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TIME FOR CLASS TOOLKIT

Navigating the complex landscape of digital learning tools is a challenge. This toolkit offers research-based insights to inform your institutional dialogue, decision-making and action.

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ABOUT THE SURVEY

**Overview of *Time for Class 2019*
survey methodology, sample size,
and demographics**

TIME FOR CLASS TOOLKIT

Time for Class (T4C) 2019 is a national, longitudinal survey of over 4,000 higher education faculty and administrators. This survey is designed to help higher education stakeholders gain a better understanding of digital courseware and other learning tools, with the ultimate aim of increasing affordability and accessibility for students. The survey targets a representative sample of respondents and has been weighted to reflect the broad range of institutions serving U.S. students, along with their unique needs. The *T4C* survey has been fielded since 2014 by Tyton Partners and the Babson Survey Research Group with support from the Bill & Melinda Gates Foundation. The Time for Class Toolkit is a set of action briefs based on research from the *T4C* survey.

Online surveys were distributed in December 2018 and January 2019 to administrators and faculty. Responses were collected from 1,639 administrators and 2,459 faculty members at 1,624 unique postsecondary institutions (Figures 1 & 2). Incentives of \$10 and \$15 were used to target specific populations and ensure a final balanced sample. Faculty and administrator respondents were weighted against Carnegie Classification attributes to best reflect the population of the United States higher education ecosystem. Because not all questions were presented to all respondents, response numbers vary by segment. Due to rounding, percentages may sum to slightly more or less than 100%.

Figure 1: Overview of Faculty Survey Respondents

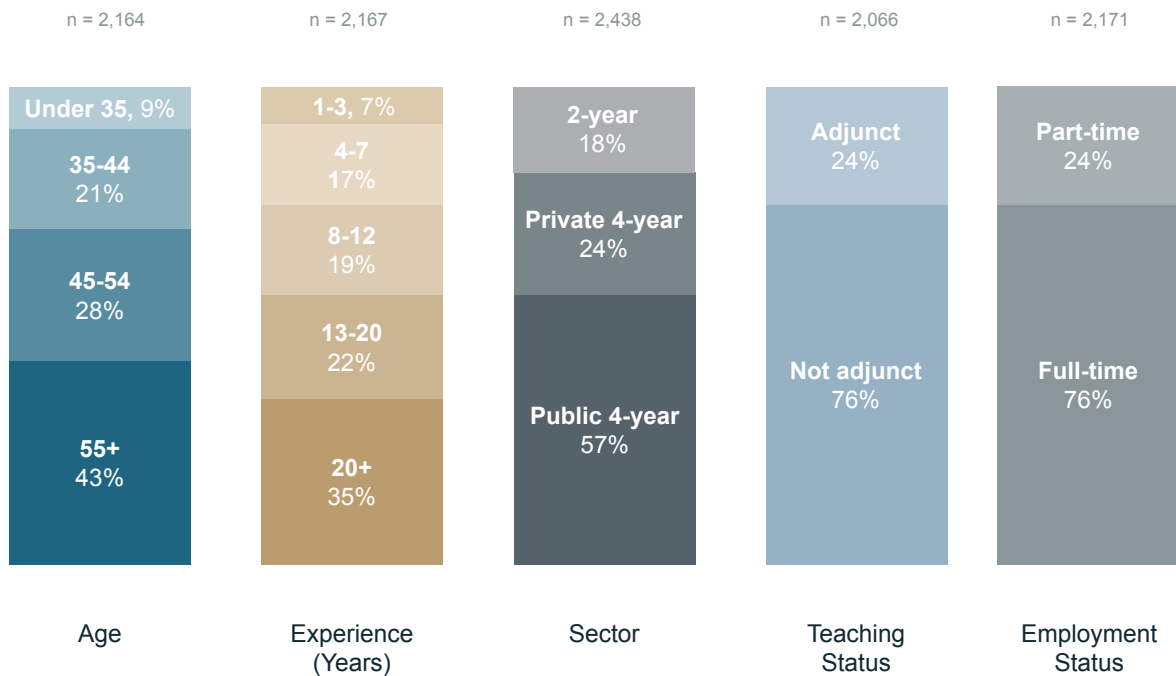
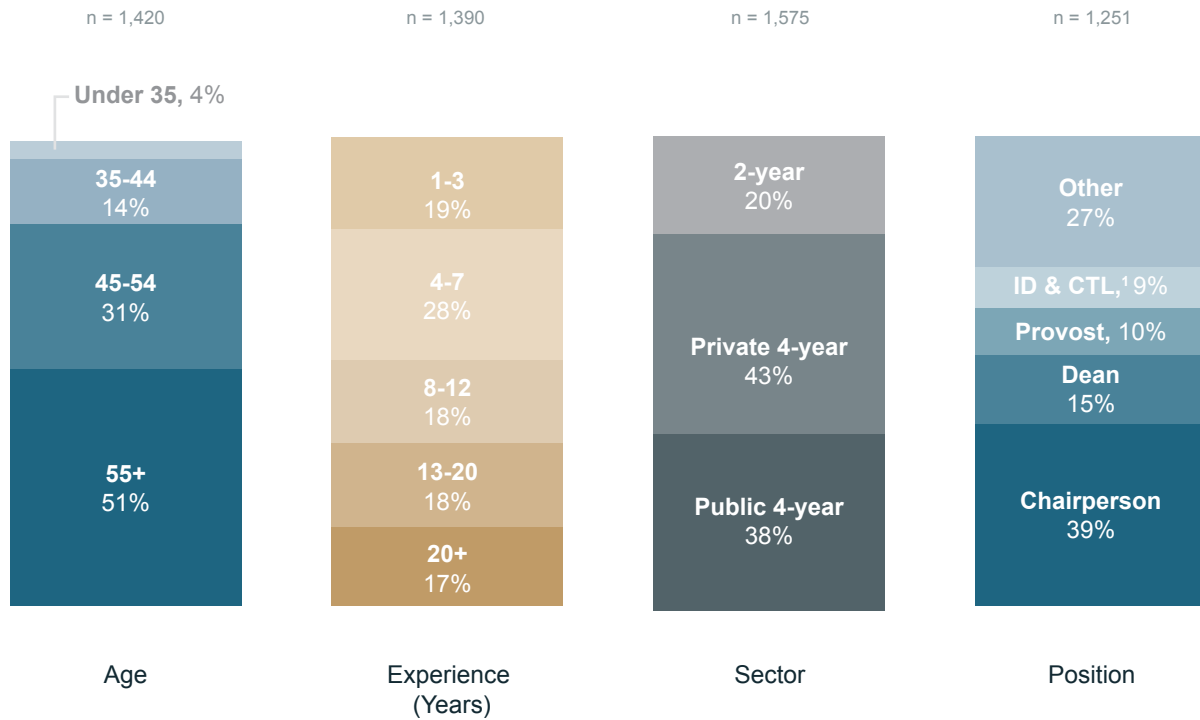


Figure 2: Overview of Administrator Survey Respondents



Some analyses use participant responses to questions, some use voluntarily provided demographic information, and some use appended institution-level data from the Integrated Postsecondary Education System (IPEDS) of the National Center for Education Statistics. Key segmentations for analysis include role (faculty or administrators), degree of distance enrollment (high- or low-distance)², type of institution (two-year, four-year public, or four-year private), and use of specific digital tools (courseware users or nonusers), among others.

After the data was compiled and merged with the IPEDS database, responders and nonresponders were compared to create weights, where necessary, to ensure that the survey results reflected the characteristics of the sample population. The responses were compared based on institution size and control (for-profit, private, or nonprofit) and whether the institution was part of a large system or not. These weights provided a small adjustment to the results, allowing for inferences to be made about the population of faculty and administrators at degree-granting institutions of higher education in the United States.

¹Instructional Designers & Centers for Teaching and Learning Staff²Segments are defined by the portion of undergraduate students taking at least one course at a distance: low-distance = up to 25%, high-distance = 25%+

Based on the full response set, the 95% confidence interval is +/- 2.5% for questions asked of the full administrative sample, and +/- 2.0% for questions asked of the full faculty sample. Questions that were addressed to a smaller subset because of skip logic have wider confidence intervals. Generally, subgroups with samples smaller than 30 responses were discounted. A threshold of 10% difference between segments was used as a cutoff indicating difference.

As is the case with all large-scale surveys, *T4C* has the potential for bias. It is possible that respondents willing to take a digital survey as opposed to a paper instrument could be biased towards digital technology. It is also possible that those willing to take the time to discuss their own experiences with digital learning tools did, by nature, have stronger opinions than those who chose not to participate.



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BRIDGING THE GAP BETWEEN DIGITAL LEARNING STRATEGY & EXECUTION



When it comes to digital learning, planning is critical. To set institutional initiatives up for success, strategic plans should be accompanied by intentional sessions on goal-setting and professional development.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

What is the strategy-to-execution gap for digital learning?

What are high-performing institutions doing to achieve a positive digital learning environment?

How can institutions accelerate progress?



KEY INSIGHTS

Although an increasing number of higher education administrators report that their institutions view digital learning as important for achieving strategic goals, few believe their institutions have actually achieved an ideal digital learning environment. The difference between these two attitudes is the strategy-to-execution gap.

Institutions that set clear, measurable, public objectives for digital learning are more likely to be high-performing, as measured by the percent of faculty reporting their institution is achieving an ideal digital learning environment.

High-performing institutions set aside sufficient technical resources and double down on professional development for faculty.

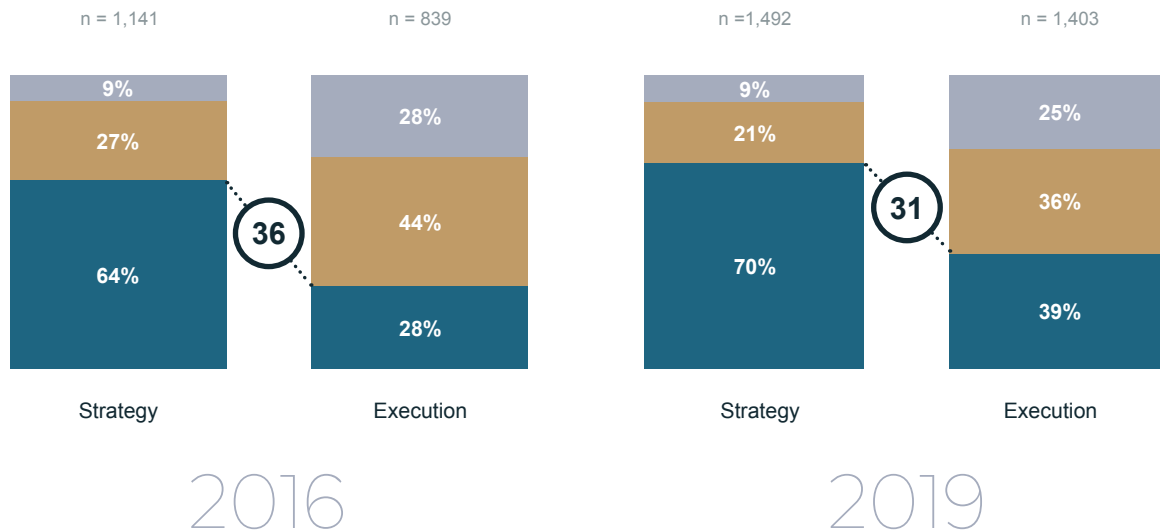


Institutions struggle to achieve ideal digital learning environments.

In the *Time for Class (T4C)* surveys administered in 2016 and 2019, a majority of university administrators (64% and 70%, respectively) indicate that digital learning is strategic for their institution's goals. At many of these institutions, digital learning is explicitly included in, or even core to, their stated strategic plans.

That said, few of these administrators believe that their respective institutions have executed the necessary initiatives to create an ideal digital learning environment. The percentage gap between those institutions rating digital learning as strategic, set beside the percentage achieving ideal digital learning environments, can be seen as digital learning work left to do—or the strategy-to-execution gap (Figure 1).

Figure 1: The Strategy-to-Execution Gap, 2016 and 2019¹



KEY:

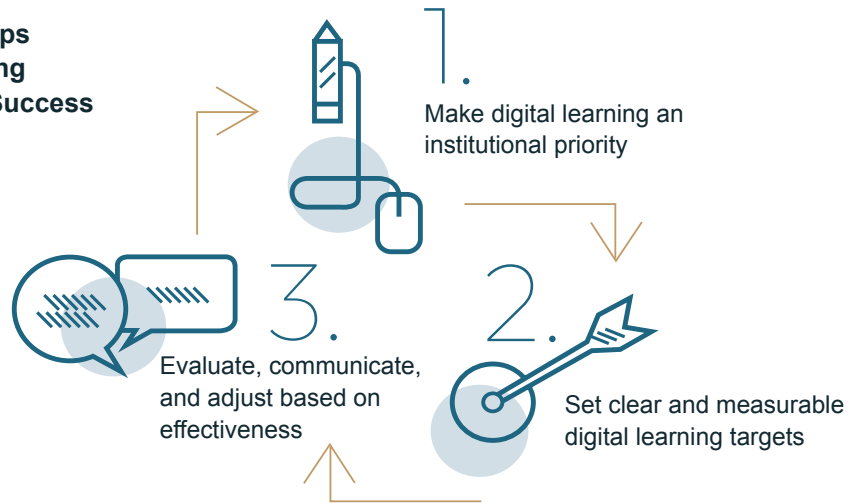
Agree
 Neutral
 Disagree

¹ Strategy graph question: "My institution views digital learning as strategic for achieving our goals"; execution graph question: "My institution is achieving an ideal digital learning environment."

Institutions that set clear, measurable, public objectives for digital learning are more likely to be high-performing.²

At high-performing institutions, there are clear themes in both administrator and faculty responses to questions about digital learning support. From these themes, best practices can be identified (Figure 2).

