconnect between the impacts that many administrators perceive and the reality of how digital learning is changing the market. Open-ended responses from administrators and faculty provide greater insight into this disconnect, highlighting a few likely causes:

- Expectations for digital learning impacts are set too high
- Sufficient resources are not being allocated to support strategy execution
- The impacts of digital learning initiatives are not being measured or communicated well

4. Instructional delivery costs represent two IPEDS spending categories—instructional support and student support—and are calculated per undergraduate credential granted (bachelor's degree, associate degree, and certificates of one year or more).

"My experience across two institutions with digital learning is that there is substantial expectation for its use with very little real support, and absolutely no extra time allotted for faculty to learn, develop, and become comfortable with this modality. It is all very much up to the individual faculty member to figure that out, figure out whom to ask for help, and find the time to do so. I have found this difficult and quite stressful, especially in the first few runs of an online course, where significantly more time is required for development, but this is not accounted for in any ways by which faculty are assessed. I also think there is lots of misunderstanding on the part of administrators (associate deans, deans, and higher) about what good digital learning takes. More than once I have been told that I didn't need more time to implement a change to a more digital learning course because 'you just put the materials there and it runs itself.' Anyone who has done any reading at all on digital learning knows this is not the case, and yet these same people are often the ones making the decisions about digital learning."

– Full-Time Faculty Member

"We do not have a center for teaching and learning, although there was some talk of starting one. Without real support for learning and measuring the usefulness of new pedagogies, faculty cannot be expected to make headway in successfully integrating technology in their courses. Some individual faculty members really like technology and end up as standouts in its use, but the university has a tendency to promote the achievements of this small group and to ignore the fact that there is no systematic support for transforming to effective digital pedagogies."

– Department Chair, Four-Year Public High-Distance Institution

"Fully online is what is resisted, under-developed, under-supported, under-appreciated. We have technical capacity, not attitudinal support by faculty, administrators, and, importantly, students."

– Department Chair, Four-Year Public High-Distance Institution

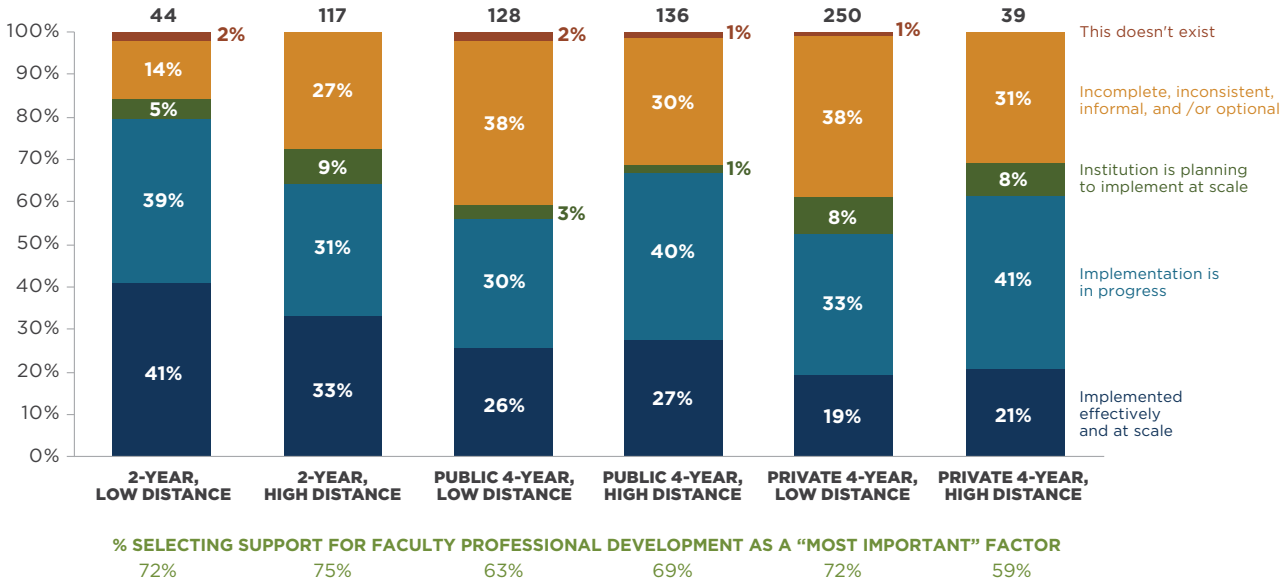
Ineffective strategic planning reduces an institution's ability to track progress toward digital learning goals and assess the return on the large investment required to implement digital learning. At the same time, execution without adequate support negatively impacts buy-in and the potential for successful implementation.

FACULTY ARE A LINCHPIN IN DIGITAL LEARNING SUCCESS, YET THEY ARE WOEFULLY UNDERSUPPORTED

When asked to select the top three most important factors contributing to a successful implementation of digital learning, 69% of administrators selected "support for faculty professional development," the top choice from a list of nine factors. Similarly, when asked about the most significant barriers to the implementation of digital learning at their institution, 74% of administrators selected "faculty time/effort required," the most frequently selected option from a list of 10 barriers. Together, these points confirm that across institutions, faculty are crucial to the success of digital learning initiatives. *(Appendix B, Figures 6 and 7)*

As such, it would follow that faculty training, extra time, and incentives would be among the first supports installed to effectively implement digital learning. Unfortunately, administrators and faculty reported that support for faculty to adopt digital learning is not scaled at many institutions. Of those administrators who selected "support for faculty professional development" as an important factor for digital learning implementation, only 25% reported that support for faculty professional development is implemented effectively and at scale at their institution. Another 35% said that implementation is in progress, but a full third (33%) indicated that support for faculty professional development "is incomplete, inconsistent, informal and/or optional" at their institution.

SCALE OF PROFESSIONAL DEVELOPMENT SUPPORT FOR DIGITAL LEARNING IMPLEMENTATION (ADMINISTRATOR)

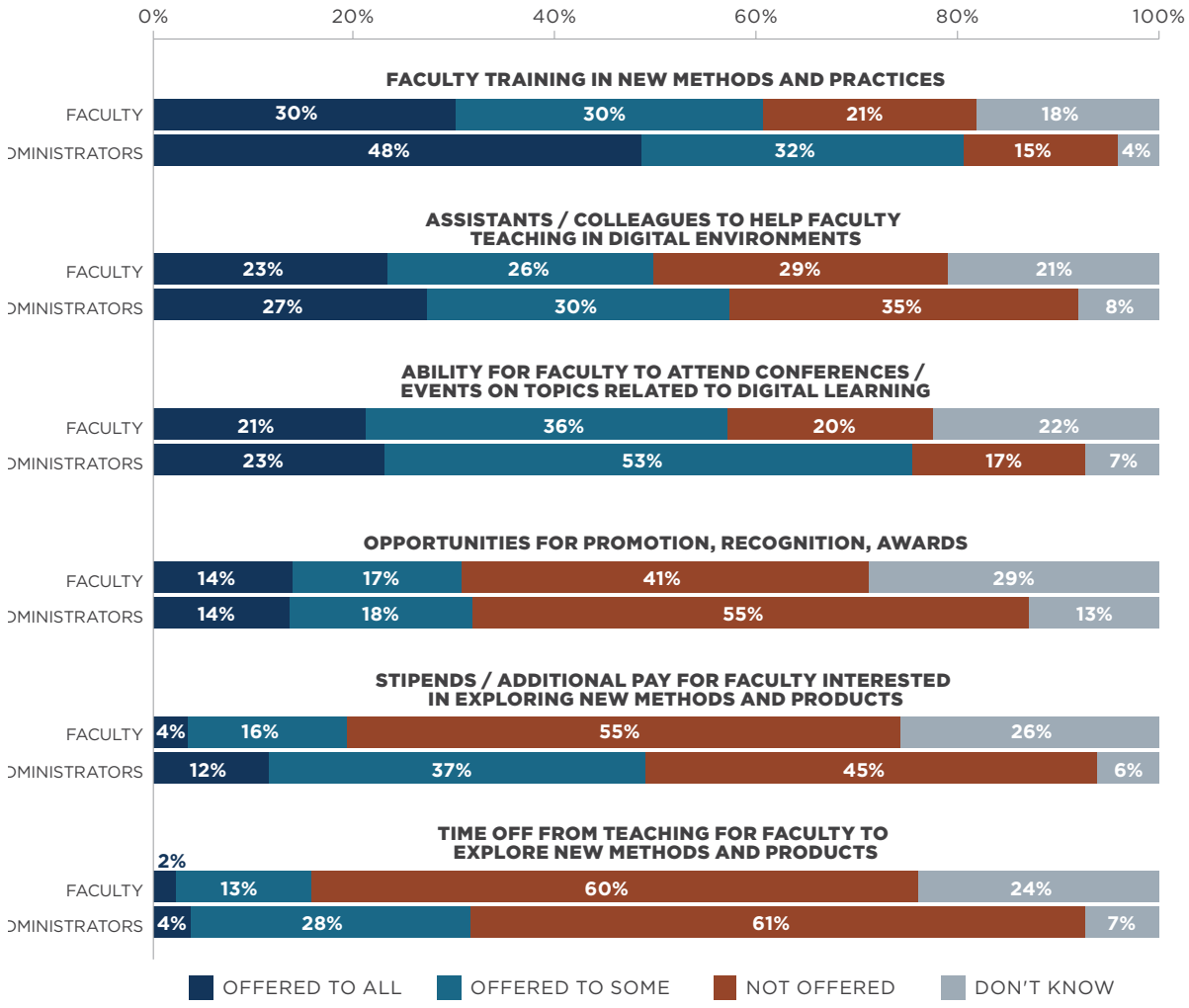


Note: Respondents to this question include only those who indicated that "support for faculty professional development" is among the top three most important factors contributing to a successful implementation of digital learning in a prior question.

Administrator Survey Question: To the best of your knowledge, how broadly does "support for faculty professional development" exist at your institution? Please rank your institution as it relates to digital learning.

The disconnect between institutional strategy and supports for execution is exemplified in the case of courseware adoption: 30% of faculty respondents agreed that they are encouraged to use courseware, yet only 18% believe that they are trained to use it effectively and only 8% are incentivized to do so. *(Appendix B, Figure 8)* When it comes to resources available to faculty to begin exploring courseware, faculty and administrator responses also point to deficits.

AVAILABILITY OF FACULTY RESOURCES FOR COURSEWARE EXPLORATION (ADMINISTRATOR & FACULTY)



Administrator & Faculty Survey Question: Please indicate the extent to which your institution offers the following for faculty beginning to explore digital courseware.

"Our institution sees online courses as a cash cow but invests almost no resources in quality control. It advocates digital learning but provides limited resources, support, and time for faculty to develop such approaches. Some of our faculty have developed excellent digital components to their courses, but at the cost of time they need for research."

– Department Chair, Four-Year Public Low-Distance Institution

*"We are a 2-year community college caught in the bind of fulltime faculty being reduced in numbers but being asked to do more, particularly with advising, grant projects, success initiatives, etc. A common lament even among our most progressive bleeding-edge fulltimers is 'I *know* there is all this stuff to do more with BUT I just don't have the time to implement/do it'"*

– Learning Technology Administrator, Two-Year Low-Distance Institution

"The vast majority of faculty incentives (>90%) at my institution are for research…and I don't mean research that is in any way related to teaching… Basically, people who focus their effort on improving their own teaching and student learning outcomes are second-class citizens here. We are paid much less, given far, far fewer institutional resources, and routinely I've been told explicitly that it is a 'two-tier system': the real faculty and the teaching faculty."