Figure 2: Key Steps for Digital Learning Implementation Success



1 Make digital learning an institutional priority. Administrators at high-performing institutions are nearly 3x more likely to cite digital learning as core to their strategic plan, rather than included or merely mentioned.³

2 Set clear and measurable learning targets. Administrators in high-performing environments are 2.5x more likely to have measurable goals and outcomes in place for their digital learning programs compared to respondents whose institutions are still developing.⁴ For best results, the strategic plan must be tightly connected to the operational plan. Notably, objectives cited by administrators at high-performing institutions tend to be student-focused—they are at least 20% more likely than respondents at developing schools to cite the following objectives for digital learning initiatives⁵:

- Improving access and scheduling flexibility for students
- Increasing diversity of our student body
- Increasing retention and rates of course completion
- Reducing cost of course materials to students

3 Evaluate, communicate, and adjust based on effectiveness. In support of their goals, administrators at high-performing institutions are more than 2x as likely as those at developing institutions to have a process in place to assess their programs' effectiveness.⁶

²Institutions whose respondents agree with the statement "My institution is achieving an ideal digital learning environment" are considered high-performing for the purposes of this brief. Institutions whose respondents disagree are considered developing. ³Question: "What role does digital learning play in your institution's strategic plan?" ⁴Question: "Which of the following would you use to describe your institution. Please select all that apply." Answer: "We have goals and defined measurable outcomes for digital learning." ⁵Question: "Is digital learning at your institution key to any of the following strategic priorities? Please select all that apply." Answer: "We have a process for evaluating the effectiveness of digital learning technology based on learning outcomes."

High-performing institutions back their institutional commitments with sufficient resources.

Inadequate budgets create roadblocks on the path to ideal digital learning environments. Only 15% of faculty respondents at high-performing institutions report that their institutional budgets are barriers to success,⁷ compared with 31% of those at developing institutions. Administrator responses show the same trend, with only 21% of respondents at high-performing institutions citing budgets as a barrier compared with 32% of respondents at developing institutions.

Ongoing investment in technology resources is particularly important. Administrators at high-performing institutions pay close attention to the state of their IT resources. 68% of administrators at high-performing schools say their institutions “maintain and continuously assess [their] digital learning technology infrastructure,” while only 28% of administrators at developing schools claim the same.⁸

High-performing institutions double down on professional development.

By far the most striking contrast between respondents at high-performing institutions relative to other institutions is the focus on professional development for their faculty. Administrators at high-performing institutions are 6x as likely to report that digital learning professional development has been implemented effectively and at scale as those at developing schools (Figure 3).

Figure 3: Professional Development Implementation Status⁹



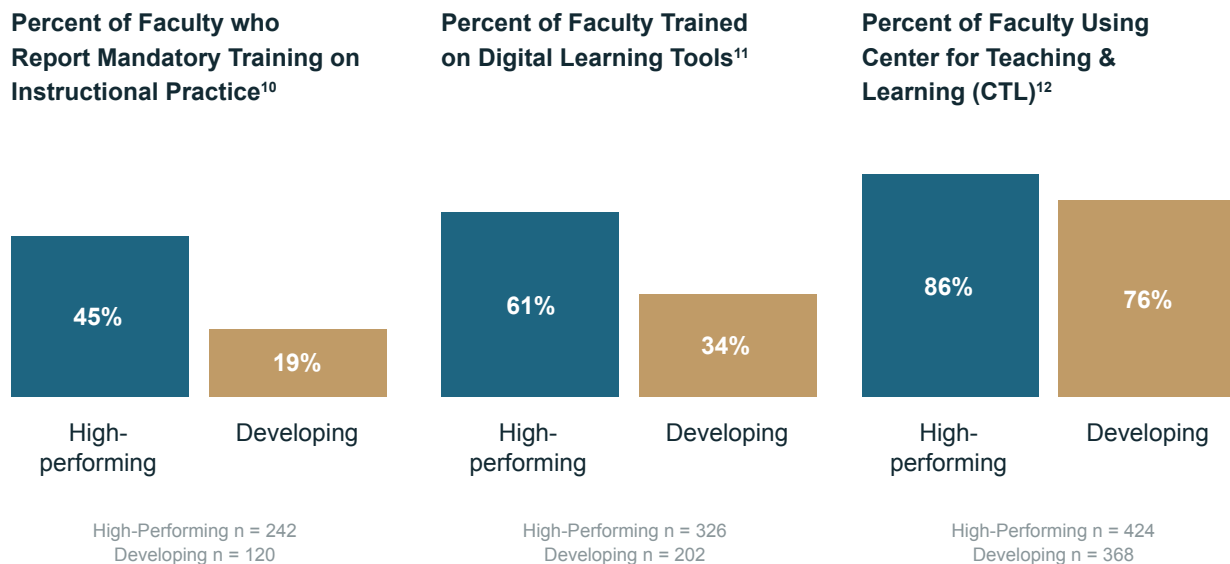
High-Performing n = 454 Developing n = 142

KEY:

■ Effectively & at scale ■ In progress

⁷Question: “What factors if any have contributed most negatively towards the implementation of digital learning? Please select up to three.”

⁸Question: “Which of the following would you use to describe your institution? Please select all that apply.” Answer: “We maintain and continuously assess our digital learning technology infrastructure.” ⁹Question: “To what extent is digital learning professional development (PD) implemented at your institution?”

Figure 4: Training Differences By Institution Performance

There are observable differences in faculty training between high-performing and developing institutions (Figure 4). Nearly half of faculty at high-performing schools cite training as mandated by their institution. Faculty at high-performing institutions are 27% more likely to be trained on digital learning tools. Faculty at high-performing schools are 10% more likely to have engaged with their Center for Teaching & Learning.

Institutions should be strategic and pick digital tools aligned with their goals and objectives.

While many digital learning resources can be used to support progress towards an ideal environment, there is not one specific tool that can solve all problems or achieve all goals for all institutions. Current faculty users of various tools across the digital learning ecosystem—including courseware, Open Educational Resources (OER), and instructional tools (e.g., social learning platforms, classroom engagement applications, and assessment resources)—are only slightly more likely to cite their institutions as high-performing. Separate briefs in this series provide insight and guidance for digital tool selection, with a focus on courseware.

¹⁰Question: "Does your institution require faculty to participate in professional development on their instructional practice for digital learning?"

¹¹Question: "Which of the following professional development topics for digital learning have you engaged with at your current institution? Please select all that apply." ¹²Question: "Does your institution have a center for teaching and learning?" Answer: "Yes, and I have engaged with it."³

TOOL FOR ACTION

Institutional Transformation Assessment (ITA)¹³

There is a clear and important connection between planning for and resourcing investments in digital learning and achieving results. One important first step to take as you ensure you bridge the digital learning strategy-to-execution gap is to assess the current capacity of your digital learning plan and infrastructure.

The ITA is a broad, multitopic self-assessment tool and accompanying process composed of nine elements that allow institutions to compare their own practices. The ITA can help institutions identify strengths and opportunities for improvement through reflective conversations around the results. These “consensus conversations” and subsequent prioritizations set the stage for institutions to act and for students to succeed. The ITA is intended to support a broader institutional transformation process as described below:

- 1 **Prepare.** Institution leaders review, analyze, and consider digital learning initiatives and goals, understanding that considerable change may be needed.
- 2 **Reflect.** Institution leaders gather information and people to complete the ITA and reflect on goals, progress, and plans.
- 3 **Prioritize.** Leaders review assessment results, relevant digital learning data, and other concurrent strategic initiatives; discuss alternatives; and prioritize to initiate or proceed with plans to address gaps.
- 4 **Act.** Leaders make changes and investments in people, processes, and technology to address gaps.
- 5 **Monitor.** Leaders monitor progress against goals, adapt as necessary, and support changes made with leadership and resources.

¹³The Institutional Transformation Assessment (ITA) is an inquiry and learning tool that has two components: an online self-assessment (based on field-created content), and a group discussion (i.e., the consensus conversation). The goal of the ITA is to help institutions better understand their strengths and areas for improvement to prioritize transformation efforts.

Review the categories and indicators of the ITA. For those areas where you have one or more “no” responses, start a dialogue with key stakeholders and begin the planning and goal-setting processes.

Category	Indicator	Implementation in Progress	Are We Achieving This? (Y/N)	Is This Present in Department-Level Planning? (Y/N)	Is This Part of Institution-Wide Strategic Plan? (Y/N)
Strategic Planning	The institution has a strategic plan with accountable goals and objectives related to the continuous improvement of teaching and learning across all learning environments.	The institution has established a strategic plan with accountable goals and objectives related to continuously improving teaching and learning across all learning environments (face-to-face, hybrid, and online).			
Academic Planning	Through academic planning, the institution sets accountable goals and objectives for the implementation of digital learning tools as part of its effort to continuously improve teaching and learning and to promote the closing of equity gaps in learner outcomes, particularly in foundational courses.	The institution has an academic master plan establishing accountable goals and objectives for the implementation of digital learning tools as part of a continuous improvement effort for teaching and learning and promoting the closing of equity gaps in learner outcomes in the majority of foundational courses.			
Learner Support	The institution has processes and resources to support access, readiness, and engagement for all learner populations across all learning environments, particularly in foundational courses.	Processes and resources are implemented to support access, readiness, and engagement for all learner populations across all learning environments to promote equitable outcomes across all learner populations in the majority of foundational courses.			
Inclusive Teaching Practices	The institution supports the understanding of students' lived experiences and incorporates this into culturally relevant pedagogy and inclusive teaching practices.	Staff, faculty, and administrators build upon their understanding of their student populations' aspirations, lived experiences, and life contexts through implementation of instructional approaches that have been shown to reduce equity gaps. Processes to solicit, analyze, and apply meaningful student feedback from all demographics have become integrated within the institution's operating practices. They intentionally and systemically integrate this understanding and feedback into their goals for inclusive teaching practices, digital learning, and the way they measure outcomes.			

Category	Indicator	Implementation in Progress	Are We Achieving This? (Y/N)	Is This Present in Department-Level Planning? (Y/N)	Is This Part of Institution-Wide Strategic Plan? (Y/N)
Faculty Support	The institution supports faculty and instructor engagement, and professional development around teaching in all learning environments, with a focus on equitable teaching practices.	Planning is implemented and resources allocated for support, engagement, and professional development for faculty and instructors teaching across all learning environments. Equitable teaching practices are observed. Digital tools are leveraged to promote equitable outcomes across all learner populations in the majority of foundational courses.			
Technology Support	The institution provides hardware and software resources in support of teaching and learning.	There is sufficient and ongoing hardware and software resources implemented effectively in the support of teaching and learning in the majority of foundational courses.			
Instructional Design	The institution implements course development and instructional design processes that incorporate a variety of high-quality digital tools in the support of learning objectives and competencies, learner engagement and high impact practices.	Course development and instructional design processes are being systematically undertaken across the majority of foundational courses/departments to incorporate a variety of high-quality digital tools in the support of learning objectives and competencies, the promotion of learner engagement, and high impact practices.			
Individualized Learning	The institution effectively leverages high-quality digital learning tools which provide for individualized and engaging learning opportunities in the achievement of stated learning objectives or competencies across all learning environments.	Policies and practices are being systematically undertaken across the majority of foundational courses/departments to support the use of high-quality digital learning tools which provide for individualized and engaging learning opportunities, including the use of analytics.			
Learner Interaction	The institution effectively leverages the use of high-quality digital learning tools that enhance opportunities for learner interaction to support the achievement of learning objectives and/or competencies across all learning environments.	Policies and practices are being systematically undertaken across the majority of foundational courses/departments to support the use of high-quality digital learning tools and analytics that provide opportunities for interaction that support the achievement of stated learning objectives or competencies across all learning environments.			
Accessibility and Usability	The institution meets recognized accessibility standards in its use of digital tools across all modalities (desktop/tablet/phone).	Policies and processes are in place for continuous monitoring to make sure the institution meets recognized accessibility standards and provides for usability of all digital tools across all learning environments.			
Continuous Improvement	The institution measures the effectiveness of high-quality digital learning tools to support teaching and learning in all learning environments using rubrics, frameworks, assessments, and standard practices and works to continuously improve its digital learning tools.	Policies and practices are being systematically undertaken across the majority of foundational courses/departments for continuous improvement in the effectiveness of high-quality digital learning tools to support teaching and learning in all environments using rubrics, frameworks, assessments, and standard practices.			



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TAKING A PORTFOLIO APPROACH TO MANAGING DIGITAL LEARNING INITIATIVES



Institutions experiment with varied digital learning initiatives to further their objectives. Purposeful portfolio management based on goal setting and resource planning can prevent initiative fatigue and increase success.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

What challenges inhibit the success of digital learning initiatives?

What are the range of strategic priorities institutions seek to address?

How can you use a portfolio approach to build a digital learning strategy and help manage initiative fatigue at your institution?



KEY INSIGHTS

Time and effort required are the most commonly cited barriers to the successful implementation of digital learning initiatives.

Administrators report using digital learning as a tool to support a broad array of institutional goals. The relative importance of these goals differs across institutional types.

Initiatives should be clearly linked back to specific institutional outcomes and priorities that benefit students, whether that be through teaching and learning goals or productivity and efficiency goals.

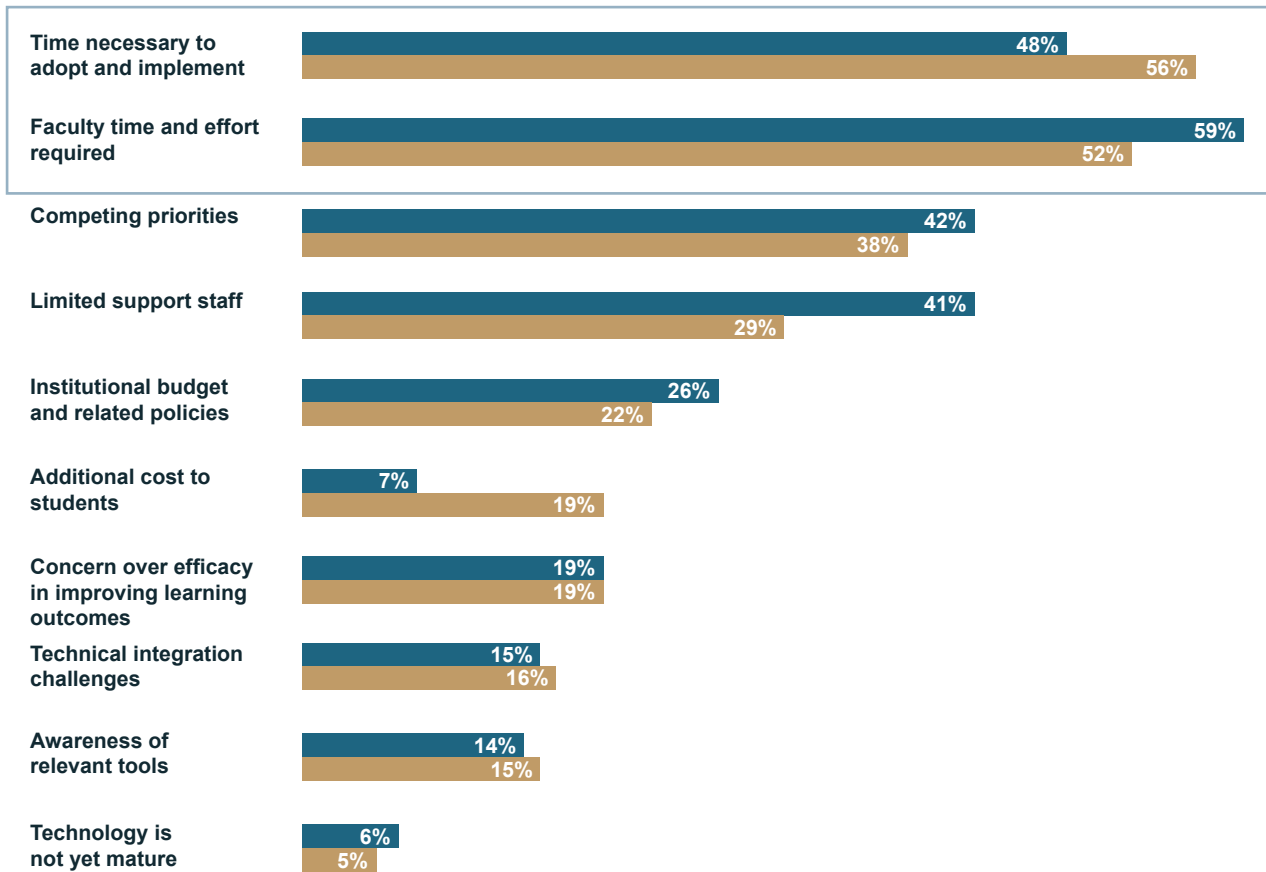
Initiatives should be evaluated based on the time required from primary influencers and stakeholders, whether that be individual or groups of faculty, administrators, or others.



Time and effort are the most commonly cited barriers to the successful implementation of digital learning initiatives.

Unsurprisingly, time and attention are some of the most valuable and finite commodities, but also the critical inputs to success (Figure 1). Carefully and strategically managing faculty, administrator, and staff time to plan and implement new initiatives is critical.

Figure 1: Factors that Inhibit Digital Learning Success¹



KEY:

Administrators Faculty

Administrator n = 1,583 Faculty n = 2,357

¹Question: "What factors have contributed most negatively towards the implementation of digital learning? Select up to three."

Complicating matters, digital learning is used as a tool to advance a broad array of institutional goals.

Digital learning is seen by more than 50% of administrators as a tool to achieve goals related to access, affordability, growth, and innovation in teaching and learning (Figure 2). This diversity of objectives for digital learning initiatives makes it even more important to ensure that initiatives are carefully planned, built, implemented, and communicated in relation to primary goals.

Teaching- and learning-focused goals such as improving access and flexibility and encouraging faculty experimentation with instruction are clear priorities across institution types. Growing enrollment is the second-highest priority for high-distance four-year institutions. Given your institution type, how do your goals compare?

Figure 2: Administrator-Reported Digital Learning Priorities by Institution Type²

	OVERALL	2-year Low-Distance	2-year High-Distance	4-year Public Low-Distance	4-year Public High-Distance	4-year Private Low-Distance	4-year Private High-Distance
Improve access and scheduling flexibility	75%	81%	88%	74%	85%	57%	81%
Grow enrollment	65%	57%	77%	59%	70%	54%	78%
Encourage faculty to implement innovative instructional methods	63%	62%	62%	67%	58%	70%	57%
Reduce cost of course materials to students	51%	62%	63%	50%	55%	39%	49%
Identify new or alternative revenue streams	48%	29%	31%	52%	48%	51%	62%

KEY:

- Most Frequently Selected
- 2nd Most Frequently Selected
- 3rd Most Frequently Selected

n = 1,551

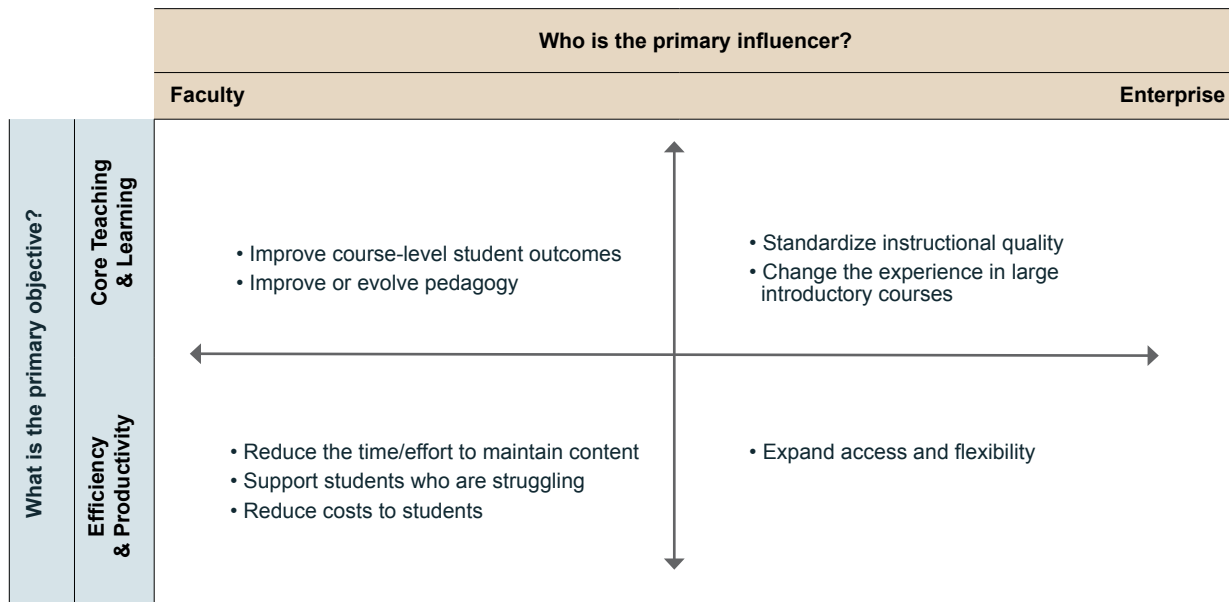


²Segments are defined by the portion of undergraduate students taking at least one course at a distance: low-distance = up to 25%, high-distance = 25%+ ³Question: "Is digital learning at your institution key to any of the following strategic priorities? Please select all that apply."

As a first step in prioritizing digital learning initiatives, consider the primary objective you seek to achieve, as well as the primary influencers.

At any given time, there could be digital learning initiatives across these dimensions. Faculty could be experimenting in the classroom with content and pedagogy while they use tools to more efficiently maintain content and provide support to struggling students. Meanwhile, administrators can work across courses, programs, and the institution to standardize instructional quality, change the experience in large introductory courses, or grow and expand access.

Figure 3: Framework for Prioritizing Common Digital Learning Initiative Goals



The critical challenge is to ensure that these initiatives are clearly linked to an institutional priority and then appropriately supported and evaluated.



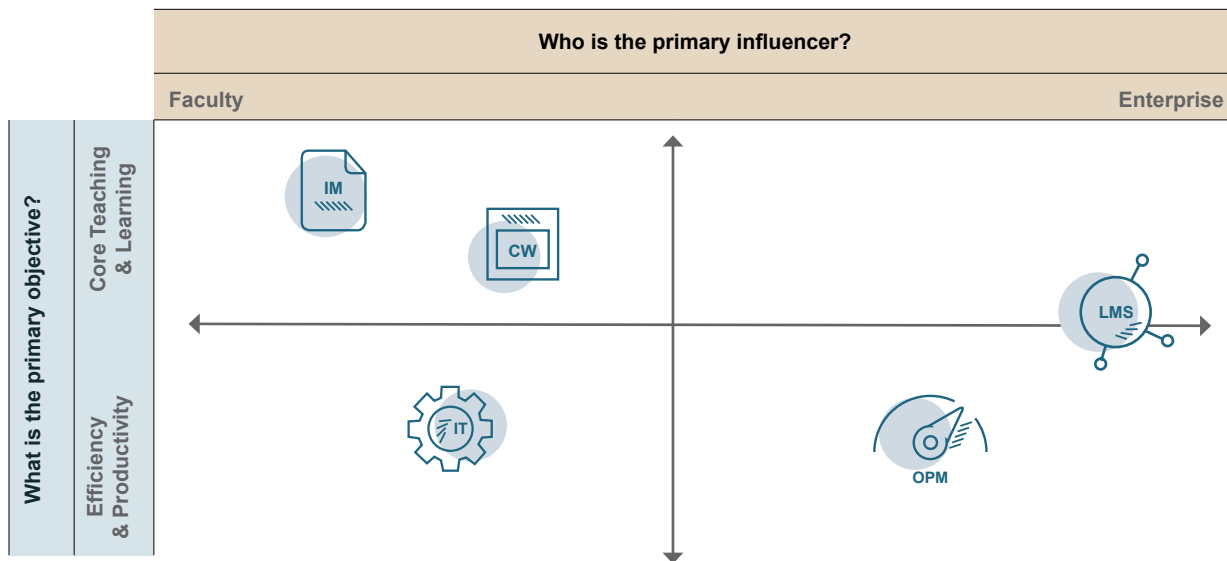
There is a new innovation every week. You really need a focused look at what will work in your context. Then pilot some of that and figure out how it works together with other efforts, then you can look at it more.






Russ Poulin, Senior Director of Policy, Analysis, and Strategic Alliances, WCET

Understanding where and how digital learning products enable and support change across these dimensions can help map existing efforts and identify new ones.

Categories of products can be mapped to their respective quadrants in terms of who is served and what is accomplished (Figure 4). The briefs in this series support individual and institutional decision-making in regard to courseware in particular—but decisions about courseware and other digital tool adoption must be made in the context of broader digital learning initiatives.

Figure 4: Digital Tools Mapped by Segment



	Category	Definition
	Instructional Material (IM)	Content (print or digital) used for core or supplemental teaching and learning purposes; includes new, used, rental, and open-source materials. e.g., McGraw-Hill, OpenStax
	Courseware (CW)	Digital instruction tools that include content and assessment, scoped and sequenced to support an entire course. e.g., Cengage MindTap, ALEKS
	Instructional Tools (IT)	Supplementary tools that facilitate the process of learning within a course or program. These include assessment, classroom engagement, social learning and collaboration, and experiential and project-based learning tools. e.g., ConnectYard, Piazza, iClicker
	Online Program Management (OPM)	Services designed to scale, grow, and drive success of online learning through outsourced management of nonacademic functions. e.g., 2U, Wiley Education Services
	Learning Management Systems (LMS)	Software applications and platforms for the administration and delivery of educational programs. e.g., Canvas, Blackboard

The use of digital tools alone does not drive successful outcomes. Success comes from selecting and using tools for the right purpose at the right time.

While many digital learning resources can be used to support progress towards an ideal environment, there is not one specific tool that can solve all problems or achieve all goals for all institutions. For example, the *Time for Class* survey of over 4,000 faculty and administrators notes that the use of any one tool or combination of tools alone is not correlated with the institution achieving an ideal digital learning environment.³ Faculty and administrator users of various tools across the digital learning ecosystem—including courseware, open educational resources, and instructional tools—are only slightly more likely to cite their institutions as ideal digital learning environments.

Ensure that digital learning pilot initiatives are carefully selected and tied to a clear evaluation plan and decision timeline.

Initiative portfolio management is the ongoing process of selecting and managing the set of initiatives that are delivering the best returns for your organization. One of the most common traps that institutions fall into is “pilot proliferation,” piloting a portfolio of promising initiatives but then failing to rigorously evaluate which ones to continue or discontinue based on results and impact. Just as you would manage your personal portfolio of savings and investments to achieve the best returns, you should approach your human and financial investments in digital learning in a way that makes best use of limited time and resources. The steps laid out in the [APLU Courseware Implementation Guide](#)⁴ offer guidelines to ensure that pilots follow a step-by-step decision-making process. Separate briefs in this series also provide insight and guidance regarding how to plan for, select, and implement digital learning initiatives and courseware specifically.

The following strategies can help reduce the impact of initiative fatigue on your campus:

- √ Connect initiatives to a central institutional goal. Provide clarity and specificity about what each initiative is designed to accomplish and how existing initiatives will drive it.
- √ Select and plan for pilot initiatives based on strong connections to institutional strategic priorities. Only embark on those initiatives that will have a significant outcomes upside for the institution.
- √ Consider faculty and staff time as one of your most valuable assets, and limit or phase major new initiatives that impact each individual’s day-to-day work to those that are critical for student success and outcomes.

See *Time for Class Toolkit* brief *Bridging the Gap Between Digital Learning Strategy & Execution* for more information.

³Question: “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?’” Row: “My institution is achieving an ideal digital learning environment.” Answers: “Strongly Disagree, Neutral, Strongly Agree, Not Applicable” ⁴A Guide for Implementing Adaptive Courseware: From Planning Through Scaling, Association of Public and Land-grant Universities (APLU) and Every Learner Everywhere, October 2018. <https://www.everylearnereverywhere.org/resources>

TOOL FOR ACTION

Digital Learning Initiative Planning Worksheet⁵

Planning a digital learning initiative at your campus? Identify the initiative goals, the tool(s) already planned or in use, and how each aligns to your course, program, college, and/or institutional priorities.

Vision
Where will you be in three years as a result of this initiative?

Strategic Priorities
What are the most important priorities addressed in your existing strategic plan?

Teaching and Learning	Efficiency	Student Success	Other

What product or tool are you using or considering?
Be comprehensive. Include name, description, purpose, evidence of impact, and strategic priorities addressed by this tool (see above).

What are the initial courses, programs, and/or population of focus? Subsequent?

Who are the key end users for this tool? Do they have capacity?
 Individual, department, level? Do these groups have any other major initiatives underway?

Faculty?	Administrators?	Staff?	Other?

What support is needed for success?
 Technology integration or support? Instructional design assistance for course redesign?

What are the specific measurable goals for this initiative?

Goal 1 (e.g., reduce DFW rates)	Goal 2 (e.g., increase student engagement by X% in course)	Goal 3	Goal 4

What is the timeline for initial evaluation and decision-making on continued investment?

Milestone date for continue/discontinue decision: _____

Key stakeholders consulted:

⁵Adapted from "Digital Promise EdTech Pilot Framework" for a higher education context. "Edtech Pilot Framework," Digital Promise, [Webpage]. <https://edtech.digitalpromise.org>



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ALIGNING THE STUDENT & FACULTY TECHNOLOGY EXPERIENCE

Students and faculty are mostly aligned regarding their use of technology in the classroom, but areas where they disagree offer potential opportunities to improve engagement.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

How do students and faculty differ in their perceptions of instructional technology?