– Full-Time Physical Sciences Faculty Member

With faculty as a cornerstone for digital learning success, it is imperative that they are adequately resourced and supported. Responses of administrators and faculty alike indicate that too few institutions are investing sufficiently in faculty supports (like training and additional time) for the adoption of digital learning. Further complicating adoption is the fact that institutional incentives like tenure and recognition generally do not promote innovation or time investment in adopting new tools, materials, or pedagogies. Without resources available and structures in place to equip faculty to adopt digital learning successfully and without damage to their careers, implementation will continue to be slow and tenuous at many institutions.

DIGITAL LEARNING DECISION-MAKING IS DECENTRALIZED

To understand the institutional factors that enable digital learning use, it is important to identify how key decisions impacting digital learning initiatives are made, including who influences those decisions. Our inquiry into this issue revealed that in most institutions, there are multiple influencers and that decision-making power is decentralized across different institutional stakeholders, including faculty.

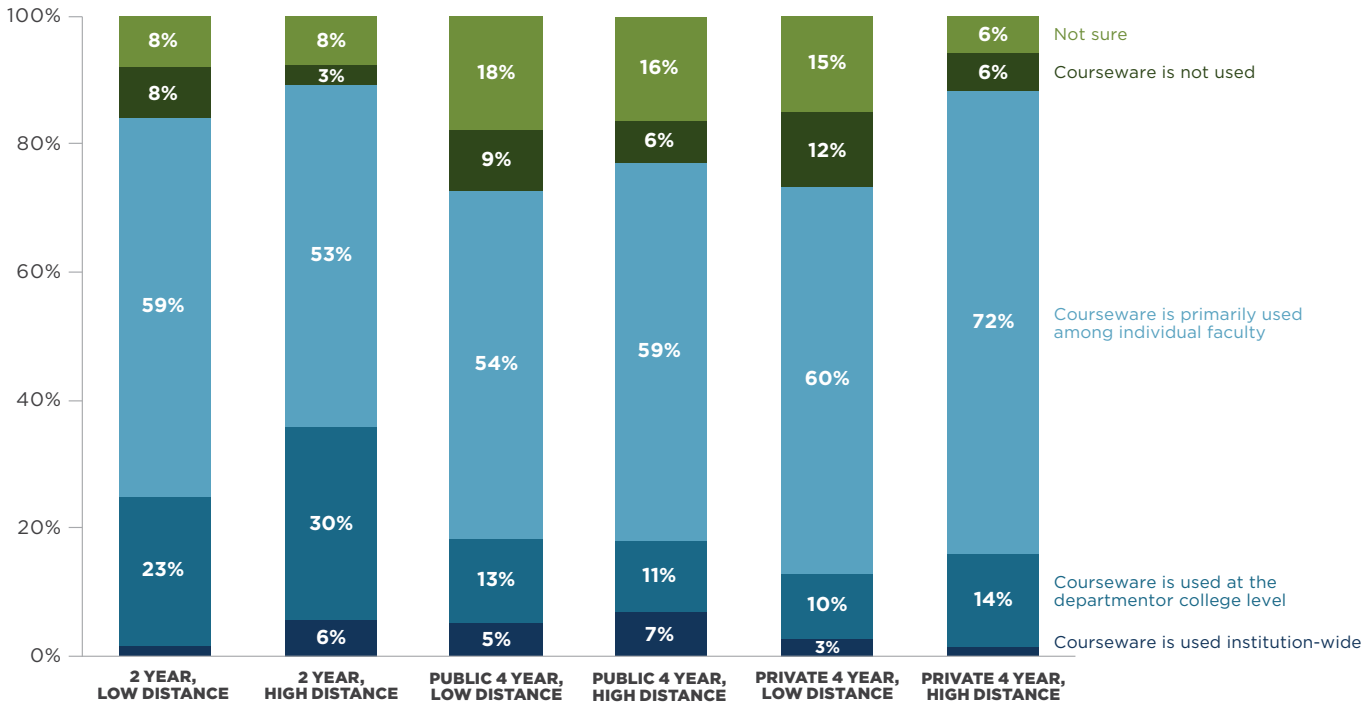
When asked to select who influences online or blended program development, 52% of administrators selected three or more of the five stakeholder groups listed. The most common response was "college / institutional leadership," with 71% of administrators selecting this group. Of those who selected "college / institutional leadership," 83% paired that selection with at least one other group on campus, indicating multiple influencers. *(Appendix B, Figures 9 and 10)*

Administrator responses to the question "Who influences digital material selection?" confirmed that faculty remain the key drivers of selecting which materials to use in the classroom. 91% of administrators reported that individual faculty members are influencers in this decision at their institution, and of those administrators, 55% reported that individual faculty members are the only influencers in this decision on their campus. *(Appendix B, Figures 11 and 12)*

Also important to understand is the frequency of these decision points. 82% of faculty reported having either substantially modified an existing course or created a new course in the past three years, and for 46% of those faculty, the decision to embark on the design or re-design of the course was their own. Only 25% of the faculty who substantially modified or created a new course in the past three years did so without influence on the decision; in those cases, the decision was made at the department, division, or institutional level. *(Appendix B, Figures 13 and 14)*

Given the dispersed decision-making authority in postsecondary institutions, it is unsurprising that in the case of courseware, scaled use remains limited. Only 4% of administrators reported that courseware is used institution-wide, and another 15% reported use at the department or college level. The vast majority of courseware adoptions take place at the level of individual faculty, according to administrators.

EXTENT OF COURSEWARE USE (ADMINISTRATOR)



Administrator Survey Question: Which description below best describes the use of courseware at your institution?

Decisions to expand digital learning programs or digital material use require buy-in from across the institution. Decentralized decision-making results in slower and more costly adoption for vendors and institutions. For smaller digital learning technology providers, each conversion of a new user is costly and small scale, limiting growth. For institutions, maintenance of full academic freedom in terms of digital material selection

is costly in that students, faculty, administrators, and support staff must come up to speed on each new material or platform selected and must maintain fluency as the different platforms evolve.

LOW COURSEWARE PRODUCT SATISFACTION INHIBITS LARGER-SCALE ADOPTION

"Frequently, faculty do not use, or do not use effectively, the available digital resources and / or courseware because the courseware is poorly designed. I spend a huge amount of time dealing with emails having to do with registration, access and billing instead of learning. Students may benefit a small amount from online quizzes, for instance, but I spend a ridiculous amount of time dealing with non-functional and partially functional homework systems. The hassle factor oftentimes is greater than any student benefit."

– Full-Time Life Sciences Faculty Member

"The most important point of any software is usability, clarity and match with people's intuition. Software developers today completely fail to understand the mind of many users, particularly those who were educated before the digital age. What seems clear to the IT nerds is often incomprehensible to others. This is the main barrier – no – it is the only barrier to digital learning."

– Department Chair, Four-Year Private Low-Distance Institution

"There needs to be a focus on simplification of course software and Learning Management Systems. Also, there needs to be some industry standards and 'integrated platforms."

– Department Chair, Four-Year Private High-Distance Institution

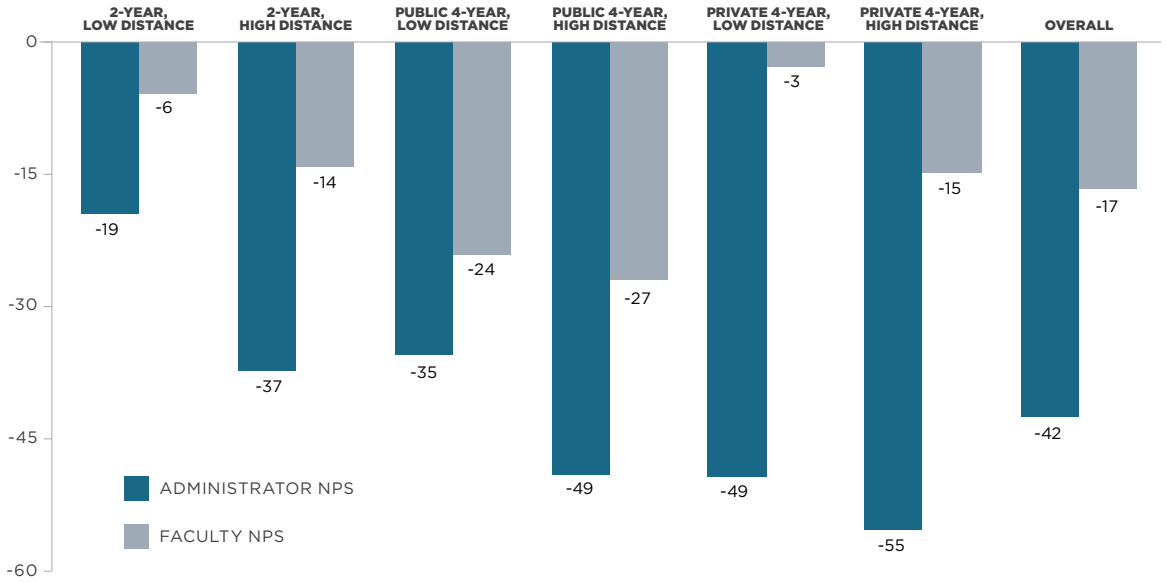
"The greatest, most learner-centered and agile instructional technology is useless if it is not (1) absolutely reliable (no significant downtime), (2) not a system or horsepower hog (can run reliably and nimbly on less-than-optimal machines), and (3) ADA compliant. Too many technologies and resources depend upon individual faculty to have to make [them] ADA compliant."

– Department Chair, Four-Year Public High-Distance Institution

Among the key takeaways from the original *Time for Class* series was the level of dissatisfaction that many faculty reported with their courseware products. In 2016, sentiments improved slightly; however, most faculty and administrators continued to express dissatisfaction, as measured by a Net Promoter Score (NPS). An NPS is evaluated by asking, "How likely are you to recommend this [product, service, or company] to a friend or colleague?" with 10 being "very likely" and 0 being "not at all likely." People responding 9 or 10 are considered to be promoters of the product, those who select 7 or 8 are neutral, and respondents indicating 6 or below are considered to be detractors. The NPS is calculated by subtracting the portion of respondents that are detractors from the portion that are promoters, and it is a metric used by companies across industries as

an indication of customer satisfaction. When asked whether they would recommend a courseware product that they are familiar with to a friend or colleague, only 24% of faculty and 12% of administrators indicated that they would be highly likely to recommend. NPS scores from both faculty and administrators remained negative in 2016.

COURSEWARE NET PROMOTER SCORE (ADMINISTRATOR & FACULTY)



Unwillingness to recommend a courseware product should be particularly troubling for courseware vendors. According to administrators with influence over digital material selection, recommendations reign supreme as the most valuable resource for product discovery and selection. 57% of that group selected "recommendations from colleagues / peers at your institution" as the top source, and 57% selected "recommendations from colleagues / peers at other institutions." Recommendations from peers are followed distantly by "conference / events," which was selected by 40% of administrators with influence over digital material selection. *(Appendix B, Figure 15)*

Adoption growth will be slow as long as products do not meet the needs of users and as long as users do not have adequate time to invest in learning about their courseware products. Vendors need to listen to their constituents to develop products that are easy to use, customizable, and meet accessibility and integration requirements. At the same time, the onus is on faculty and institutions to understand their goals and needs for courseware, evaluate courseware products effectively, and select the best courseware to help them achieve their goals and meet their needs.