What learning environments do students prefer?

In what ways do faculty use technology in the classroom?

What potential opportunities are revealed through technology-related disagreement?



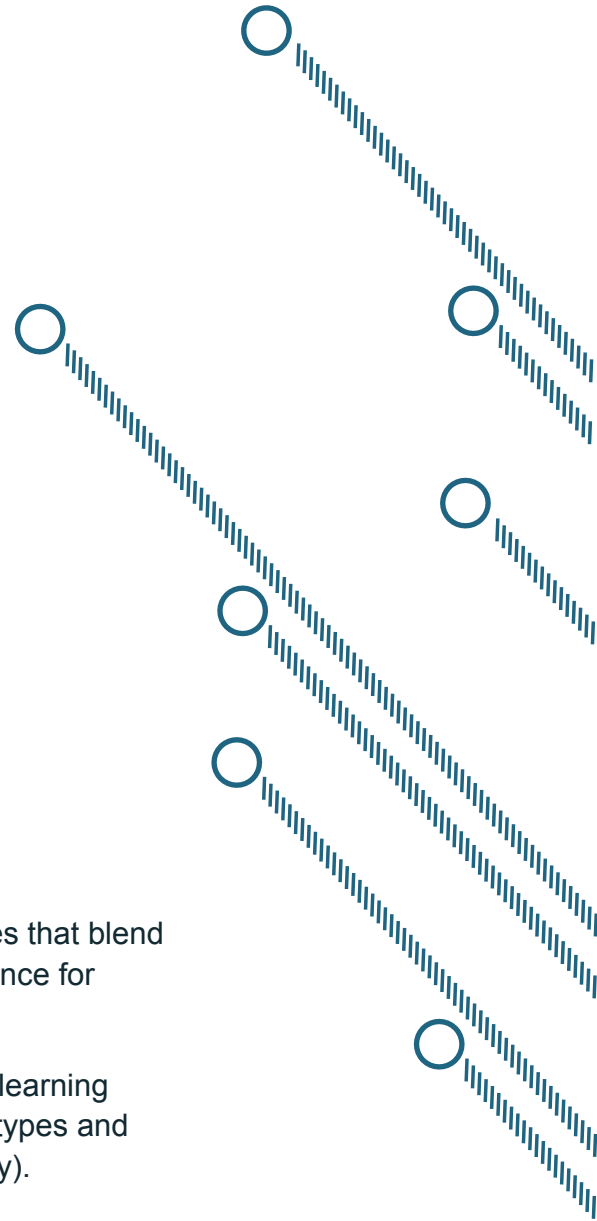
KEY INSIGHTS

The majority of students prefer blended learning experiences that blend face-to-face and online instruction, but show a clear preference for significant face-to-face time.

The “digital divide” is not evident in student preferences for learning modality. Student preferences are similar across institution types and socio-economic backgrounds (as measured by Pell eligibility).

Faculty report using technology primarily to deliver additional instructional content and to engage students in the learning process.

Students report using technology for social learning and collaboration at much higher rates than faculty say they employ it, which is a potential opportunity for faculty to achieve increased student engagement.



Students generally have a more positive view of instructional technology than faculty do.

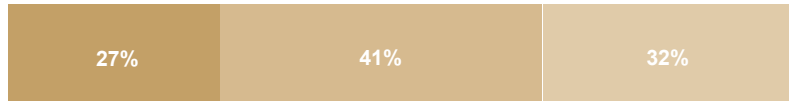
Students are positive about their academic technology experience, but faculty have concerns about the quality of digital learning environments. Improving digital learning environments would be met by a receptive and positive student base (Figure 1).

Figure 1: Student and Faculty Perception of Campus Digital Learning^{1,2}

Students: How would you describe your overall technology experience at your school?



Faculty: To what degree is your institution achieving an ideal digital learning environment?



KEY:

- Excellent
- Neutral/Good
- Fair/Poor
- Ideal
- Neutral
- Not Ideal

Faculty n = 1,403 Student n = 54,285

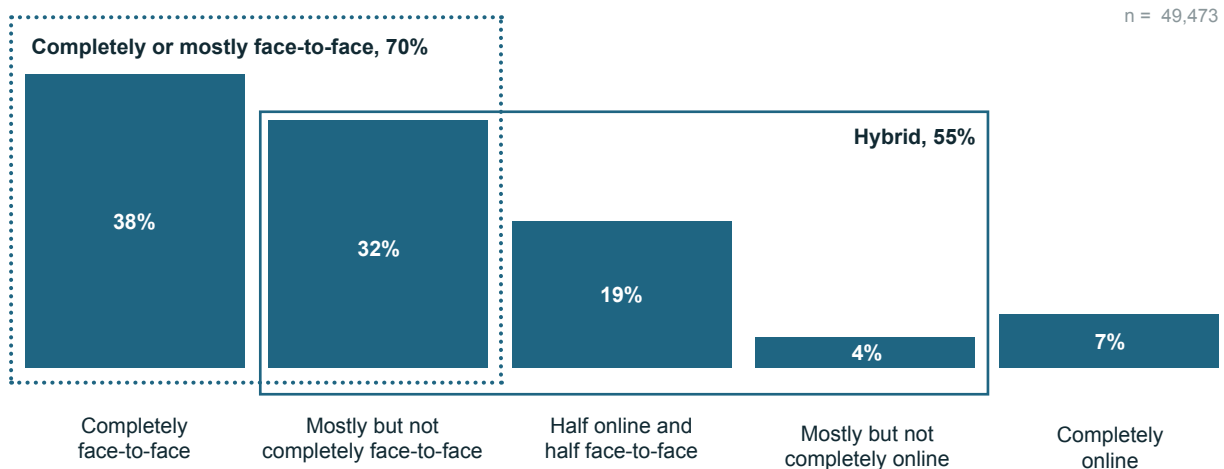


¹EDUCAUSE's ECAR Study of Undergraduate Students and Information Technology, 2018 collected responses from approximately 50,000 students across the United States. These students represent both public and private institutions as well as two-year and four-year institutions.
²Student question: "How would you describe your overall technology experience at your school?" Faculty question: "To what degree is your institution achieving an ideal digital learning environment?"

The majority of students prefer hybrid learning experiences that blend face-to-face and online instruction, but show a clear preference for significant face-to-face time.

70% of students prefer completely or mostly face-to-face instruction, while 55% of students prefer hybrid learning environments incorporating both face-to-face and digital instruction. Both face-to-face and hybrid learning create opportunities for digital learning technology; the challenge for institutions is to incorporate technology in ways that are meaningful and additive to the course and classroom experience.

Figure 2: Student Preferences for Learning Environments³



The “digital divide” is not evident in student preference for learning modality.

There is little to no variation in this student perspective across institution type⁴ or by socio-economic background as measured by undergraduate Pell Grant eligibility status.

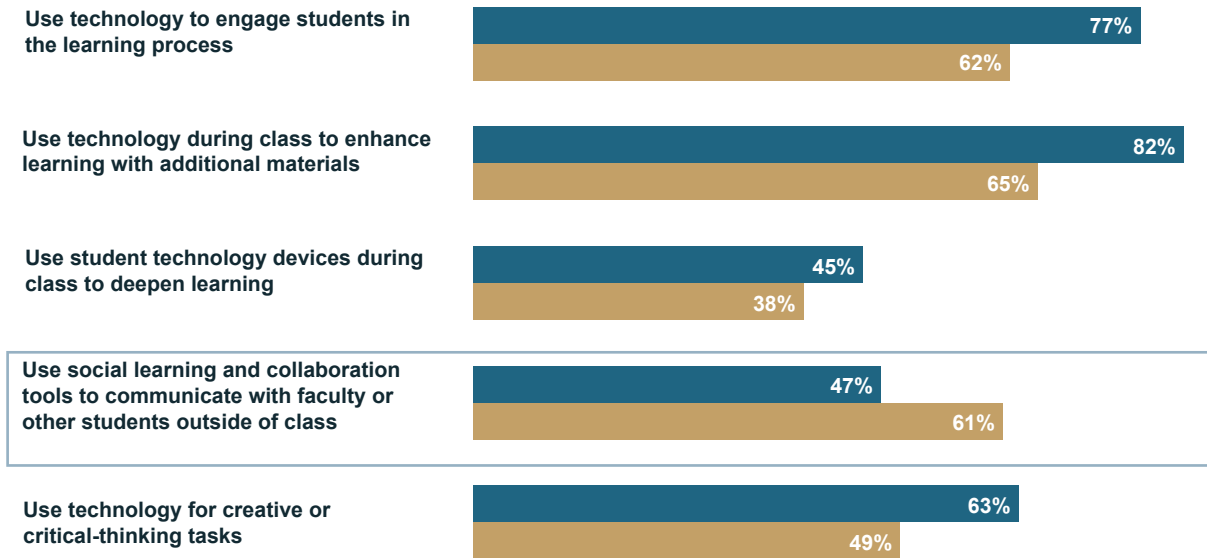
Faculty and students agree that using technology to enhance and engage in learning is most common but differ on social and collaboration use.

Time for Class 2019 asked faculty members about instructional technologies they use frequently in the classroom. The *2018 Study of Undergraduate Students and Information Technology* asked students about the ways they are encouraged to use technology in the classroom.

³Student question: “In what learning environment do you most prefer to learn?” ⁴Types of institutions include two-year, four-year, low-distance (<25% of undergraduates enrolled in some distance education), and high-distance (25%+ of undergraduates enrolled in some distance education).

Nearly two-thirds (63%) of faculty report that they use technology in most courses and an even higher percentage of students (85%) agree that they are typically encouraged to use technology by faculty. Faculty are more likely to say that they use technology within the classroom setting – e.g. “technology to engage students in the learning process” and “technology during class to enhance learning with additional materials.” By comparison, students are more likely to report that they are encouraged to use “social learning and collaboration tools” outside of the classroom setting (Figure 3).

Figure 3: Ways Technology Is Used in the Classroom⁵



KEY:

■ Faculty ■ Student

Faculty n = 2,426 Student n = 54,285

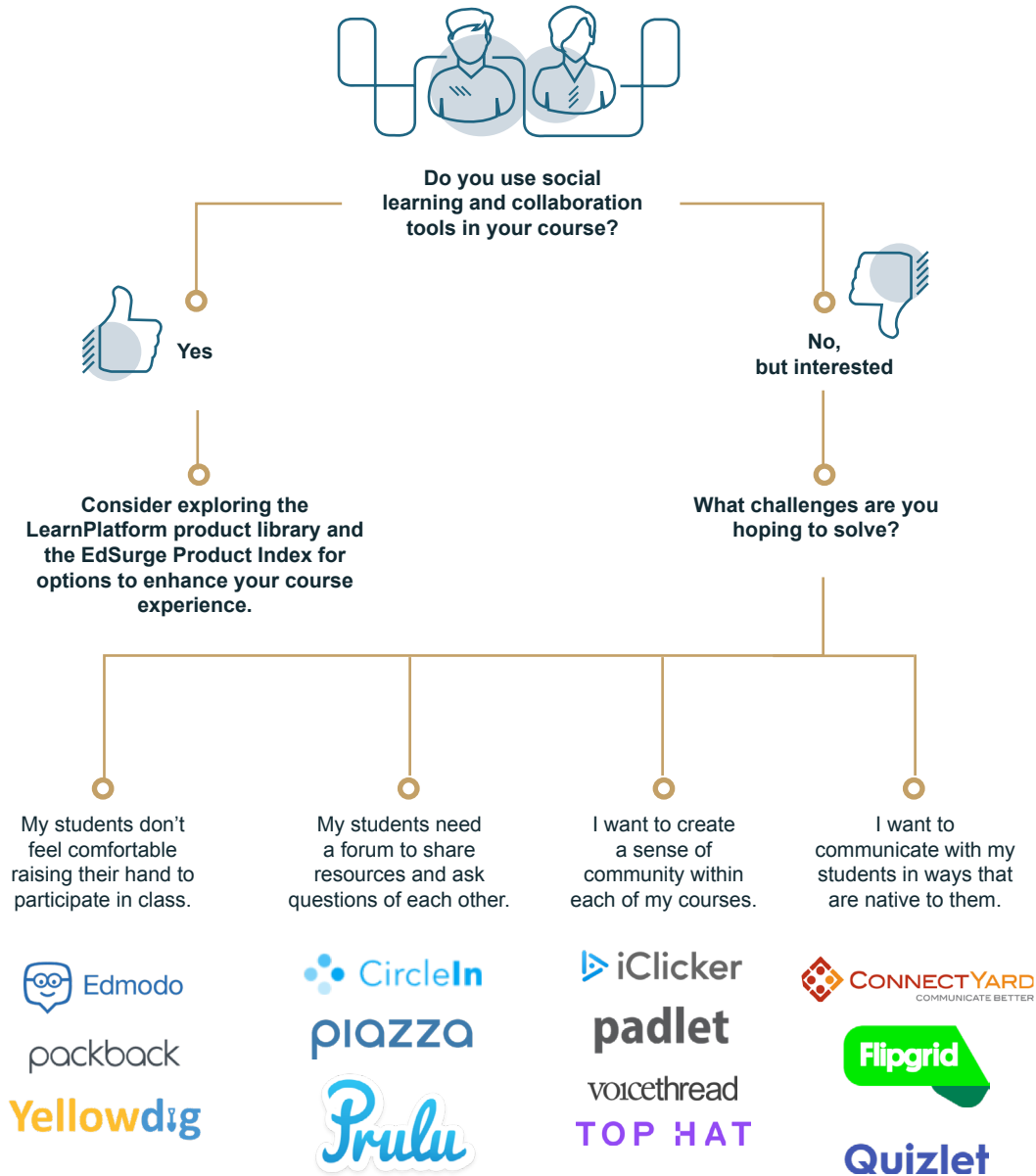


⁵Faculty Question: “Which of the following statements, if any, describe your instructional practice in most courses? Please select all that apply.”
 Student Question: “Thinking about your college/university experiences within the past 12 months, rate your level of agreement with the following statements: My instructors typically encourage...”

TOOL FOR ACTION

Engaging Students through Social Learning and Collaboration

There are many social learning and collaboration tools on the market, and finding the right one can be a challenge. The flowchart below presents some of the options to explore depending on the course needs.



Engaging Students through Social Learning and Collaboration cont.

Edmodo	Digital platform that enables professors to offer quizzes, polls, and general questions
Packback	"AI-supported" discussion board with automated moderation, feedback, and scoring
Yellowdig	Gamified social discussion board with multimedia capability and nudge features

Circlein	App that enables students to ask questions, video chat, and share notes
Piazza	Wiki-style Q&A platform with file-transfer functionality for frequently asked student questions
PruLu	Management platform for frequently asked student questions

iClicker	Physical devices (or mobile options) for real-time classroom polling and engagement
Padlet	Digital photo, video, and link pinboard with comment functionality
VoiceThread	Media player with built-in interactive discussion space
TopHat	Homework, quizzes, and activities to continue discussion outside of class

ConnectYard	Allows students to receive notifications via their preferred digital platform
Flipgrid	Social video sharing platform with moderation tools
Quizlet	Flashcards and learning games

The providers above are included for illustrative purposes only. They do not represent an endorsement and are not inclusive of the entire marketplace.



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MAKING THE CASE FOR COURSEWARE

Courseware has the potential to improve outcomes, increase access, and decrease costs for students, but discussions of adoption at scale raise questions from faculty and administrators. Case-making for scaled adoption requires appealing to a wide range of perspectives.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

What is courseware?

What are the potential benefits of courseware to students, faculty, and institutions?

What are the challenges related to courseware adoption?

What tools can you use to plan, pilot, and implement courseware effectively?



KEY INSIGHTS

Courseware is a digital instruction tool that includes content and assessment; it is scoped and sequenced to support an entire course.

The emerging evidence base around courseware shows potential to improve outcomes, increase access, increase engagement, and decrease costs for students.

Faculty report time and effort as key barriers to the adoption of new digital learning tools, including courseware. To support successful adoption at your institution, focus on clear goal-setting and providing sufficient institutional support to faculty.



Courseware enables full-course digital content delivery and assessment and is not a learning management system (LMS).

Courseware products work in conjunction with but are not learning management systems (LMS). They are digital instruction tools that include instructional content and assessment, scoped and sequenced to support an entire course.¹ An LMS, by contrast, is focused on course administration and reporting, though it can host courseware products within its interface.

Courseware ranges from content-led to platform-led.

In the marketplace today, it is possible to find courseware products with a wide range of customization and usage options. This spectrum allows for faculty to choose the products that best fit their instructional practices, adoption goals, and student learning needs (Figure 1).

		Content-Led Courseware		Platform-Led Courseware	
		Off-the-Shelf	Customizable	Adaptive	Other
Definition		Course-complete solutions that create opportunities for reduced time spent building out content. Can contain adaptive capabilities.	Tailoring options combine the benefits of off-the-shelf, curated courses with flexibility to make adjustments for students, context, and objectives.	Platform that is primarily built to deploy course content using adaptive features.	Provide features, functionality, and/or content that is beyond typical LMS, but does not include adaptivity.
	Illustrative (not Comprehensive) Players				

¹A Guide for Implementing Adaptive Courseware: From Planning Through Scaling, Association of Public and Land-grant Universities (APLU) and Every Learner Everywhere, October 2018. <https://www.everylearnereverywhere.org/resources>

Courseware is used to achieve outcomes across four broad categories—outcomes, engagement, access, and affordability.

1. Improve Outcomes – While the fact base evaluating courseware’s efficacy is still being developed, many institutions have reported that the adoption of courseware has helped them achieve their goals for student outcomes. Studies on gains to learning and content retention credit adaptivity—the use of assessment and analytics within courseware to provide a personalized learning experience—as a key driver of student learning outcome successes.² Courseware’s analytics features, if deployed properly, allow faculty to assess continuously, intervene early, and diagnose appropriately. On average, grades earned by students in course sections using products from the SRI Next Generation Courseware Challenge (NGCC) were slightly (and statistically significantly) better than the grades earned by students in sections without the software.³

Case Study: Arizona State University (ASU) Improves College Algebra Completion¹

Each year, ASU enrolls over 5,000 students in college algebra—a course that is often seen as a barrier to college progression. With an unsatisfactory average success rate (grade of A, B, or C) of 59%, ASU redesigned the course in 2016 based on the latest educational research on courseware, scheduling, and developmental instruction. As a result of these changes, success rates for all enrolled students increased to 79% in 2018. ASU found that over 800 additional students were able to complete the course on their first attempt, improving persistence in subsequent courses and allowing students to stay on track for degree completion.

¹“The 2018 Digital Learning Innovation Award Winners,” Online Learning Consortium, [Webpage]. <https://onlinelearningconsortium.org/about/olc-awards/2018-digital-learning-innovation-award-winners/>

² Johnson, Dale. “Adapting to Adaptivity.” Conference Talk, Southeast Digital Learning Forum, Charlotte, NC, February, 2019 ³ House, A., Means, B., Peters Hinton, V., Boyce, J., Wetzel, T., & Wang, S., Next Generation Courseware Challenge Evaluation. (Menlo Park, CA: SRI International, 2018) ⁴ National Center for Education Statistics; students enrolled in at least one distance education course

2. Improve Engagement – As a specific strategy to improve course-level student outcomes, courseware is used to drive student engagement with content. Courseware can be a tool to convert online or face-to-face content—such as large lecture-based courses or passive online lessons—into active learning experiences. With features for social learning and collaboration, courseware can enable exchanges and discussions between students and faculty. In blended learning environments, courseware can be used to create “flipped classrooms,” to support in-class interactions and reinforce classroom learning through post-lecture assessments.

3. Increase Access – Since 2012, online and hybrid higher education enrollment has grown 20% to 6.2 million students.⁴ This rise in technology to support non-face-to-face instruction has allowed more working adults to earn a college education. Because learners can access content through their own devices at their own pace, courseware has the potential to increase flexibility and to have a positive impact on progress towards degree.

Case Study: The American Women’s College at Bay Path University Stays Affordable for Adult Female Undergraduates¹

Bay Path University launched The American Women’s College (TAWC) in 2013 to deliver online accelerated undergraduate programs to adult women. At an average age of 34, enrolled students are balancing multiple responsibilities, so TAWC sought to create a more affordable and flexible way for students to complete their degrees. TAWC credits the adoption of adaptive courseware products into 51 courses as critical to ensuring that students have access to materials on day one and to achieving better learning outcomes and persistence. The approach has **“yielded rates for retention (75%), course completion (93%), and student satisfaction (95%) that surpass national averages in the nontraditional, online space.”**

¹“The 2018 Digital Learning Innovation Award Winners,” Online Learning Consortium, [Webpage]. <https://onlinelearningconsortium.org/about/olc-awards/2018-digital-learning-innovation-award-winners/>

4. Decrease Costs – The transition to digital learning materials is in part a response to the rising cost of instructional materials. In addition to providing interactivity not offered by printed content, access to digital instructional materials often means significant cost savings for students. In the NGCC study, schools using courseware saved approximately \$105 per student, mainly due to the avoidance of textbook costs and improved course completion.⁵

⁴Scott Ginder and Janice Kelly-Reid, eds. *Enrollment and Employees in Postsecondary Institutions, Fall 2017* (National Center for Education Statistics), <https://nces.ed.gov/pubs2019/2019021REV.pdf>. ⁵House, A., Means, B., Peters Hinton, V., Boyce, J., Wetzel, T., & Wang, S., *Next Generation Courseware Challenge Evaluation*. (Menlo Park, CA: SRI International, 2018)

Case Study: Norfolk State University Adopts Inclusive Access to Reduce Cost¹

Norfolk State, a historically black university in Norfolk, Virginia, offers online certificate and degree programs. To keep course materials affordable and respond to the needs of the 21st-century learner, Norfolk State partnered with Barnes & Noble and Cengage Learning on an inclusive access² deal to eliminate textbooks and incorporate courseware into their computer science courses. Since adoption, Norfolk State has reported a jump in pass rates and student savings **“between 33% and 68% on textbooks and course materials.”**

¹“The 2018 Digital Learning Innovation Award Winners,” Online Learning Consortium, [Webpage]. <https://onlinelearningconsortium.org/about/olc-awards/2018-digital-learning-innovation-award-winners/>

²In the inclusive access model (also known as digital direct or immediate access), publishers such as Pearson, Cengage, McGraw-Hill, or Wiley partner with organizations such as VitalSource, RedShelf, Verba, Follett, and Barnes & Noble to provide digital access to all students in a class on a subscription basis.

Despite these potential benefits, courseware adoption is not without challenges.

Faculty and administrators report that the top three barriers to digital learning implementation are time, effort, and competing priorities (Figure 2).

Figure 2: Top Reported Barriers to Digital Learning Adoption⁶



KEY:

■ Administrators ■ Faculty

Planning, coupled with institutional support, can promote the successful selection and implementation of courseware.

Other action briefs in this series describe specific institutional, course, and individual faculty factors that contribute to greater levels of use and satisfaction with various courseware products. Among the key factors are institutional support and professional development.

⁶ Question: “What factors, if any, have contributed most negatively towards the implementation of digital learning?”

TOOL FOR ACTION

Frequently Asked Courseware Questions

As you make the case for courseware at your institution, use the frequently asked questions below to help you communicate courseware’s value and address common concerns.



The Outcome Skeptic	
Common Questions	Strategies for Consensus Building
<ul style="list-style-type: none"> • What research supports the claims that courseware improves outcomes? • Is courseware relevant for our student population demographic? • How will we assess the quality of an individual courseware product? 	<ul style="list-style-type: none"> • Review the resources and research available at Every Learner Everywhere, SRI, and Courseware in Context. • Develop clear performance indicators, and continuously monitor success at the student, course, and institution level. • Look at ratings aggregators like the Learn Platform Product Library and the EdSurge Product Index.



The Cost-Conscious Critic	
Common Questions	Strategies for Consensus Building
<ul style="list-style-type: none"> • How much are the implementation costs to students and to faculty? • What are the ongoing costs to maintain the product? • Who will bear the cost of purchasing courseware? 	<ul style="list-style-type: none"> • Review costs for comparable institutions as outlined in SRI’s NGCC research. • Review the <i>Adopting Courseware through Course Redesign</i> action brief for redesign cost considerations. • Refer to the <i>Bridging the Gap Between Digital Learning Strategy & Execution</i> action brief and think about your institution’s strategic priorities. What financial resources are available for well-aligned initiatives? • Think about alternative sources of funding: what local, regional, or federal grants are available for the type of initiative you want to implement?



The Engagement and Experience Cynic	
Common Questions	Strategies for Consensus Building
<ul style="list-style-type: none"> • What are the challenges of learning a new tool? • Will students be less engaged with each other and with the content if they are learning online? • How will faculty and students stay connected? 	<ul style="list-style-type: none"> • Define the goals and objectives—as well as the tradeoffs—of adopting courseware in your specific institutional context. • Explore products with collaboration functionalities and consider third-party social tools to enrich the experience. • Using the <i>Scaling Courseware Adoption</i> action brief, identify faculty who align with the Early Adopter profile. • Refer to the <i>Designing Professional Development for Impact</i> action brief to identify potential resources to support successful implementation.

Courseware has the potential to help institutions achieve a variety of teaching and learning goals. However, successful implementation requires that you address the following:

- √ Courseware products range in their value propositions, features, and functionality. Clarify the challenge(s) your institution wants to address via courseware, and evaluate various product options and features relative to those goals.
- √ A growing number of tools are available for discovering and evaluating courseware products. Review the available research base to understand what products have driven outcomes for similar student populations in similar contexts.
- √ The adoption of courseware requires collaboration across faculty, administrators, and staff. As you consider your implementation, identify the stakeholders involved in your institution’s decision-making process, and drive fact-based exploration to address stakeholder concerns.



TIME FOR CLASS TOOLKIT

As part of a portfolio of resources published by the Every Learner Everywhere network, Tyton Partners has published this Time for Class Toolkit, a set of actionable reports that summarize findings from the *Time for Class* large-scale survey of faculty and administrators. Each brief includes data, analysis, and a tool to ease the digital learning adoption and implementation processes. All briefs are available at <https://www.everylearnereverywhere.org/resources> and are designed to be shared with any campus stakeholder considering courseware adoption.

Tyton Partners recommends that faculty and administrators pay special attention to the following topics:

	Making the Case for Courseware	Scaling Courseware Adoption	Adopting Courseware through Course Redesign	Designing Professional Development for Impact	Creating a Positive Courseware Adoption Experience	Understanding Adaptive Courseware
Individual Faculty	X		X		X	X
Department/ Program-Level Leadership	X	X	X		X	X
College/ Institutional Leadership	X	X		X	X	X



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SCALING COURSEWARE ADOPTION

Any institution can try out a new tool or instructional practice, but recognizing successful initiatives and moving beyond the pilot stage to scaled impact can be a challenge.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

How broadly is courseware being adopted?

In what course contexts (level and discipline) is adoption highest?

What are the key reasons that faculty adopt courseware?

What instructional practices are associated with higher adoption?

How can you accelerate faculty adoption at your institution?

KEY INSIGHTS

Faculty play an important role in influencing courseware, but the role of administrators in influencing courseware selection and adoption is also growing.

Faculty report higher rates of courseware use compared to 2016. One third of faculty are current courseware users, and the vast majority of users (77%) plan to continue or increase use.

Undergraduate introductory courses are the most likely courseware adoption points.

Courseware is still being used by early adopter faculty. Faculty using courseware are more likely than non-users to be willing to experiment with “new yet-to-be proven technology.”

Faculty instructional practice drives the adoption of courseware; assessment-based instructional practices correlate with higher adoption, whereas discussion-based practices correlate with lower adoption.

Faculty adopt courseware for specific teaching and learning goals; these should be the focus of adoption planning and communications.

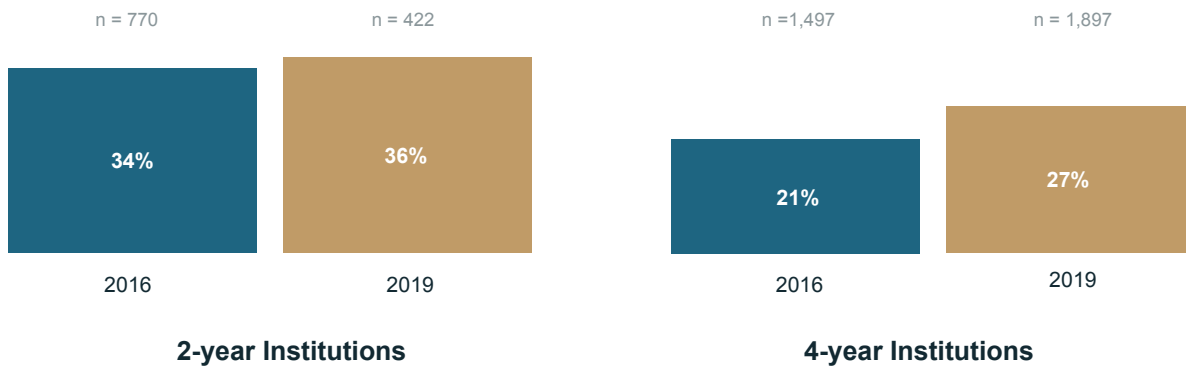
Administrator influence in courseware decision-making is growing.