NAVIGATING TOWARD DIGITAL LEARNING SUCCESS

The market realities described in this paper are not insurmountable barriers to expanded and effective implementation of digital learning. We believe that there are actionable steps that can be taken to resolve or adapt to these issues in order to improve and expand digital learning adoption. Institutions are at the core of our recommendations, but they will not be successful without aligned efforts from digital learning product vendors. Institutional partner organizations, such as funders, associations, and advocacy groups, also have a role to play in accelerating change. *Opportunities for institutional partners to intervene are highlighted in the Institution and Vendor sections below.*

It is important to note that different institutions have different goals for digital learning adoption, different barriers, and different success factors. All institutions are not the same, and interventions to advance digital learning should be customized to meet the needs of a specific institution. We recommend reviewing the data in Appendix B to learn more about the needs of a specific institutional segment represented in the survey sample, and using that information to customize interventions.

INSTITUTIONS

Effective strategic planning can help an institution to build stakeholder support for a transformative effort through the articulation of important and attainable goals and the allocation of sufficient resources to achieve those goals. Planning should be informed by market and institutional knowledge and should support ongoing learning by incorporating evaluation and communication of findings to stakeholders. In the case of higher education, we believe that "stakeholders" is best interpreted broadly, because by sharing findings beyond the boundaries of a leadership team or campus, many institutions and learners will benefit. Effective stakeholder alignment to institutional strategy should be the backbone of a successful digital learning implementation. By these measures, the typical institutional planning process is inadequate. To move beyond the status quo and toward effective alignment of strategy and execution, institutions looking to implement and scale digital learning should:

- **Articulate how digital learning supports their strategic priorities and set realistic expectations for digital learning's impacts.** Institutions should consider their strategic plan and determine which goals or priorities digital learning can help the institution to achieve. The data suggests that digital learning can improve scheduling flexibility and access, encourage faculty innovation, drive cost efficiency, and support improved rates of completion. Institutions should identify which of these or other goals the institution seeks to achieve, and clearly articulate how and to what extent its digital learning programs are expected to help. To avoid unrealistic expectations, it is also important to consider which of the institution's goals or priorities will *not* be affected by the implementation of digital learning.

- **Measure, evaluate, and share their learnings.** Once expected impacts are identified, institutions must structure implementation to enable measurement of the impacts. This includes providing sufficient timeframes and channels for feedback collection and review, and ensuring institutional capacity for data collection and analysis. Frequently, evaluation begins with a pilot, but we believe that making informed decisions based on the impacts of a digital learning pilot requires a re-envisioning of how pilots are completed at many institutions today; often, implementation takes place in a small-scale and piecemeal fashion to enable multiple pilots to run with limited investment in any one initiative. To adequately measure and evaluate the impacts of digital learning implementation, a pilot should be structured with support not only for the adoption of new technology but also for the shifts in practice that frequently and necessarily accompany effective technology use. Furthermore, pilots should be completed at a scale that has the potential to demonstrate impact across different student populations. And finally, institutions should be positioned to capture and review data quickly to allow for rapid scaling or shifts. Findings from evaluations should be shared internally and with other institutions to contribute to the development of a set of foundational data about the impacts of digital learning that all institutions can leverage.

- **Become informed consumers of instructional technology.** Better digital learning selection and implementation will result from empowering adopters with the resources needed to make good decisions. These resources include an understanding of institutional goals for digital learning, knowledge about instructional technology functionality, and time to evaluate options. By understanding and selecting the right products, institutions and their stakeholders will improve user experiences and increase the likelihood of implementation success.

- **Use their buying power to improve the market.** As large consumers of instructional technology, informed institutions can influence product development and distribution for the better. Creating opportunities to connect vendors with faculty for education, product discovery, and feedback will result in better-informed faculty and drive the creation of better products. Rather than lament integration or accessibility challenges, institutions are positioned to demand products that are accessible, integrable, and user friendly, and they should advocate for and support the development of standards for core features and functionality. Over time, as more products adhere to standards and usability improves, these steps will simplify evaluation and integration processes across instructional technologies.

- **Equip faculty for success.** Institutions should take stock of the resources and incentives currently available to faculty and assess whether they are aligned to institutional strategy. If meeting institutional goals hinges on the successful and scaled implementation of digital learning, faculty must buy in to the strategy and be equipped to execute the implementation with a clear line of sight into goals, sufficient training, and incentives (or a lack of disincentives) for change.

Opportunities for partner organizations to accelerate change:

- *Funders:*
  - *Embed faculty training and capacity building, particularly in areas like strategic planning and evaluation, into your institutional investment requirements.*
  - *Support efforts to build market knowledge around topics like digital learning impacts and digital learning product design by funding research and dissemination.*
- *Associations and Advocacy Groups:*
  - *Develop resources to help institutional leaders identify hidden barriers, like disincentives for change or innovation, that prevent successful digital learning implementation.*
  - *Start conversations with your membership about the current incentives or disincentives for faculty to innovate in teaching and learning. If you haven't already, consider covering digital pedagogy in your discipline journals and events and creating ways to recognize individuals who are doing exceptional work in digital learning in your area of interest.*
  - *Host resource-sharing hubs or events to facilitate easy information transfer and access among institutions.*
  - *Fund rapid and scaled pilots of new solutions and practices.*

VENDORS

Courseware product satisfaction concerns should fuel vendors' quests for products that are effective and easy to adopt and customize. In particular, faculty and administrator feedback raises a handful of common usability concerns that must be addressed:

- **Time-consuming adoption and customization:** Faculty members continue to voice that digital learning takes too much time to set up and use and that customization is often difficult or time intensive. While institutions must do their part to give faculty the time to learn about and adopt new products, vendors should also strive to design products that fit into faculty workflows and should offer training for faculty to implement products effectively.
- **Designs that limit use by all learners and faculty:** Digital learning products must be accessible, measured not only against legal accessibility standards but also against design principles that support adoption by all learners and faculty. CAST offers a framework for Universal Design for Learning that can help vendors and educators learn about and apply design principles that support accessibility for all.
- **Product and service downtime:** After years of using books, which work every time, learning technology products that are plagued by product or service problems that generate downtime are not acceptable alternatives for most faculty. Investment in systems and support infrastructure, including human support infrastructure, can help to reduce downtime and the frustration it brings users.

While improving product satisfaction should be the number one task on vendors' to-do lists to expand adoption and improve outcomes, it should not be the only item on the list. Vendors can also help to accelerate institutional efforts to implement digital learning by contributing to greater transparency in the learning technology market. Improved transparency will enable institutions to become better-informed consumers and support more efficient and effective decision-making and implementation. A few steps that vendors can take to promote market transparency are:

- Collaborate with platforms like those from EdSurge and Lea(R)n to broadly share information on a product's pricing, availability, and functionality with digital learning decision-makers.
- Publish data on the impacts realized from implementation of the product.
- Learn about institutional or course goals before a sales conversation and present a data-based case for how the product or a particular functionality can help achieve those goals.

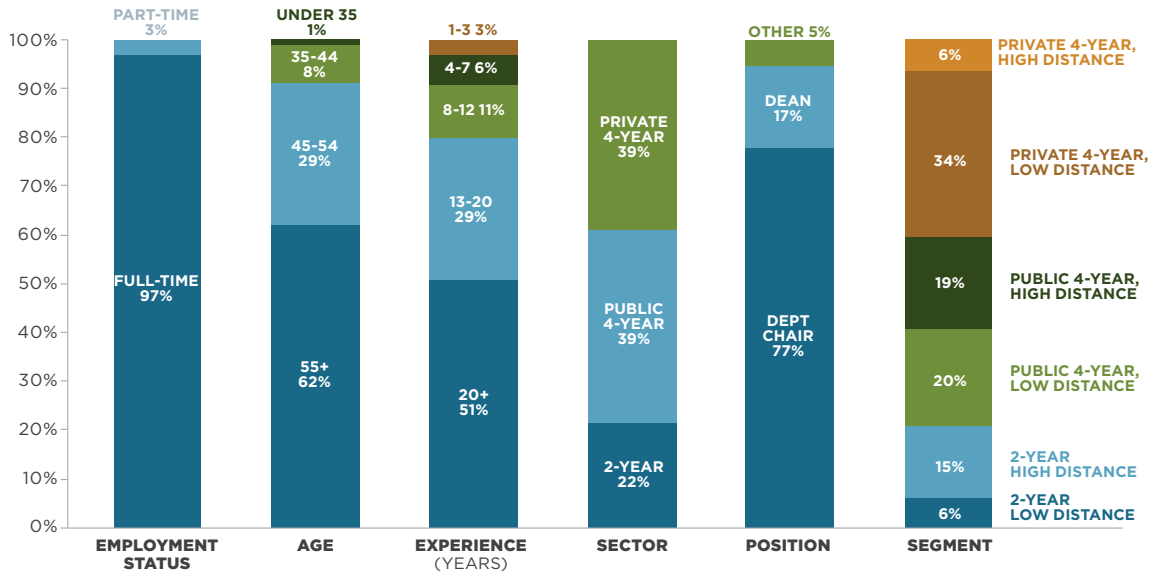
Opportunities for partner organizations to accelerate change:

- *Fund product design that seeks to alleviate current pain points.*
- *Build or support content-agnostic platforms for the distribution of digital content and knowledge.*
- *Advance efforts to standardize product specifications in important and evolving areas like accessibility, data security, and integration.*

APPENDIX A
OVERVIEW OF SURVEY RESPONDENTS

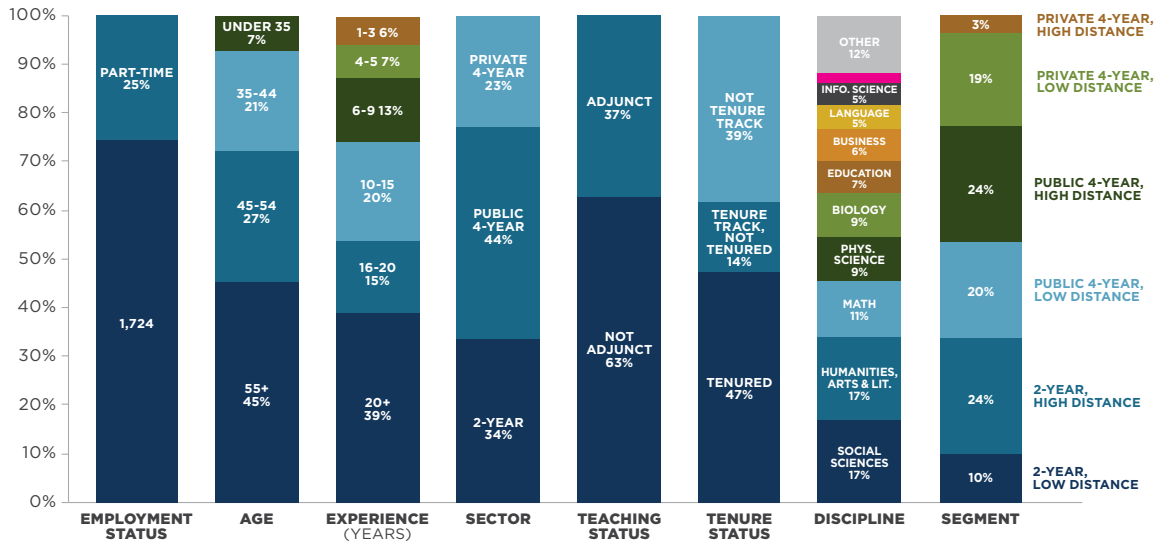
Our fall 2016 surveys received over 3,500 responses from postsecondary faculty (2,381) and administrators (1,126). The faculty sample was designed to collect perspectives from teaching faculty in high-enrollment disciplines. The administrator sample was designed to collect perspectives from a range of roles, and targeted department chairs in high-enrollment disciplines.