In the *Time for Class* 2019 survey, 74% of 2-year and 65% of 4-year administrators say that department-level and above leadership influence courseware selection, up from 63% and 47% in 2016. Comparatively, administrators say that faculty have less influence over the same decision-making process – 60% of 2-year and 61% of 4-year faculty – down from 84% and 94%. These shifts show the growing importance of administrators in technology decisions and emphasize that building momentum with all stakeholders is critical to scaling institutional adoption.

Courseware has been adopted by almost a third of faculty, and current users plan to continue using courseware.

Out of a representative sample of 2,343 faculty across institutions in the United States, 36% of 2-year and 27% of 4-year report using courseware today or in the last three years. Faculty report higher usage at two-year institutions (Figure 1).¹

Figure 1: Faculty Courseware Adoption across Institutions²



The majority of users (77%) plan to continue or increase use, demonstrating that faculty are finding these tools worthwhile.

One challenge to achieving impact is in expanding use across all institution types. Therefore, determining where and why courseware is being adopted at higher rates is important for understanding potential dynamics that enable further adoption.

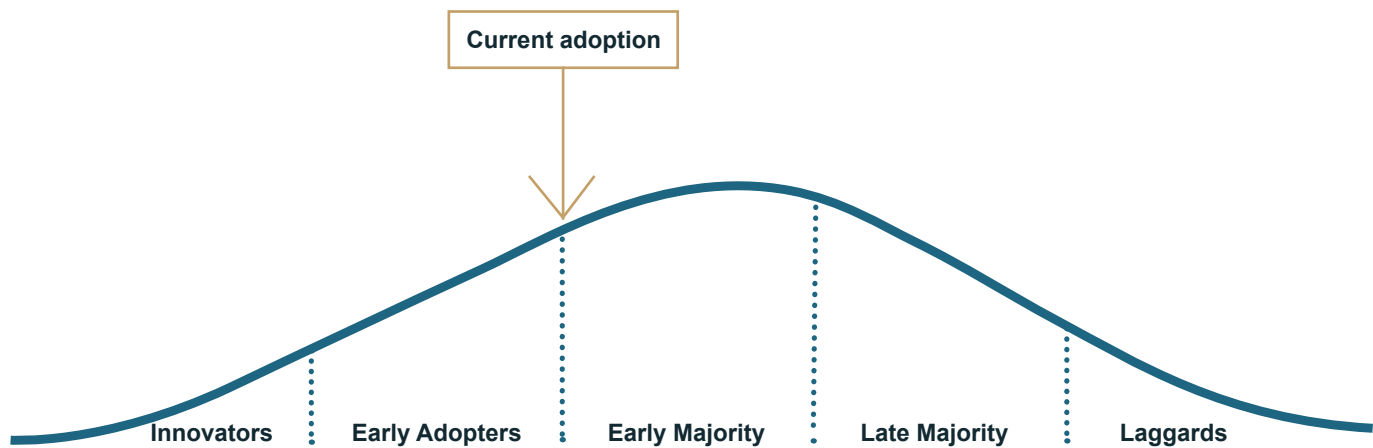


¹High-distance institutions are defined as those with greater than 25% of undergraduate students enrolled in at least one distance education course." ²Question: "Describe your level of awareness of the following"; row: "Courseware"; answers: "Aware and currently using" or "Aware but not currently using."

Courseware users are still early on the adoption curve.

Courseware adoption has not yet achieved maturity. According to *Time for Class* survey, current users are “early adopters”³ These faculty members are statistically more likely to prefer new, yet-to-be proven technology⁴ over established, well-proven technology; they also prefer using “high-quality third-party content” over developing their own curriculum (Figure 2).

Figure 2: Courseware Adoption Curve



Accelerating institutional adoption beyond this early group requires understanding faculty use cases where courseware has the most traction and the potential to grow further.



³“Early majority” adopters are those who will adopt courseware or are considering adoption in the next three years. ⁴Question: “Please indicate your instructional tendencies and preferences using the sliders: Adopter of yet-to-be proven technology <-> Adopter of established, well-proven technology”; Question: “Please indicate your instructional tendencies and preferences using the sliders: Prefer to develop my own curriculum and content <-> Prefer to use high-quality third-party content.”

Courseware is predominantly used in undergraduate courses and across disciplines.

Faculty members who reported courseware adoption were subsequently asked to elaborate on their course contexts.⁵ Variations in course level and modality had large impacts on the percentage of courseware users, whereas specific discipline did not (Figure 3).

Figure 3: Variation in Courseware Use by Context



Course Level ⁶	Modality ⁷	Discipline ⁸
<p>Adoption is predominantly in undergraduate introductory courses</p> <ul style="list-style-type: none"> • 81% of faculty adopters use courseware in undergraduate intro courses • 43% use in undergraduate upper-level courses • 32% use in undergraduate developmental courses 	<p>Usage is primarily in face-to-face courses</p> <ul style="list-style-type: none"> • 84% of adopters report usage in face-to-face courses • 59% say they use in hybrid and online courses 	<p>There is slight difference in adoption by discipline</p> <ul style="list-style-type: none"> • Courseware is slightly more common in management, mathematics, and science courses • Slightly less common in the humanities



⁵Questions prompted respondents to select all that apply given that faculty often teach across course levels and adopt courseware for a variety of reasons. ⁶Question: "Which course level is the courseware product you chose primarily used in?" ⁷Question: "Which modalities is the courseware product you chose primarily used in?" ⁸Question: "What is your primary discipline?"

Courseware is used primarily for graded homework and to promote active learning.

Courseware products can be used throughout the course experience in a variety of ways—as a textbook replacement, practice assignment, or additional reference material. Faculty who have adopted courseware report that their primary uses are for graded homework (67%), for active learning (60%), or for flipping the classroom (60%).⁹

Faculty cite teaching and learning as primary goals for adoption.

To identify courseware adoption drivers, faculty users were asked to prioritize their primary reasons for adopting courseware in their class (Figure 4). These reasons can be grouped into two categories: Faculty-Motivated and Institution-Motivated.

Figure 4: Reasons for Adopting Courseware¹⁰

Faculty-Motivated	Institution-Motivated
<ul style="list-style-type: none"> • Improve student outcomes (27%) • Part of curriculum or course redesign effort (18%) • Wanted to try a new pedagogy (8%) • Increase use of course-level analytics (5%) 	<ul style="list-style-type: none"> • Courseware was mandated (22%) • Standardize instructional quality (16%) • Change the experience in large classes (4%)

Adoption rationale is split across faculty-motivated and institution-motivated reasons and demonstrates the diversity of motives inherent in this type of decision. The most common motivation is to improve student outcomes, while the least common is to change the experience in large classes. Notably, courseware mandates are the most common reasons for institutional-motivated adoption, re-emphasizing the growing influence of administrators in the decision-making process.

Across institution types, faculty are primarily motivated to adopt based on their teaching and learning goals (58% of reasons). Therefore, adoption could be accelerated by appealing to faculty-driven motivations.

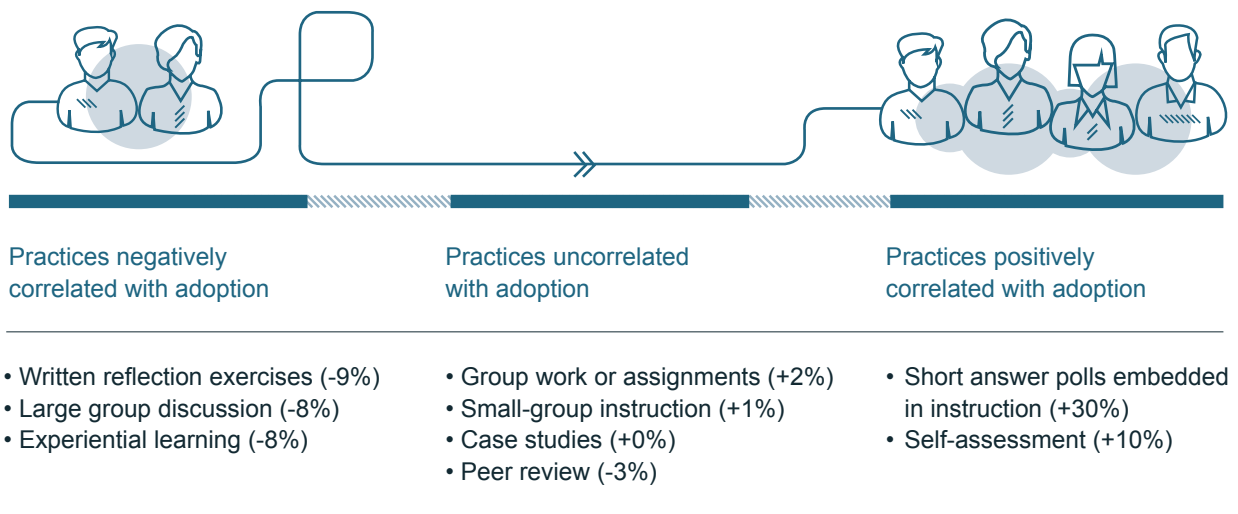


⁹Question: “How do you use the courseware product you chose in the course?” ¹⁰Question: “Why was courseware adopted? Select your primary, secondary, and tertiary reasons based on the list provided.”

Faculty who engage in instructional practices that include frequent assessment of learning are more likely to adopt courseware.

While some faculty instructional practices correlate positively with a higher rate of courseware adoption,¹¹ others—written reflection and experiential learning, for example—negatively correlate with courseware adoption (Figure 5).

Figure 5: Faculty Instructional Practices and Adoption Correlation



These results indicate that courseware is currently adopted by those who incorporate assessment-based practices into their teaching, and that those who focus on discussions and long-form writing are less likely to adopt a courseware product as part of their teaching.

Match predisposed faculty with courseware solutions that can help them meet their goals.

Given that faculty instructional practices are a driver of courseware use, administrators and faculty can accelerate adoption at their institution using the following approaches:

- ✓ Encourage faculty with assessment-based instructional practices to be early adopters of courseware.
- ✓ Frame courseware initiatives as aids to faculty-driven teaching and learning goals.

¹¹Question: "Which of the following instructional practices do you apply throughout a typical course?"

TOOL FOR ACTION

Course and Faculty Readiness Self-Assessment

To determine if you are leading courses that could benefit from a courseware adoption if you are ready to take on this work, consider the following short quiz to faculty members:

Which best describes...

1. **...the size of your largest course**
 - a) Small (0–50 students)
 - b) Medium (51–150 students)
 - c) Large (151 students or more)
2. **...your students’ backgrounds upon entering your classroom**
 - a) Extremely similar levels of academic preparation
 - b) Moderately similar levels of academic preparation
 - c) Extremely diverse levels of academic preparation
3. **...the resources provided by your institution**
 - a) Totally sufficient to provide 1:1 support to all my students
 - b) Mostly sufficient to provide 1:1 support to all my students
 - c) Totally insufficient to provide 1:1 support to all my students
4. **...your typical course outcomes**
 - a) DFW¹² below institution average
 - b) DFW around institution average
 - c) DFW above institution average
5. **...your own comfort level with technology**
 - a) Uncomfortable
 - b) Neutral
 - c) Confident
6. **...your commonly employed instructional practices**
 - a) Mainly discussion and individual written reflection
 - b) Primarily group work and small-group instruction
 - c) Mostly self-assessments and short-answer polls embedded in instruction

Mostly a’s: Propitious Professor	Mostly b’s: Teacher to Track	Mostly c’s: Apt for Adoption
<p>Based on the resources you have been allotted, you are likely already able to tailor content to students’ individual needs. Courseware may not be the top priority for you.</p>	<p>Although you have some challenges, you are not inherently likely to be a courseware advocate. Take on the opportunity if resources allow, or wait and monitor for any changes in circumstance.</p>	<p>With the pressure already being exerted on you and your classes, anything that can be done to help improve student outcomes is likely to be valuable. Consider yourself a good candidate for courseware adoption.</p>

¹²DFW rate refers to the total percentage of students in a class who get a D or an F, or who withdraw from a course.



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ADOPTING COURSEWARE THROUGH COURSE REDESIGN

Undertaking course redesign can be time consuming, but it can pay off in terms of improved student outcomes. Under what circumstances do redesign benefits outweigh the costs?

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

How important is course redesign as a courseware adoption point?

How does redesign impact faculty practice and experience?

Do redesigners use courseware products any differently?



KEY INSIGHTS

Redesign is a key adoption point for courseware, but full-course overhaul is not the only condition for a positive courseware adoption.

When courseware is adopted in connection with redesign, faculty are more likely to use courseware to drive active learning in the class, implying that redesign creates opportunity for faculty to implement improved classroom techniques.

Courseware adopters who undergo redesign are more likely to engage in professional development, underscoring the importance of ensuring that faculty have sufficient support during the redesign process.

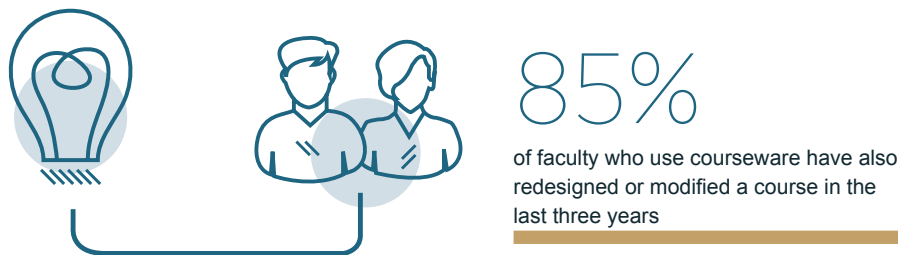
Other adoption points, where the time commitment relative to a full course redesign is lower, are also worth considering. Redesign alone does not result in faculty reporting a more positive courseware experience.



Redesign is a key courseware adoption point, but full-course redesign is not the only condition that can support positive implementation of courseware.

Course redesign¹ has long been considered a critical underlying condition for high-quality courseware implementation. That said, the process of redesigning courses relies heavily on faculty time investment, though many institutions offer specific technical support or training to faculty working on course redesign projects.