OVERVIEW OF 2016 ADMINISTRATOR SURVEY RESPONDENTS



N=1,126

OVERVIEW OF 2016 FACULTY SURVEY RESPONDENTS



N=2,381

APPENDIX B
FIGURES REFERENCED IN PAPER

FIGURE 1: FACULTY SURVEY QUESTION:

Please place yourself along the spectrum below with regard to your perspective on courseware.

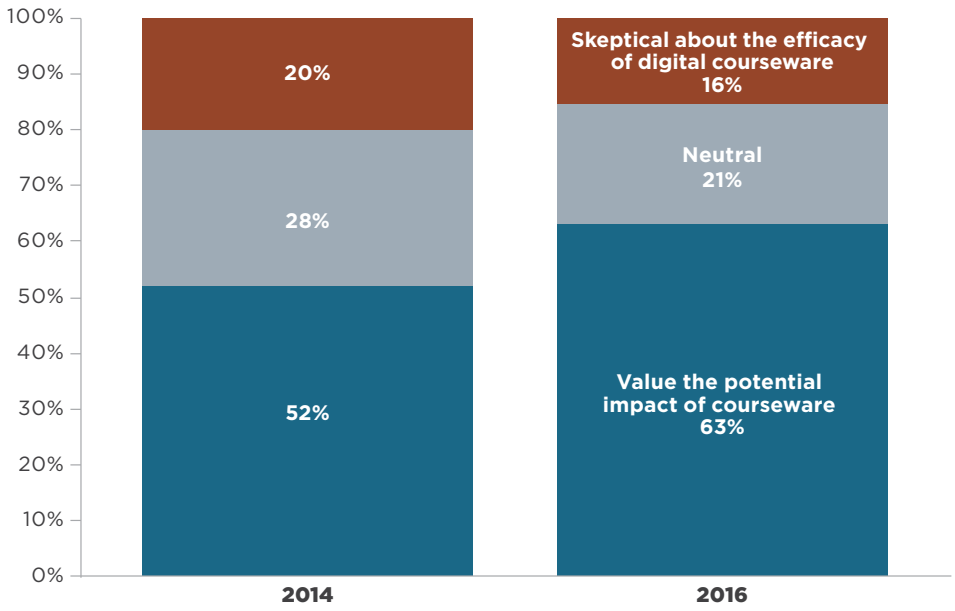


FIGURE 2: ADMINISTRATOR SURVEY QUESTION:

What role does digital learning play in your institution's strategic plan?

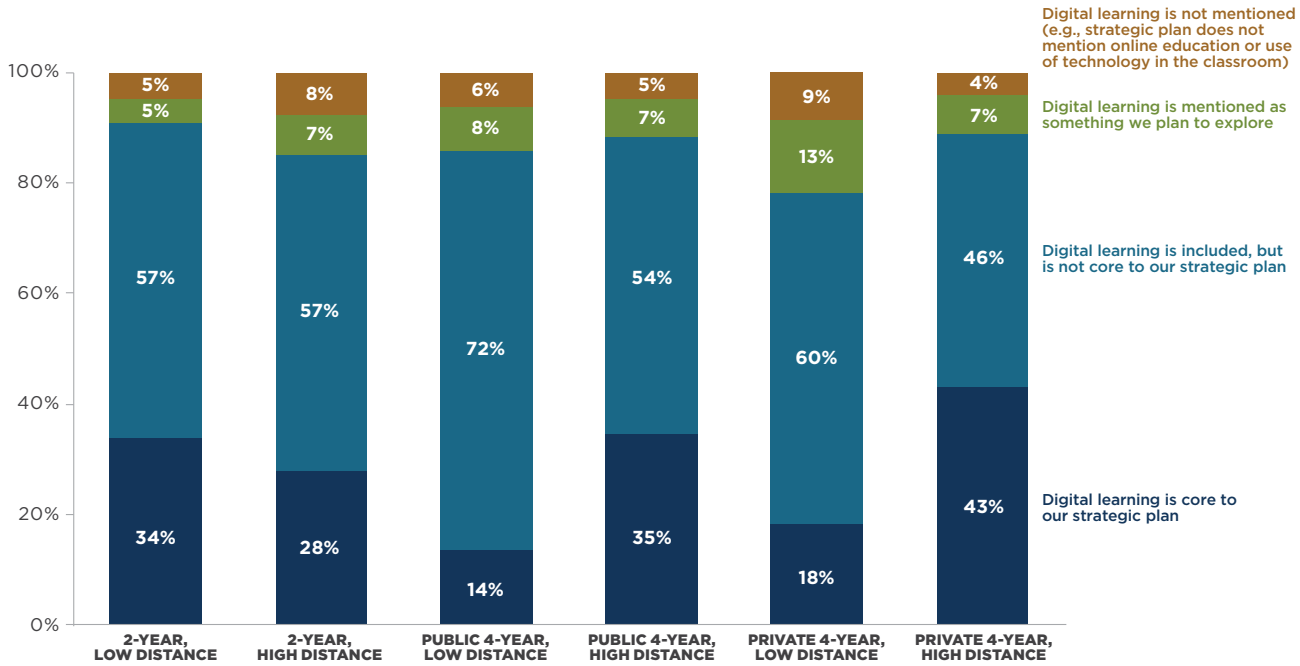


FIGURE 3: ADMINISTRATOR SURVEY QUESTION:

From your perspective, how would you rate your institution in the following categories related to the use of instructional technology to support teaching and learning, i.e., "digital learning"? "My institution views digital learning as strategic for achieving our goals"

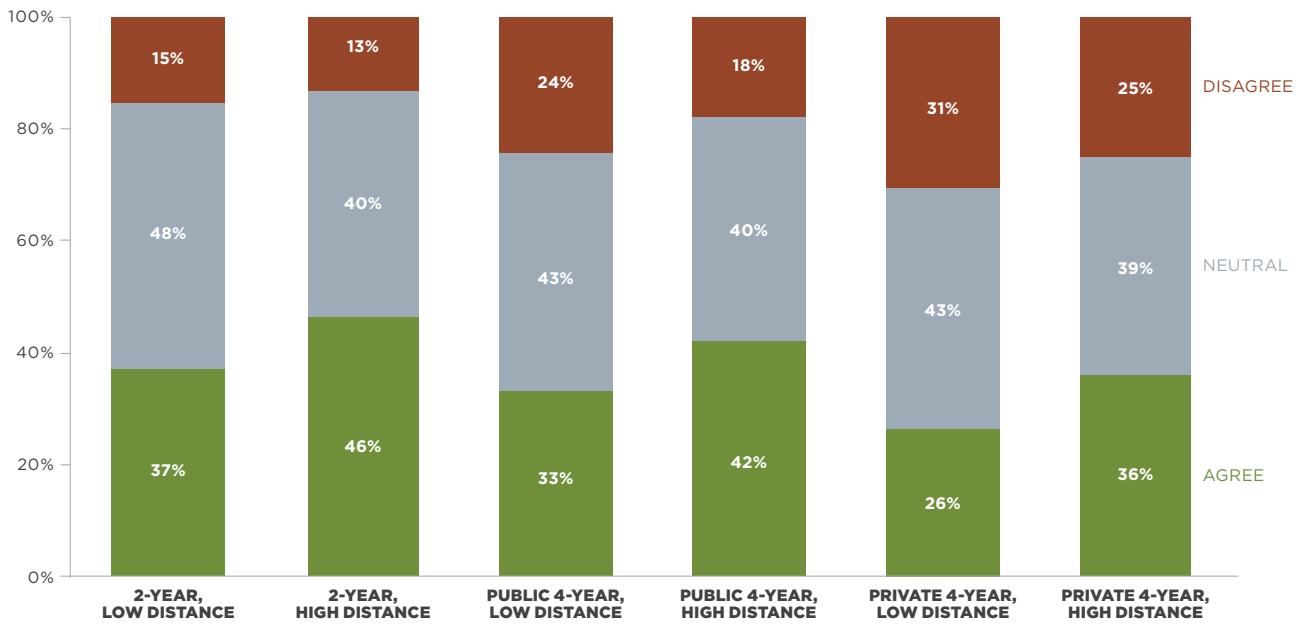


FIGURE 4: ADMINISTRATOR SURVEY QUESTION:

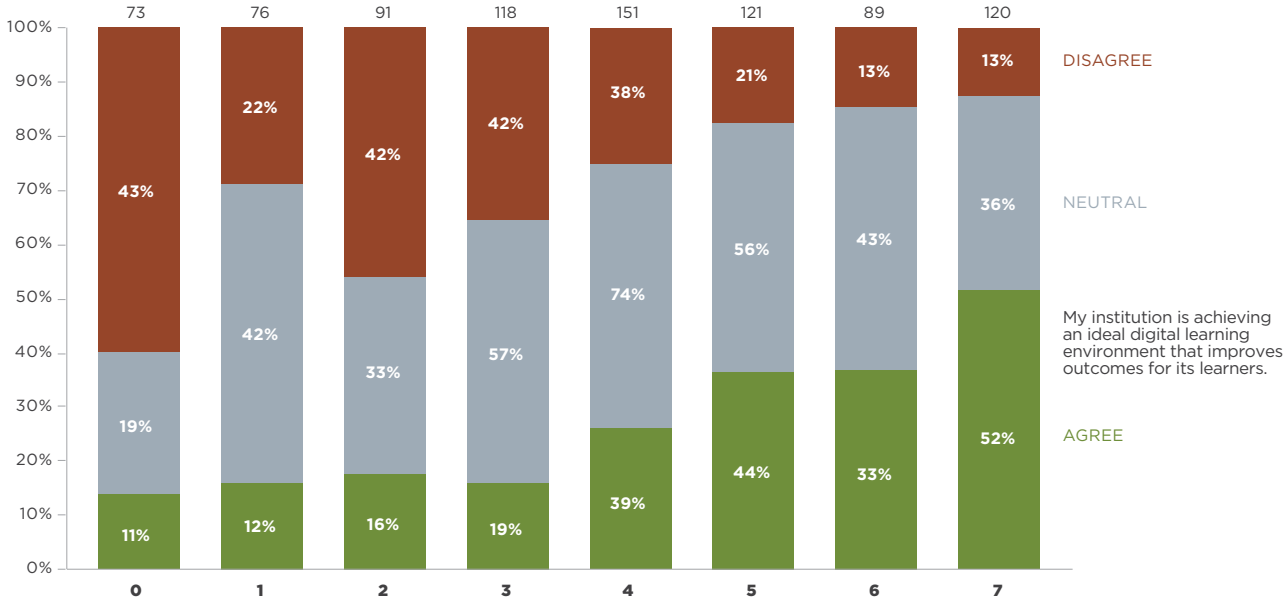
Is the use of digital learning at your institution important to helping achieve any of the following strategic priorities? (Select all that apply)

Percent selecting each strategic priority

STRATEGIC PRIORITY	2-YEAR, LOW DISTANCE	2-YEAR, HIGH DISTANCE	PUBLIC 4-YEAR, LOW DISTANCE	PUBLIC 4-YEAR, HIGH DISTANCE	PRIVATE 4-YEAR, LOW DISTANCE	PRIVATE 4-YEAR, HIGH DISTANCE
Improve access and scheduling flexibility for students	78%	83%	71%	82%	59%	75%
Encourage faculty to implement innovative instructional methods	63%	70%	67%	71%	70%	61%
Increase retention and rates of degree completion	55%	68%	50%	64%	41%	52%
Identify new / alternative revenue streams	40%	51%	64%	71%	61%	76%
Become more cost effective in course development and delivery	50%	51%	56%	63%	44%	69%
Enhance the value of our institutional brand	42%	49%	39%	55%	44%	62%
Increase the diversity of the student body	22%	40%	24%	35%	23%	34%

Note: Response options include: Digital learning has been / is being implemented in pursuit of this strategic priority, Digital learning is not integral to this strategic priority, Not a Strategic Priority / NA; Table shows percent of administrators who indicated that "Digital learning has been / is being implemented in pursuit of this strategic priority"

FIGURE 5: ADMINISTRATOR: NUMBER OF STRATEGIC GOALS SELECTED & PERCEPTION OF INSTITUTIONAL DIGITAL LEARNING ENVIRONMENT



Note: Full question: Is the use of digital learning at your institution important to helping achieve any of the following strategic priorities? Responses: Digital learning has been / is being implemented in pursuit of this strategic priority, Digital learning is not integral to this strategic priority, Not a Strategic Priority / NA

FIGURE 6: ADMINISTRATOR SURVEY QUESTION:

Understanding that there is variability, please select the top 3 most important factors that contribute to a successful implementation of digital learning?