As of 2019, redesign continues to serve as an important adoption point for courseware solutions. Of all faculty who currently use courseware,² 85% are Recent Redesigners.³



Redesign alone does not result in faculty satisfaction with courseware.

The reality of courseware implementation success is nuanced – and the *Time for Class* survey enables us to look at the faculty experience of adopting courseware as one outcome measure. While it is more common for Recent Redesigners to be courseware users, they are no more likely to be courseware promoters⁴ or to consider their institution an ideal digital learning environment⁵ than those users who have not undergone the course redesign process. This is important in that it implies there are other conditions – outside of a full course redesign – that can enable faculty experimentation with courseware in ways that they perceive to be beneficial to their goals.

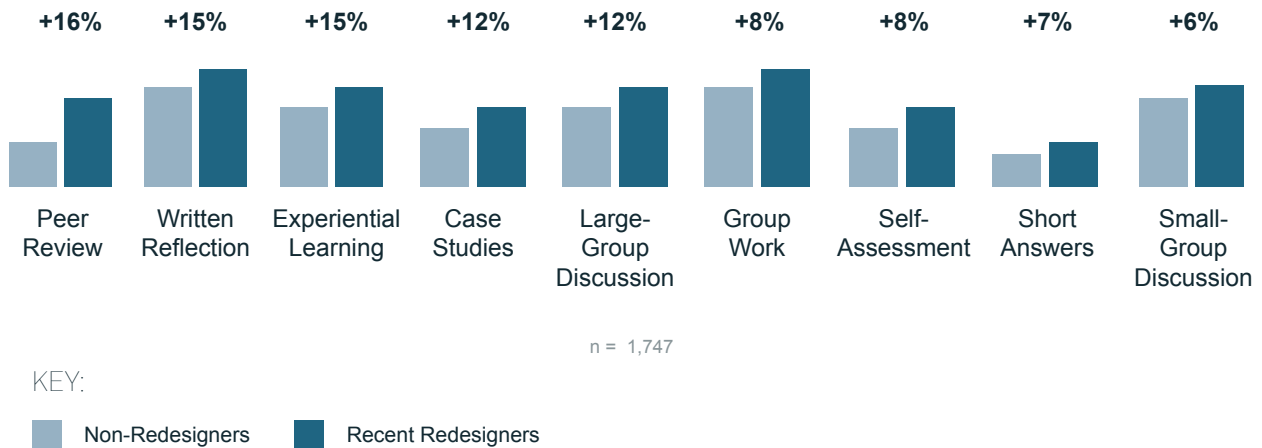
¹Question: “Over the past three years, either working alone or with others, have you done any of the following? Please select all that apply.” Answers: “Created a new course (a course that was not previously listed in the course catalog)” [and/or] “Substantially modified an existing course (e.g., making a major change in the content included in the course, changing the delivery method, or similar. Do not count the normal fine-tuning to a course.)”

²Question: “Describe your level of awareness [and use] of the following.” Row: “Courseware” Answer: “Aware, and I currently use in my course(s).” [or] “Aware, I have used but am not using currently.” ³Faculty who have undertaken course redesign or substantial modification within the past three years are Recent Redesigners. ⁴Question: “How likely are you to recommend [this courseware product] to a colleague?” ⁵Question: “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?” Row: “Is achieving an ideal digital learning environment” Slider: “Strongly Disagree <-> Strongly Agree”

Faculty who undertake redesign are more likely to be users of active-learning instructional practices.

Across the board, Recent Redesigners surpass Non-Redesigners when it comes to promoting specific active learning techniques in their classrooms (Figure 1). This is correlation, not causation, but the process of redesign is connected to the adoption of more active learning within the classroom.

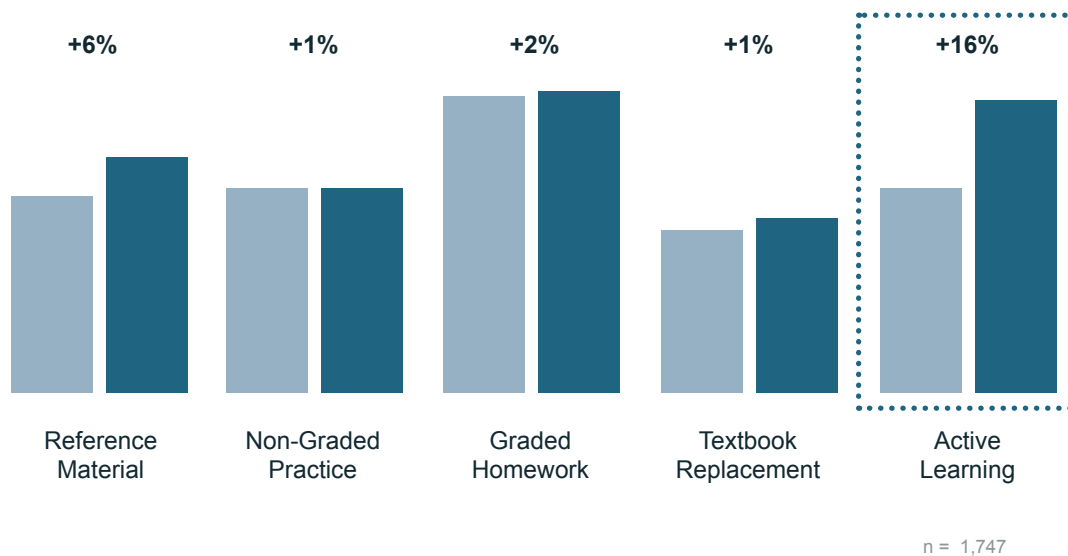
Figure 1: Faculty Use of Active-Learning Instructional Practices⁶



Once redesigners adopt courseware, they are more likely to use it to drive active learning in the classroom, implying that redesign creates opportunities for faculty to implement improved classroom techniques.

Recent Redesigners differ from Non-Redesigners in the way they employ courseware within their classrooms. Although they are about equally likely to use courseware for traditional practices like supplemental reference material or nongraded assignments, Recent Redesigners are 16% more likely to use courseware as a tool for active learning (Figure 2).

⁶Question: "Which of the following instructional practices do you apply throughout a typical course? Please select all that apply."

Figure 2: Faculty Uses of Courseware⁷

KEY:

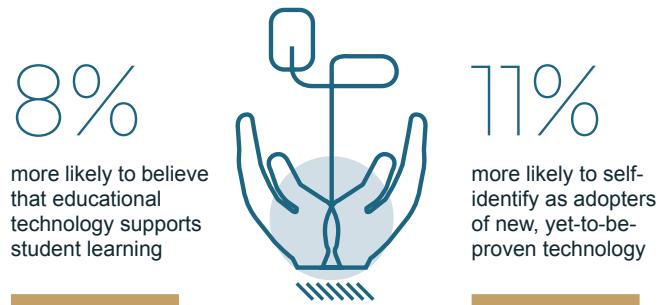
■ Non-Redesigners ■ Recent Redesigners

A faculty member's use of advanced teaching techniques in the context of a courseware implementation is limited by his or her knowledge of courseware functionality. As stated in *Lessons in Courseware Development*, "If instructors aren't fully aware of the courseware's features or haven't had time to integrate them into their teaching plans, [the] product may be treated simply as supplemental material, or just another digitized textbook. Instructors might not realize how much more they could do with whole learning courseware."⁸ Once again, this is correlation, not causation, but courseware implementation coupled with redesign appears to increase the likelihood of using courseware features to drive active learning. As institutions evaluate how to implement courseware, it is critical to consider the extent to which they seek to transform the course relative to the time investment they can afford.

⁷Question: "How do you use [this courseware product] in your course? Please select all that apply." ⁸"Supplemental vs. Whole-Course," *Lessons in Courseware Development*, Bill & Melinda Gates Foundation [Webpage]. <https://www.coursewarechallenge.org/supplemental-vs-whole-course>

Faculty who have undergone redesign are more likely to be early adopters of educational technology.

Recent Redesigners hold more open attitudes regarding the use of educational technology. They are 8% more likely to believe that educational technology supports student learning⁹ and 11% more likely to self-identify as adopters of new, yet-to-be-proven technology.¹⁰



Recent Redesigners are more likely to have engaged in professional development. Resourcing professional development is important for successful courseware implementation as part of redesign.

The availability of digital learning professional development leads to significantly more successful courseware implementation.¹¹ At institutions that require training on instructional practice for digital learning, faculty are a full 16% more likely to be promoters. Recent Redesigners are far more likely than Non-Redesigners to have engaged with professional development specific to digital learning.¹²

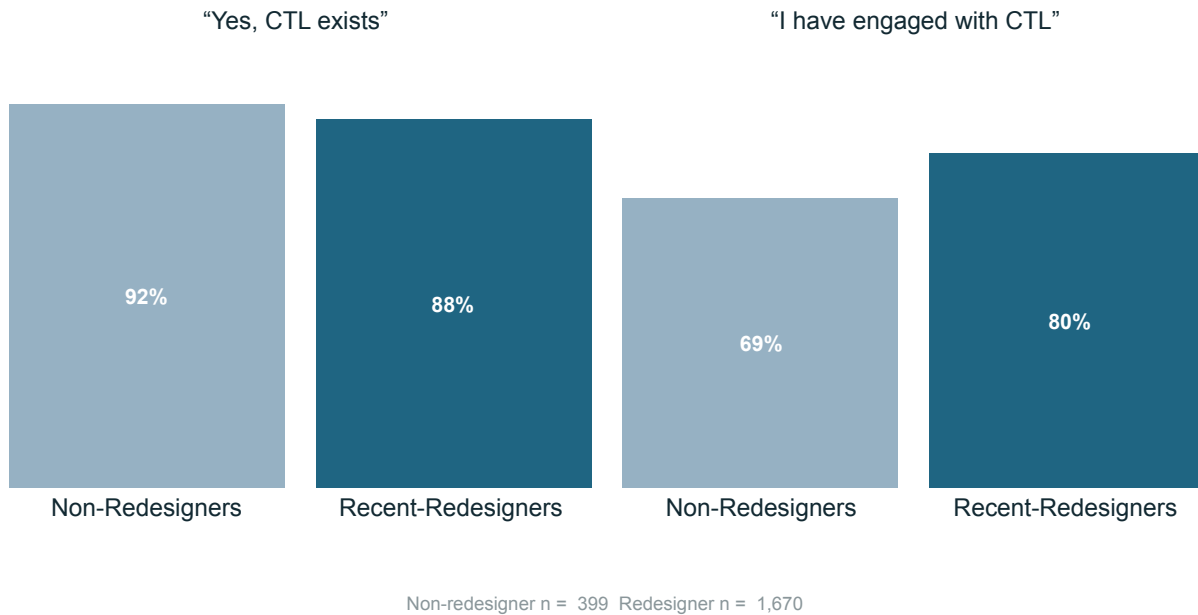
They are:

- 11% more likely to be trained on the incorporation of digital learning tools into existing pedagogies
- 16% more likely to be trained on new pedagogy for teaching online
- 20% more likely to be trained on curriculum and course design to enable them to develop new digital learning resources

These faculty members are not so much better resourced as they are proactive about taking advantage of available institutional supports to support the time-consuming work of redesigning a course and selecting and implementing courseware. Their access to centers for teaching and learning at their institutions is not significantly different than that of Non-Redesigners, but they are more likely to have engaged with these resources (Figure 3).¹³

⁹Question: "Please use the sliders below to indicate where your instructional tendencies and preferences fall on these dimensions." Slider: "Educational technology supports student learning." <-> "Educational technology detracts from student learning." ¹⁰Question: "Please use the sliders below to indicate where your instructional tendencies and preferences fall on these dimensions." Slider: "Adopter of new, yet-to-be proven technology" <-> "Adopter of established, well-proven technology" ¹¹Question: "How likely are you to recommend [this courseware product] to a colleague?" Respondents rating product with scores of 9 or 10 (out of 10) were labeled as "Promoters" and used as a proxy for implementation success. At institutions that require training on instructional practice for digital learning, faculty are a full 16% more likely to be promoters.

¹²Question: "Which of the following professional development topics for digital learning have you engaged with at your current institution? Please select all that apply." ¹³Question: "Does your institution have a center for teaching and learning?" Answers: "Yes, and I have engaged with it." [or] "Yes, but I have not engaged with it."

Figure 3: Center for Teaching and Learning (CTL) Presence and Engagement

In sum, while redesign concurrent with courseware adoption can support faculty in introducing and implementing active learning techniques, stakeholders need to decide what resources they can dedicate to the initiative. A writeup of results from the *Next Generation Courseware Challenge* (NGCC) discusses this balance. "Grantees found that whole-course products are much harder to implement in face-to-face and blended learning environments but reported that students showed significant increases in learning. Supplemental and lighter courseware is easier to adopt and scale, but such products offer shallower opportunities for student engagement."¹⁴ While a full course redesign concurrent with courseware adoption is the right approach in some cases, it is not the only way to experiment with and implement courseware.

¹⁴"Supplemental vs. Whole-Course," Lessons in Courseware Development, Bill & Melinda Gates Foundation [Webpage]. <https://www.coursewarechallenge.org/supplemental-vs-whole-course>

TOOL FOR ACTION

ROI Considerations for Redesign

Given that courseware can be used to address a variety of goals, it is important to be thoughtful in planning for your institution's particular objectives and constraints.

- √ Continue to focus on courseware adoption associated with redesign as the gold standard when the goal of courseware adoption is to transform instructional practice in the classroom.
- √ However, do not assume full redesign is the sole prerequisite for a successful courseware adoption. Consider other adoption points (e.g., use in supplemental contexts) where the time commitment relative to a full course redesign is lower and ability to experiment might be higher.

Return-on-Investment calculations have two key components:

- 1 **Costs:** the time and resources your stakeholders collectively commit
- 2 **Benefits:** the improvements you drive as a result of your change initiative.

The impact of costs and benefits should be considered relative to your particular students, faculty, and institution.