Percent selecting each factor

STRATEGIC PRIORITY	2-YEAR, LOW DISTANCE	2-YEAR, HIGH DISTANCE	PUBLIC 4-YEAR, LOW DISTANCE	PUBLIC 4-YEAR, HIGH DISTANCE	PRIVATE 4-YEAR, LOW DISTANCE	PRIVATE 4-YEAR, HIGH DISTANCE
Support for faculty professional development	72%	75%	63%	69%	72%	59%
In-house IT / technical support	57%	58%	56%	58%	66%	61%
Incentives for faculty practice change / course redevelopment effort	36%	38%	52%	44%	50%	39%
Processes / resources for supporting course re-design	28%	30%	49%	43%	43%	50%
A Center for Teaching and Learning at your institution	25%	18%	21%	20%	22%	18%
Processes / resources for evaluating quality / effectiveness	28%	31%	20%	19%	15%	18%
Alignment of stakeholders in support of implementation	20%	18%	17%	18%	17%	32%
A Center for Online or Distance Education at your institution	30%	25%	14%	24%	8%	17%
Use of external partners / vendors	5%	4%	3%	2%	6%	2%

Note: Top 3 responses per segment are shaded

FIGURE 7: ADMINISTRATOR SURVEY QUESTION:

What do you perceive to be the most significant barriers to implementing digital learning at your institution? (Select up to 5)

Percent selecting each barrier

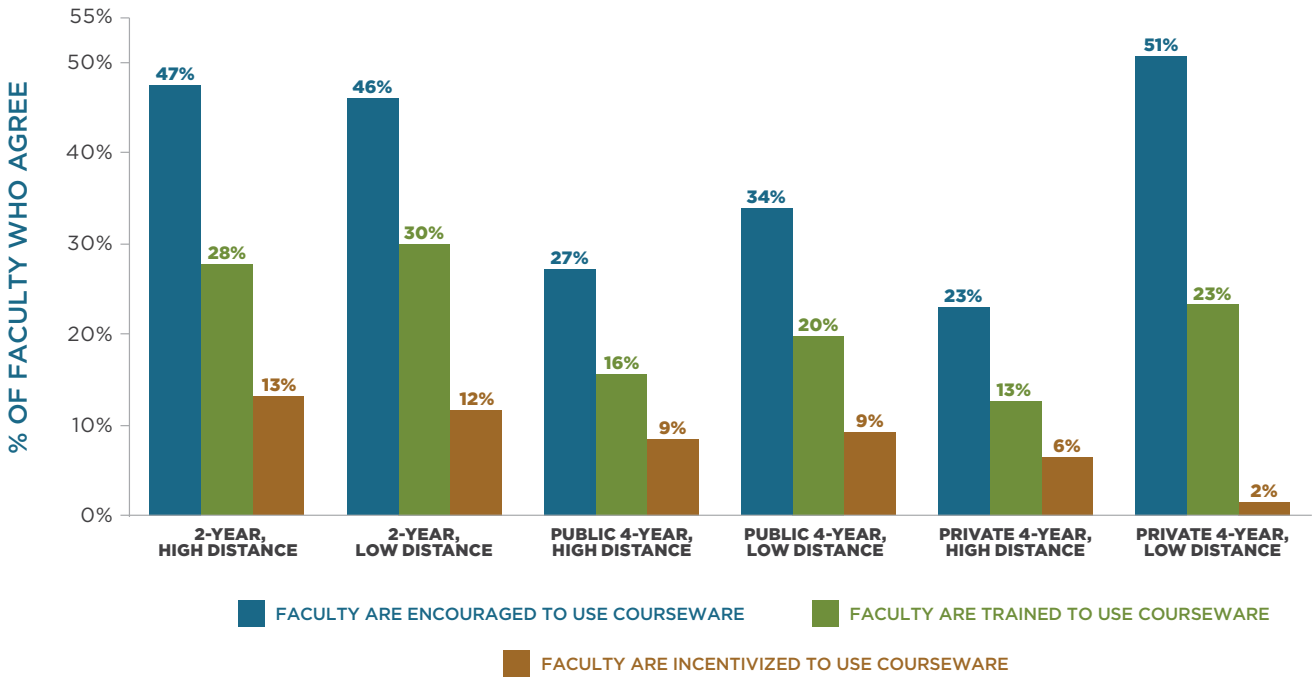
STRATEGIC PRIORITY	2-YEAR, LOW DISTANCE	2-YEAR, HIGH DISTANCE	PUBLIC 4-YEAR, LOW DISTANCE	PUBLIC 4-YEAR, HIGH DISTANCE	PRIVATE 4-YEAR, LOW DISTANCE	PRIVATE 4-YEAR, HIGH DISTANCE
Faculty time/effort	65%	68%	81%	75%	72%	79%
Concern over efficacy	51%	38%	56%	48%	46%	49%
Competing priorities	56%	41%	44%	45%	41%	47%
Limited IT support	37%	45%	35%	36%	45%	51%
Faculty resistance	22%	39%	39%	46%	39%	39%
Institutional culture	27%	29%	34%	25%	43%	36%
Technical integration challenges	37%	38%	32%	31%	30%	34%
Cost to institution	37%	34%	22%	20%	28%	31%
Cost to students	16%	25%	9%	22%	7%	7%
Technology is not yet mature	6%	10%	13%	11%	15%	19%

Note: Response options include: College / institutional level leadership; Individual faculty; Division / program level leadership, Department level leadership; Other

FIGURE 8: FACULTY SURVEY QUESTION:

Please rank your level of agreement with the following statements regarding the use of courseware at your institution.

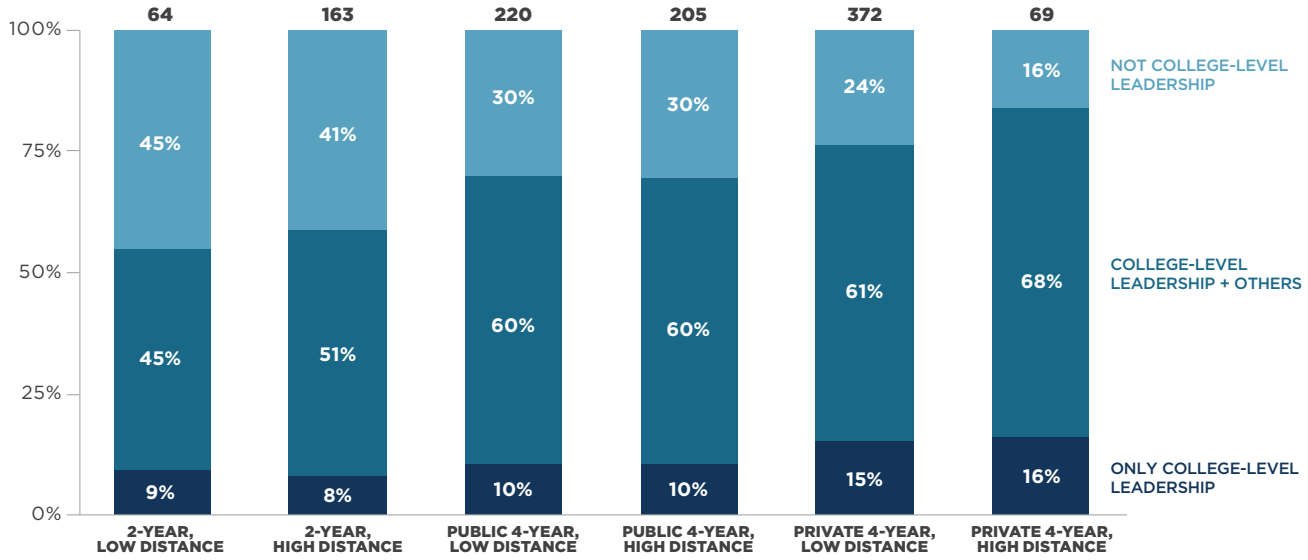
Percent who agree or strongly agree



Note: Bar captures response for the sum of respondents who selected "strongly agree" or "somewhat agree"

FIGURE 9: ADMINISTRATOR SURVEY QUESTION:

Who influences the decisions on the launch or development of new online / blended programs at your institution? (Select all that apply)

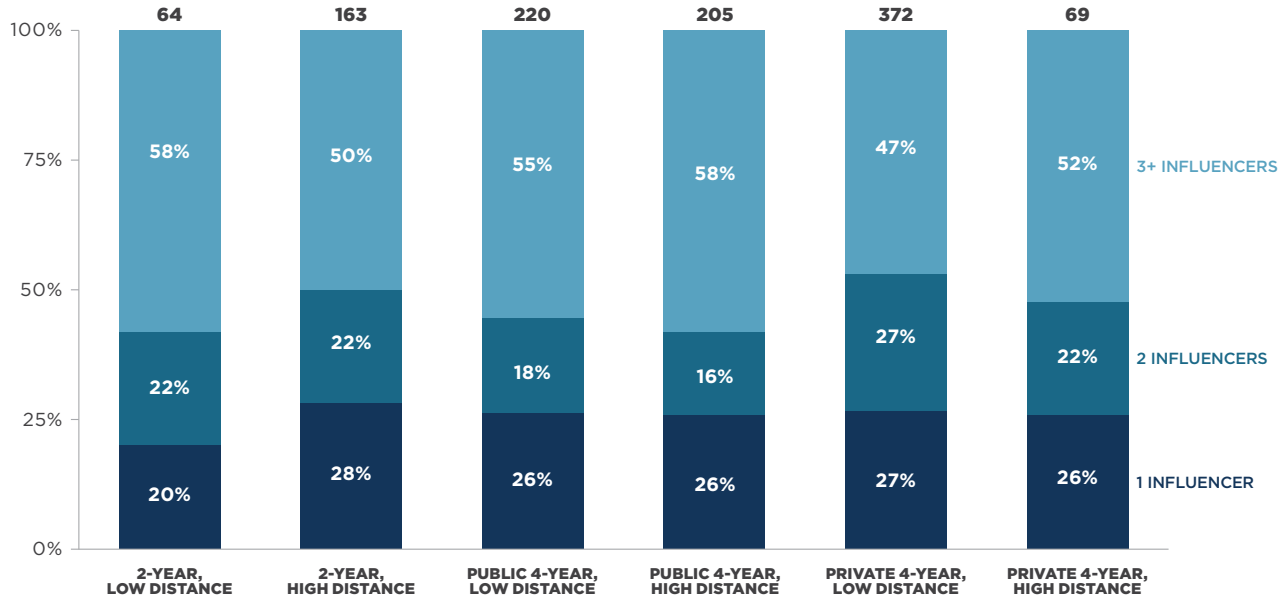


Note: Top 3 responses per segment are shaded

FIGURE 10: ADMINISTRATOR SURVEY QUESTION:

Who influences decisions on the launch or development of new online / blended programs at your institution? (Select all that apply)

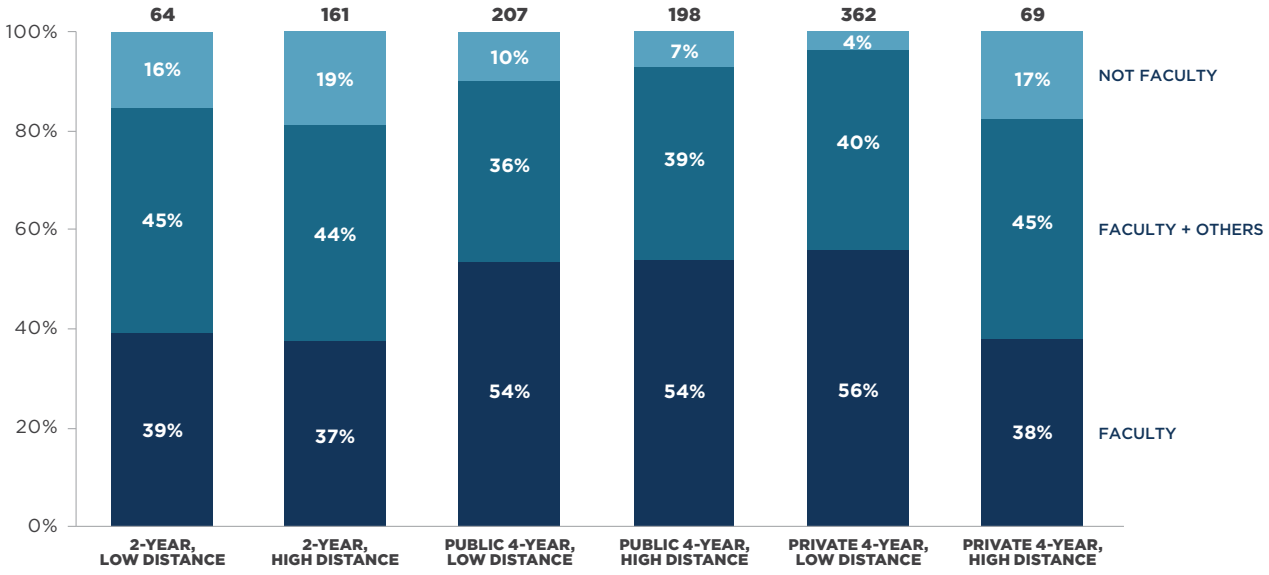
Number of influencers selected



Note: Response options include: College / institutional level leadership; Individual faculty; Division / program level leadership, Department level leadership; Other

FIGURE 11: ADMINISTRATOR SURVEY QUESTION:

Who influences decisions on digital learning materials selection at your institution? (Select all that apply)

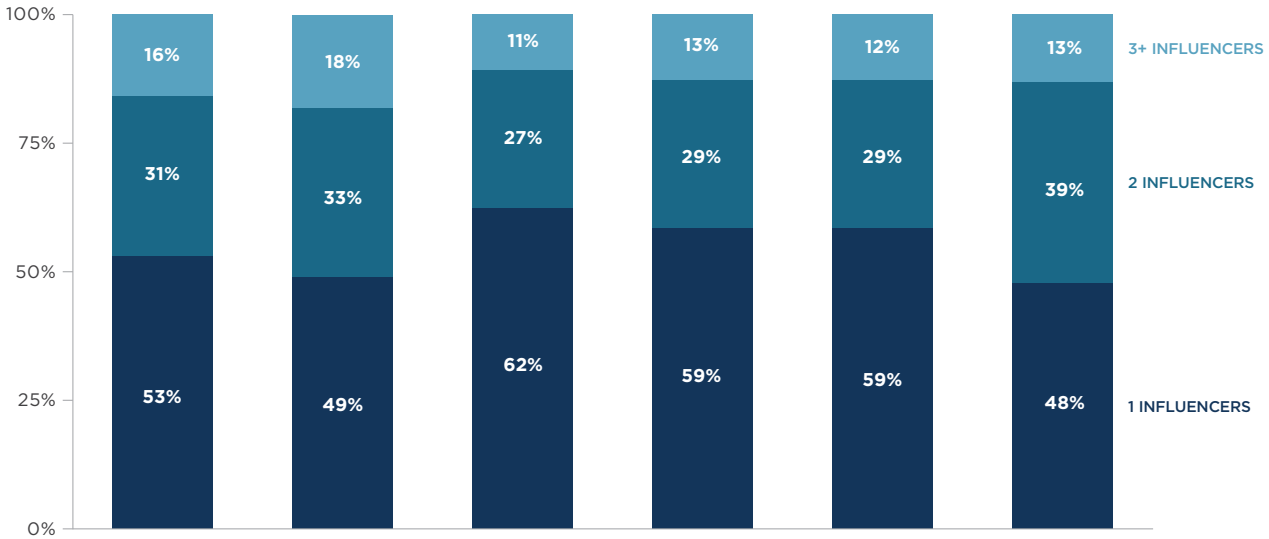


Note: Response options include: College / institutional level leadership; Individual faculty; Division / program level leadership, Department level leadership; Other

FIGURE 12: ADMINISTRATOR SURVEY QUESTION:

Who influences decisions on digital learning materials selection at your institution? (Select all that apply)

Number of influencers selected

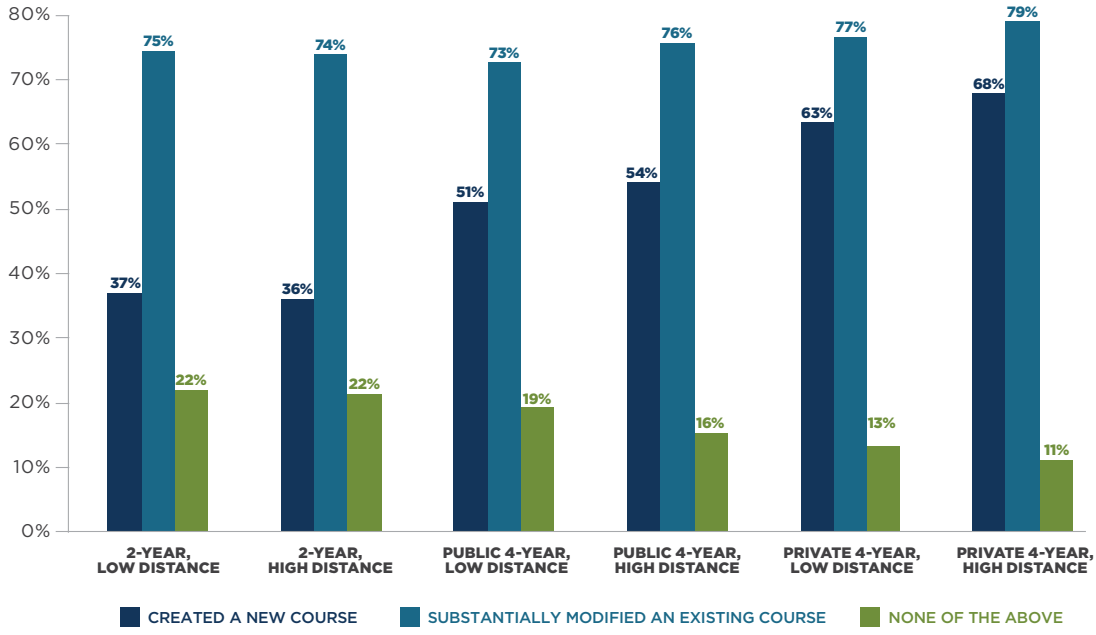


Note: Response options include: College / institutional level leadership; Individual faculty; Division / program level leadership, Department level leadership; Other

FIGURE 13: FACULTY SURVEY QUESTION:

Which of the following have you done in the past three years, either working alone or with others? (Select all that apply)

Percent selecting each option



n=2,454

FIGURE 14: FACULTY SURVEY QUESTION:

For the course you have selected, whose decision was it to embark on its design / re-design?

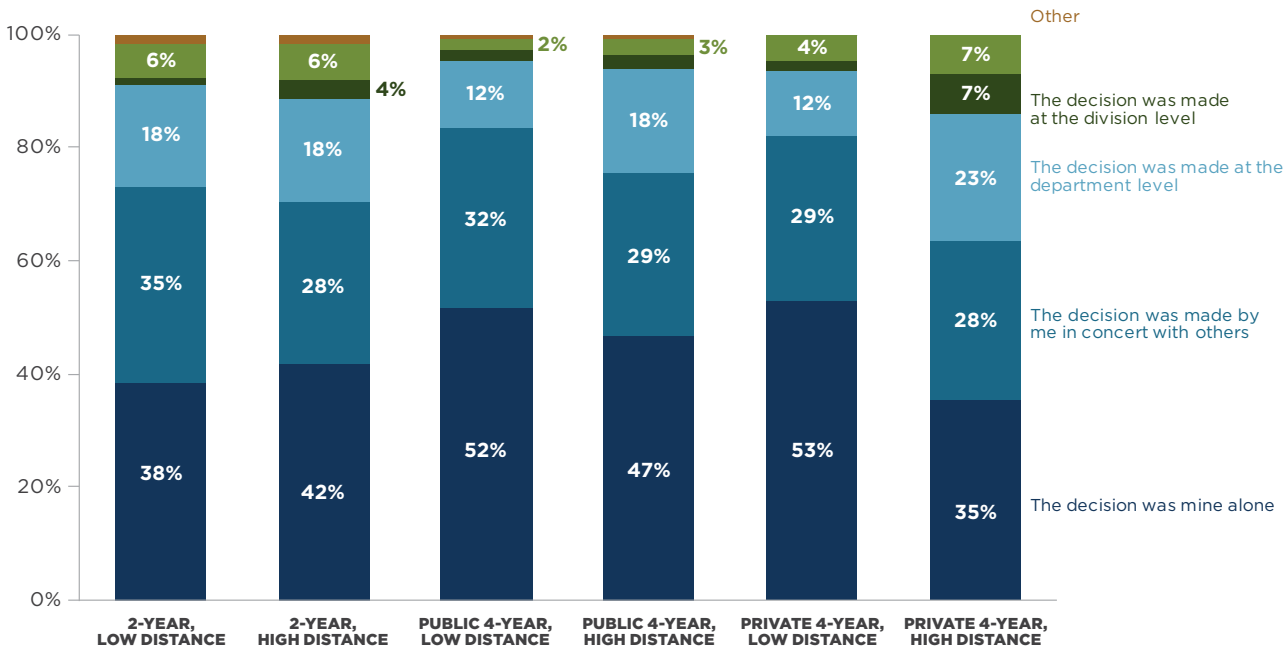
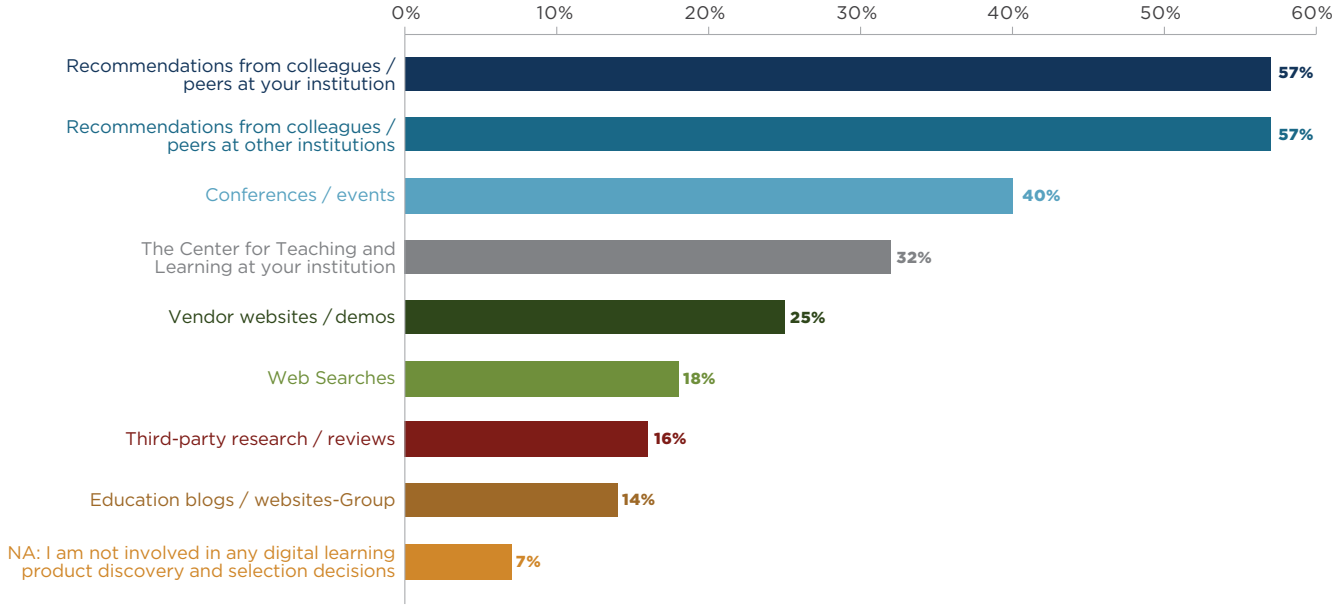


FIGURE 15: ADMINISTRATOR SURVEY QUESTION:

Which of the following resources are most valuable to inform your digital learning product discovery and selection? (Choose up to three)

Percent selecting each resource



APPENDIX C
COMPARISON OF 2014 AND 2016 FINDINGS

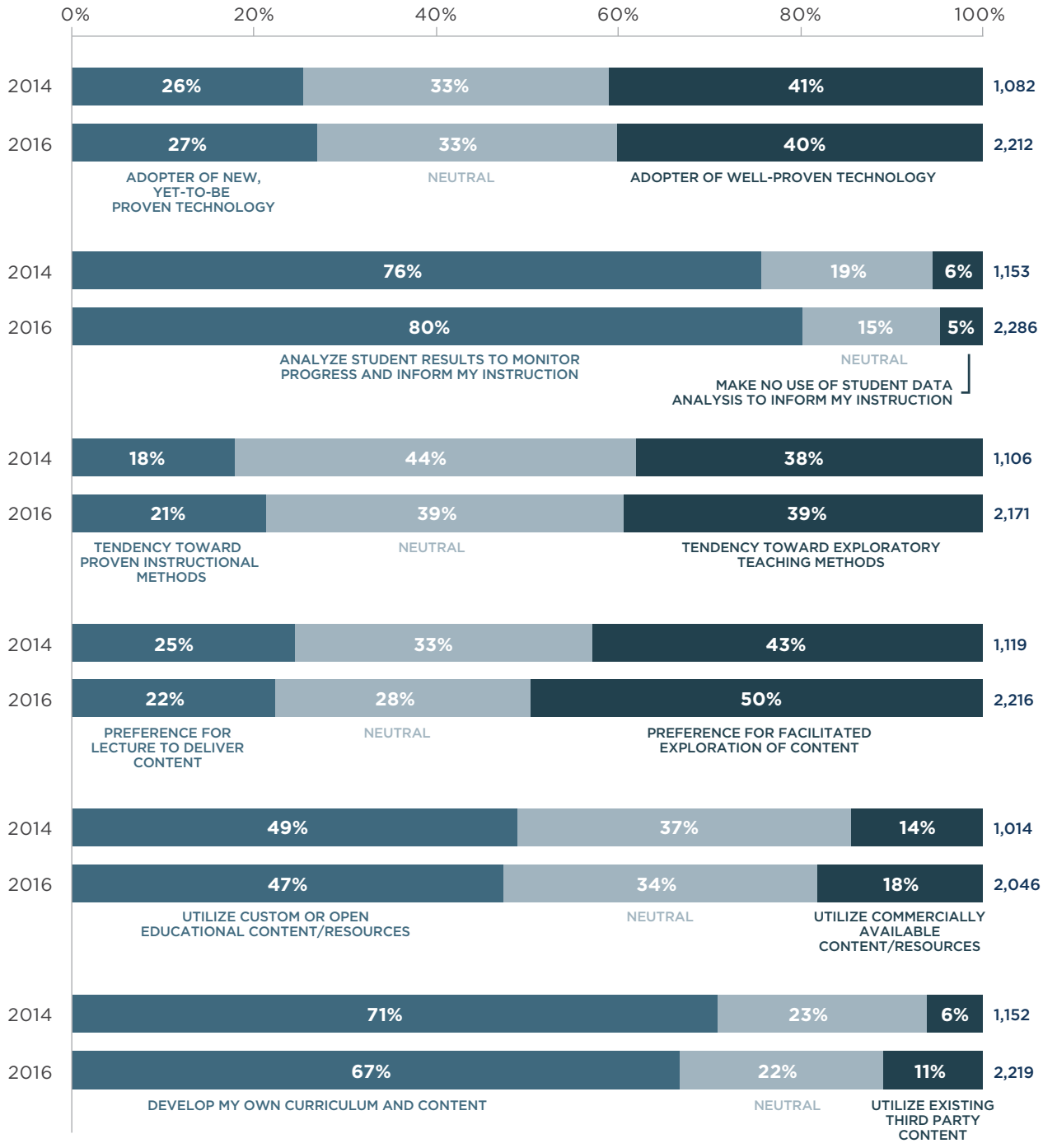
Note: The definitions of courseware used in the 2014 and 2016 surveys were not the same. The 2016 survey included a more specific and narrow definition, which we hypothesize to be a primary reason for lower levels of awareness reported in 2016 as compared to 2014. The definition used in each survey is provided below.

2014: Digital courseware is curriculum delivered through purpose-built software to support teaching and learning.

2016: Courseware is instructional content that is scoped and sequenced to support delivery of an entire course through software that is built specifically for educational purposes (e.g., YouTube is not considered courseware). Courseware includes assessments to inform personalization of instruction and is equipped for adoption across a range of institutional types and learning environments (face-to-face, online, and blended / hybrid). Courseware is not a learning management system.

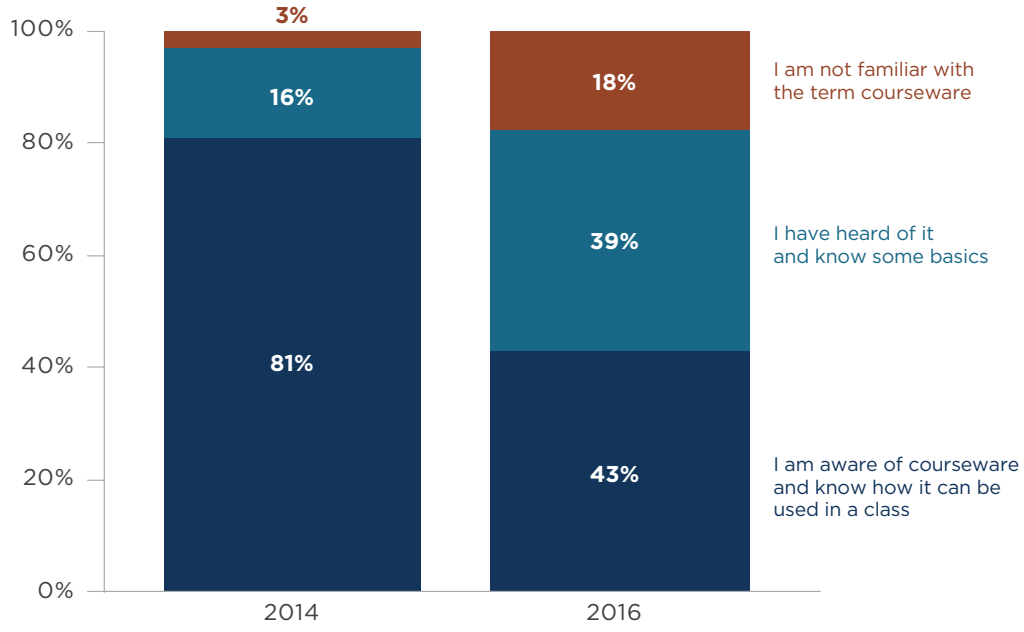
FACULTY SURVEY QUESTION:

In order to help us understand your instructional style, please use the sliders below to indicate where your instructional tendencies and preferences fall on these dimensions.



ADMINISTRATOR SURVEY QUESTION:

Are you familiar with the term courseware?



ADMINISTRATOR SURVEY QUESTION:

Top barriers to digital courseware adoption (2014) / digital learning implementation (2016)

	2014 – TOP 5 BARRIERS TO DIGITAL COURSEWARE	2016 – TOP 5 BARRIERS TO DIGITAL LEARNING
Response Rank 1	Additional time required for faculty	Faculty time/effort required
2	Efficacy of digital courseware in improving learning outcomes	Concern over efficacy on learning outcomes
3	Poor implementation support for institutions and faculty	Competing priorities
4	Resistance to shift in instructional method	Limited IT support staff
5	Institutional culture	Faculty resistance

Full Survey Questions:

2014: What are the most significant barriers to adoption of digital courseware at your institution?

Please drag up to three factors to the box on the right (the order in which you drag the three factors is not important).

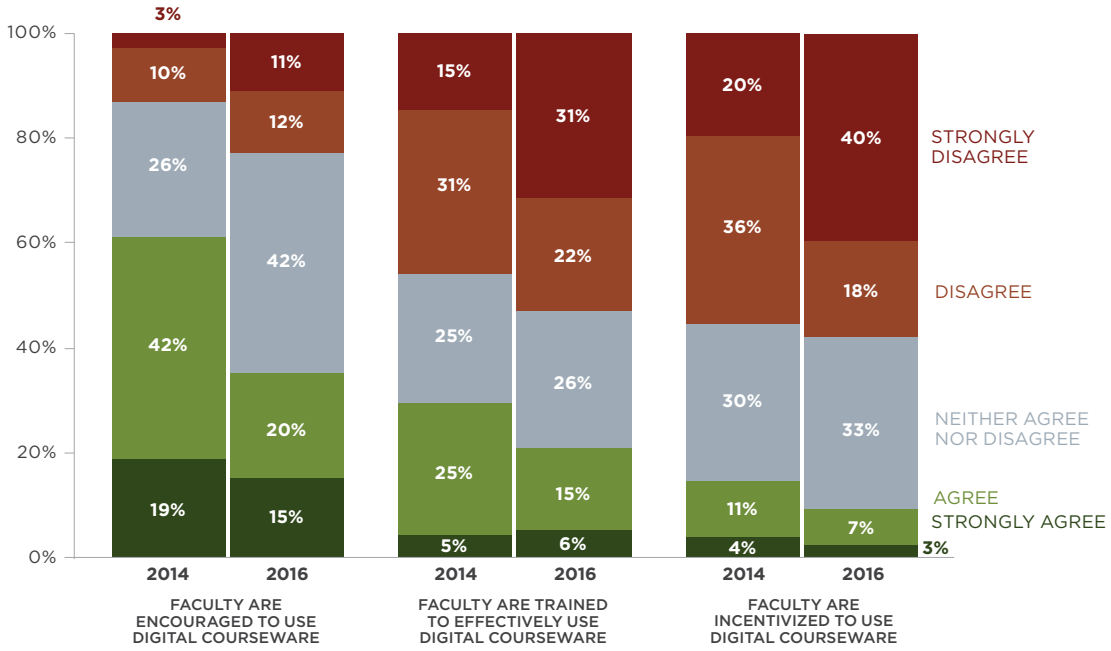
- 21 Options for Selection: Additional time required for faculty; efficacy of digital courseware in improving learning outcomes; technical integration challenges; lack of alignment with my philosophy of instructional design; additional cost to students; reduced control over course content and student experience; resistance to shift in instructional method; lack of relevant courseware; poor implementation support for institutions and faculty; concern that technology is not reliable; additional cost to institution; perceived low quality of courseware; low faculty awareness of digital courseware products; institutional culture; questions about content ownership; low institutional awareness of digital courseware products; accreditation issues/concerns; difficulty differentiating between courseware products; prohibitive institutional policy; faculty collective bargaining issues; other

2016: What do you perceive to be the most significant barriers to implementing digital learning at your institution? (Select up to 5, the order in which you select is not important.)

- 10 Options for Selection: Faculty time/effort required; concern over efficacy on learning outcomes; competing priorities; limited IT support; faculty resistance; institutional culture; technical integration challenges; additional cost to institution; additional cost to students; technology is not yet mature

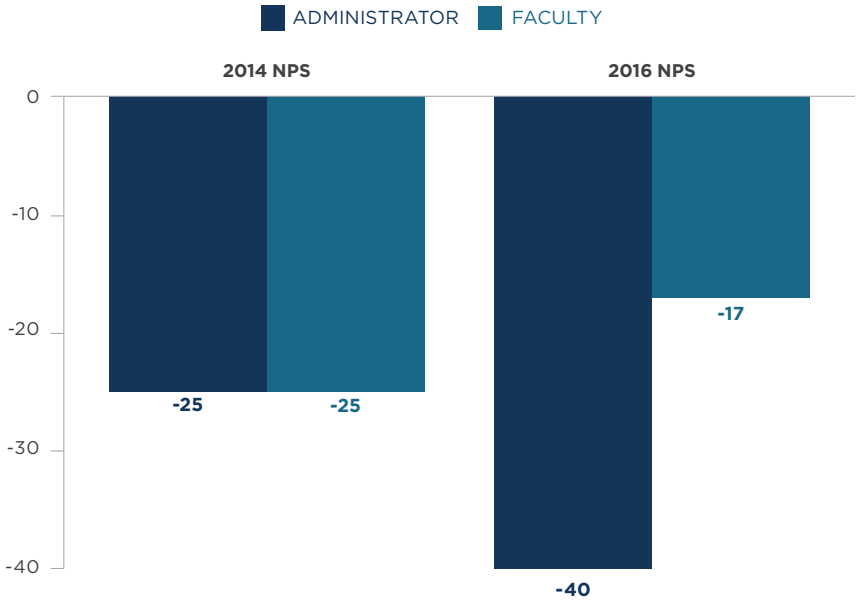
FACULTY SURVEY QUESTION:

Percent of Faculty who Agree with the Following Statements: Faculty are encouraged to use courseware; Faculty are incentivized to use courseware; Faculty are trained to use courseware



ADMINISTRATOR AND FACULTY SURVEY QUESTION:

Net Promoter Score



2014: Faculty: How likely are you to recommend the digital courseware product [you are most familiar with] to a friend or colleague in your institution or others?

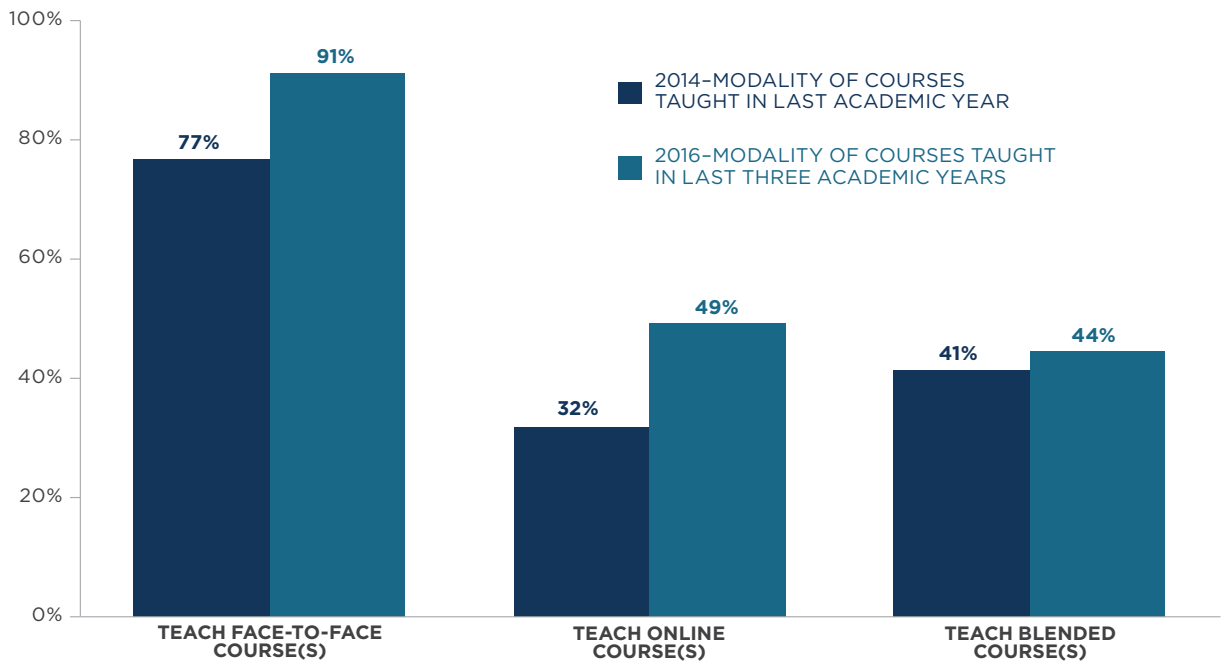
Administrator: Based on your institution's experience with digital courseware, how likely are you to recommend digital courseware to a peer at another institution?

2016: Faculty: What is the primary courseware product used for the course you have been describing for the course sample? How likely are you to recommend this courseware to a friend or colleague?

Administrator: What courseware product are you most familiar with that is used at your institution? How likely are you to recommend this courseware to a friend or colleague?

FACULTY SURVEY QUESTION:

Modality of Courses Taught by the Faculty Sample

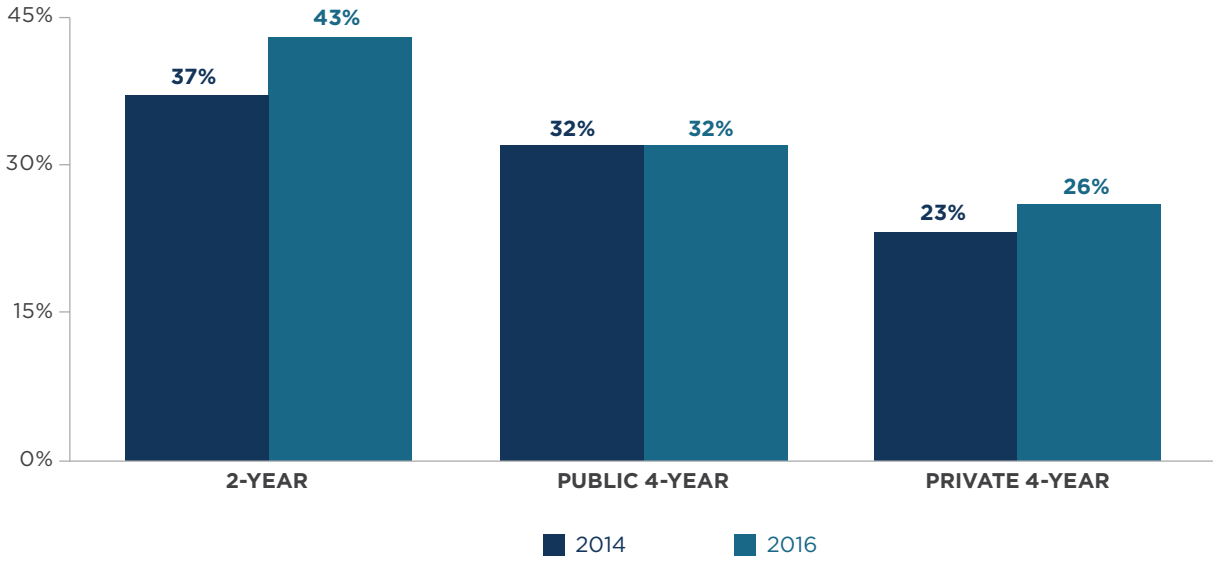


Full question: 2014: What courses did you teach over the past academic year? (Select all that apply)

Full question: 2016: Which of the following have you taught during the past three academic years? (Select all that apply)

FACULTY SURVEY QUESTION:

Percent of Faculty Who Have Used Courseware in the Last 3 Years



ADMINISTRATOR SURVEY QUESTION:

Influencers of Digital Courseware (2014) and Digital Learning Materials (2016)
(Percent of administrators selecting each influencer)

	2014 - COURSEWARE INFLUENCERS	2016 - DIGITAL LEARNING MATERIALS INFLUENCERS
RESPONSE RANK 1	Individual Faculty (58%)	Individual Faculty (90%)
2	Provost (41%)	Department-Level Leadership (40%)
3	Deans (41%)	Division/Program-Level Leadership (15%)
4	Department/Program Chair (33%)	Institutional Leadership (13%)
5	Director of Distance Education (33%)	Other (2%)
6	CIO / CTO (24%)	
7	President (20%)	
8	Students (8%)	
9	Faculty Senate (8%)	
10	Other (10%)	

Note: Full question: 2014: Who are the top influencers for decisions on digital courseware purchasing for your institution? (Select up to 3)

2016: Who influences Selecting digital learning materials (e.g., e-textbooks, courseware) at your institution? (Select all that apply)

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Finally, any errors, omissions, or inconsistencies across this publication are the responsibility of Tyton Partners alone.

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Gates Bryant is a general manager and strategy consultant with a successful track record of bridging the gap between innovative strategy and practical execution. He joined Tyton Partners as a partner in 2011.

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