Institutions face an enormous variety of challenges and have starkly different assets they can bring to bear in solving them. Considering this, the following framework shows three of many ways to implement courseware as a potential solution.¹⁶



¹⁶House, A., Means, B., Peters Hinton, V., Boyce, J., Wetzel, T., & Wang, S., Next Generation Courseware Challenge Evaluation. (Menlo Park, CA: SRI International, 2018) https://www.sri.com/sites/default/files/publications/next_generation_courseware_challenge_evaluation_final_report_dec_2018.pdf

		Courseware as Supplement	Courseware as Complement	Courseware as Core
		<ul style="list-style-type: none"> Retains the basic structure of a traditional course Adds technology-based, out-of-class activities 	<ul style="list-style-type: none"> Adjusts how some in-class meetings are used Features online, interactive learning activities 	<ul style="list-style-type: none"> Removes traditional lectures from course plan Relies on interactive software and on-demand personalized assistance
		←		→
		Modification		Full Redesign
Potential Costs	Student	Potentially higher instructional materials costs given additional software license	Potentially lower or same instructional materials costs depending on software license	Potentially lower instructional materials costs depending on software license
	Faculty	Minimal time investment needed to select and implement product	Moderate time investment needed to select, implement, train and adjust course	Significant time investment to select, implement, train, adjust, and build courseware experience
	Institution	Minimal investment required for technology integration and support	Moderate investment required for technology integration and support, faculty training, classroom infrastructure, and instructional modification	Significant investment required for technology integration and support, faculty training, classroom infrastructure, and instructional redesign
Potential Benefits	Student	<ul style="list-style-type: none"> Some opportunities for individual practice Some personalization of content and learning path Increased student learning Reduction of failed course attempts 	<ul style="list-style-type: none"> More opportunities for individual practice More personalization of content and learning path Increased student learning Reduction of failed course attempts 	<ul style="list-style-type: none"> Most opportunities for individual practice Most personalization of content and learning path Increased student learning Reduction of failed course attempts
	Faculty	<ul style="list-style-type: none"> Some data and analytics to personalize learning and inform intervention Some grading and assessment time savings 	<ul style="list-style-type: none"> More data and analytics to personalize learning and inform intervention More grading and assessment time savings 	<ul style="list-style-type: none"> Most data and analytics to personalize learning and inform intervention Most grading and assessment time savings
	Institution	Increased persistence Better student learning outcomes Capacity to serve more students		
		<i>This lower investment option is appropriate when looking for a faster time to implementation and when pursuing goals that require less content modification (e.g., increased engagement).</i>	<i>This moderate investment scenario should be leveraged when looking to achieve greater impact without a full redesign.</i>	<i>This intensive investment should be pursued when the potential depth and scale of impact is high and when sufficient time and support can be committed to initiative success.</i>

To understand which courseware implementation style is right for you or your institution, consider:

- What is the most pressing problem you are trying to solve? (e.g., access, engagement, affordability)
- What access do your students have to technology? (e.g., personal devices, learning lab, home WiFi)
- Are there specific faculty who are willing to experiment with and learn to use new digital tools? (e.g., identify as early adopters of technology, believe technology can be used to support student learning)
- What instructional design resources do you already have available? (e.g. CTL, dedicated instructional designers)



DESIGNING PROFESSIONAL DEVELOPMENT FOR IMPACT

Despite the critical role of professional development in the success of digital learning and courseware initiatives, institutions report barriers to scaling professional development. A focused approach centered on the right kinds of training at the right times can support success in a significant way.

TIME FOR CLASS TOOLKIT



QUESTIONS ADDRESSED

How important is professional development to digital learning and courseware implementation success?

What are best practices in professional development design and implementation?

How does professional development impact faculty satisfaction with courseware implementation?

What types of professional development have the biggest impact on courseware implementation success?



KEY INSIGHTS

Both faculty and administrators see professional development as the most critical enabler of digital learning initiative success, but institutions still report challenges in implementing professional development at scale.

Scaled and effective professional development doesn't require outsized resources; what is more important is a place in the institution's strategic plan, investment in structures like a center for teaching and learning (CTL), and smart use of tools and systems.

Requiring faculty participation in specific forms of professional development is connected to a more positive sense that the institution is creating an ideal digital learning environment – but only 28% of faculty report that it is required at their institution.

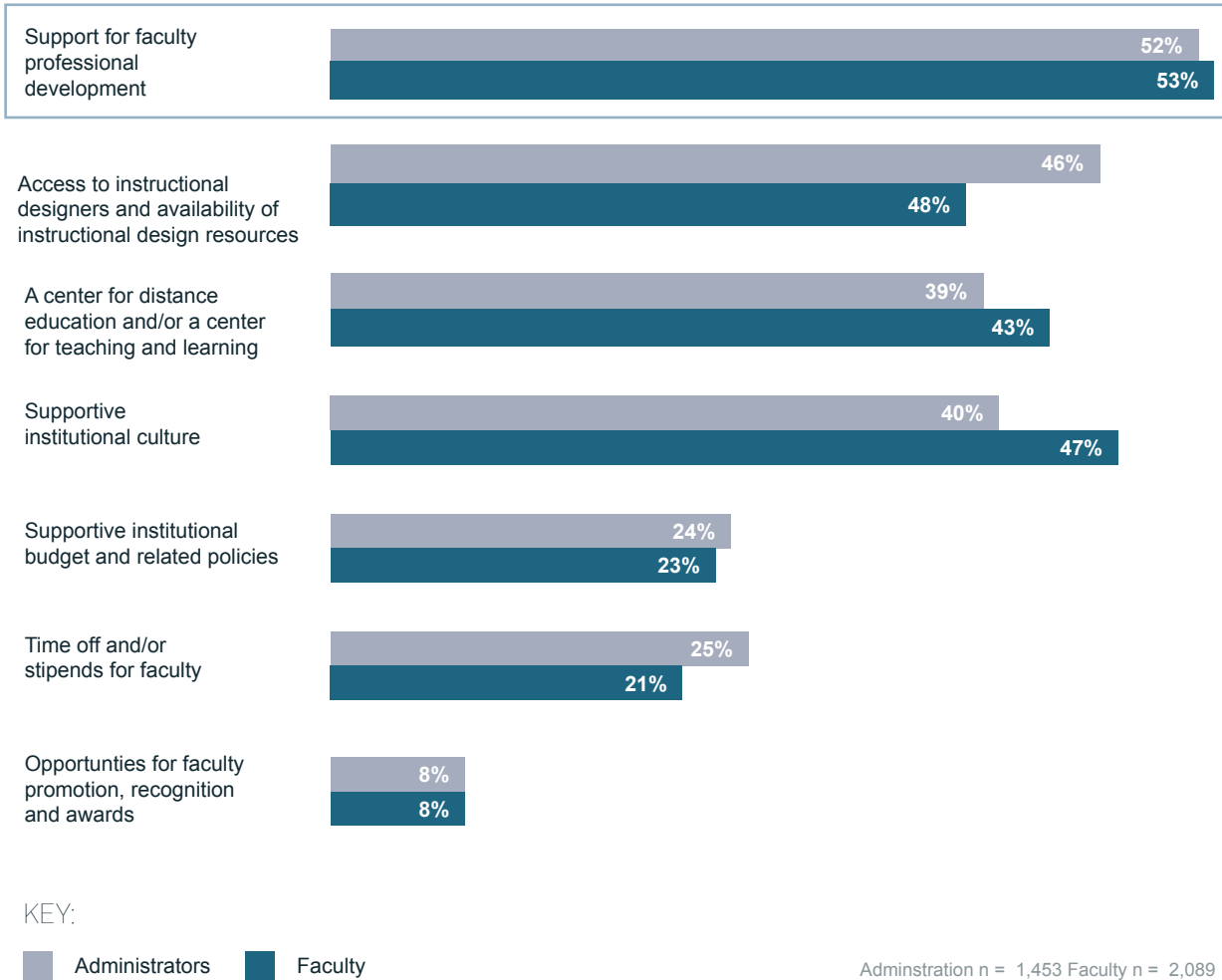
Specific professional development activities are correlated with both courseware adoption and positive faculty experience.



Professional development is seen by both faculty and administrators as the most important enabler of digital learning initiatives (Figure 1).

Although there are many factors (financial and otherwise) that can contribute to successful digital learning implementation, professional development and support for faculty is the top factor as cited by both faculty and administrators.

Figure 1: Positive Factors in Digital Learning Implementation¹



¹Question: "Which factors, if any, have contributed most positively towards digital learning? Please select up to three."

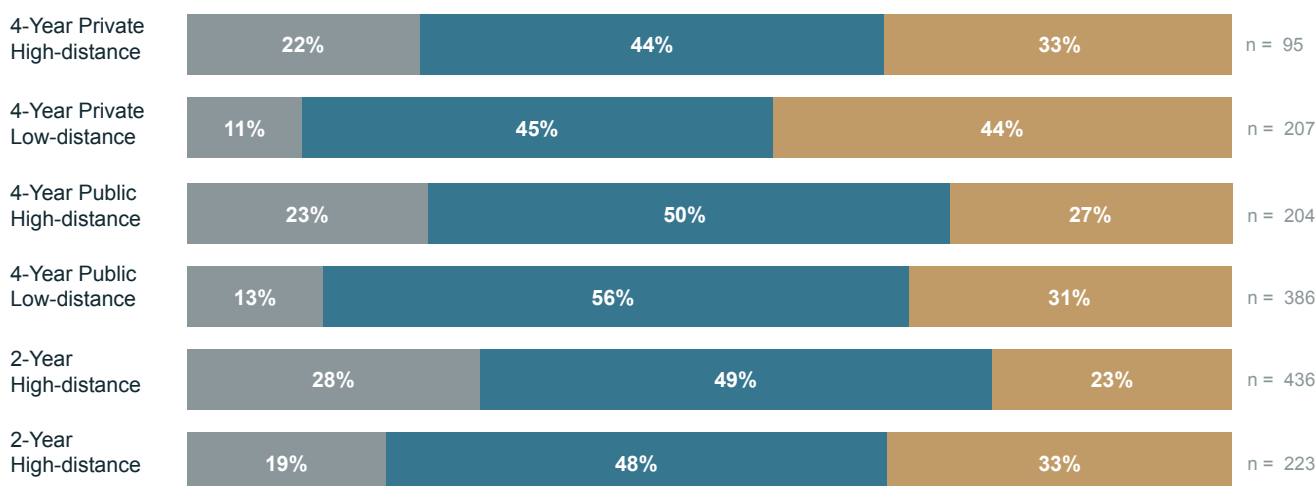
However, on-the-ground progress implementing professional development is not complete at most institutions.

Only 19% of administrators say that digital learning professional development has been implemented effectively and at scale. Almost half (49%) say implementation is in progress or being planned and 33% say it is incomplete.²

Scaled and effective professional development doesn't require outsized resources.

Where there is a will to provide professional development, there is a way. High-distance institutions—which employ a higher percentage of adjunct faculty³ than low-distance institutions in the study—cite higher rates of scaled professional development implementation (Figure 2). This suggests not that they have more or better resources than other schools, but that they have made professional development a priority and put the right systems and tools in place.

Figure 2: Status of Professional Development by Institution Type²



KEY:

At Scale In Progress Incomplete

One example of a commitment to professional development is the presence of a Center for Teaching and Learning (CTL)—82% of institutions with scaled professional development report having a CTL compared to only 66% of those with incomplete professional development



²Question: "To what extent is digital learning professional development (PD) implemented at your institution?" Answers: At scale = Digital learning PD has been implemented effectively and at scale; In progress = Digital learning PD implementation is in progress OR the institution is planning to implement digital learning PD at scale; Inconsistent = Digital learning PD is incomplete, inconsistent, informal, and/or optional OR Digital learning PD does not exist. ³Question: "Please indicate your adjunct status."

According to faculty, availability of and participation in professional development is connected to a more positive sense that the institution is creating an ideal digital learning environment.

While only 27% of overall faculty note that their institutions are achieving an ideal digital learning environment, 42% of faculty at institutions that require professional development report that their institutions are achieving an ideal digital learning environment.⁴ In addition, faculty who participate in certain forms of professional development are more likely to report that their institution is achieving an ideal environment (Figure 3).

Figure 3: Faculty Views on Ideal Digital Learning Environment and Professional Development

KEY:

Ideal
 Neutral
 Not ideal



Of faculty who...	X% agree their institution is achieving an ideal digital learning environment
Are required to participate in digital learning professional development	42%
...have participated in...	
Training and pedagogy for teaching online	32%
Training on incorporation of digital learning tools	32%
Selection and/or advising regarding third-party tools	31%
Curriculum and course redesign to develop digital resources	34%
None of the above	17%

n = 1,988

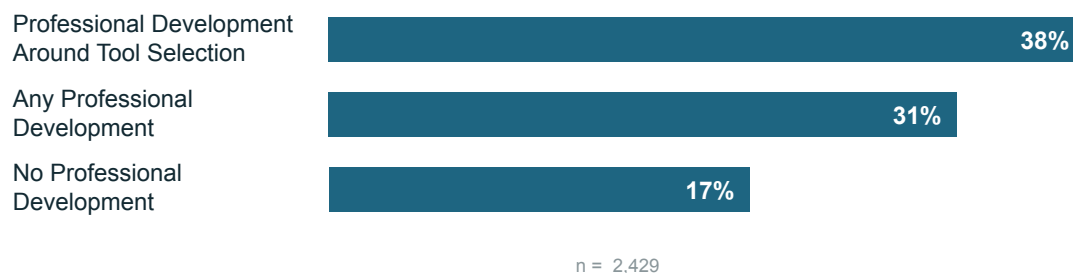
Despite the clear benefits of professional development, only 28% of faculty say their institution requires professional development for their instructional practice for digital learning.

⁴Question: "Which of the following professional development topics for digital learning have you engaged with at your current institution? Please select all that apply." Answers: Training on new pedagogy for teaching online; Training on incorporation of digital learning tools into existing pedagogies; Selection and/or advising regarding third-party digital learning tools; Curriculum and course design to help me develop new digital learning tools; Curriculum and course design to help me develop new digital learning resources for my course; None of the above; Other

Professional development can also be a lever to support courseware adoption.

Faculty who participate in professional development are more likely to adopt courseware. This connection suggests that availability of and participation in professional development can support faculty adoption. Specifically, faculty who participate in professional development focused on the selection of third-party digital learning tools adopt courseware at higher rates than those who receive other types of training (Figure 4).

Figure 4: Percentage of Faculty Using Courseware by Professional Development Received⁵



Professional development is a particularly important tool for ensuring that adoption and implementation are high quality and that faculty have a positive experience.

Faculty at institutions with required participation in professional development on instructional practice for digital learning⁴ report an average courseware Net Promoter Score⁶ of 16, while those with no requirement have an NPS of -6. Similarly, faculty at institutions with a CTL⁷ report higher NPS scores than those without such a center: 5 vs. -7. This underscores the importance of professional development to support a positive courseware implementation experience.

These findings are reinforced by SRI's *Next Generation Courseware Challenge* study, which shows that training for instructors on how to integrate the courseware with their intended pedagogy is associated with more positive impacts for adaptive courseware implementation.⁸

⁵Question: "Does your institution require faculty to participate in professional development on their instructional practice for digital learning?"

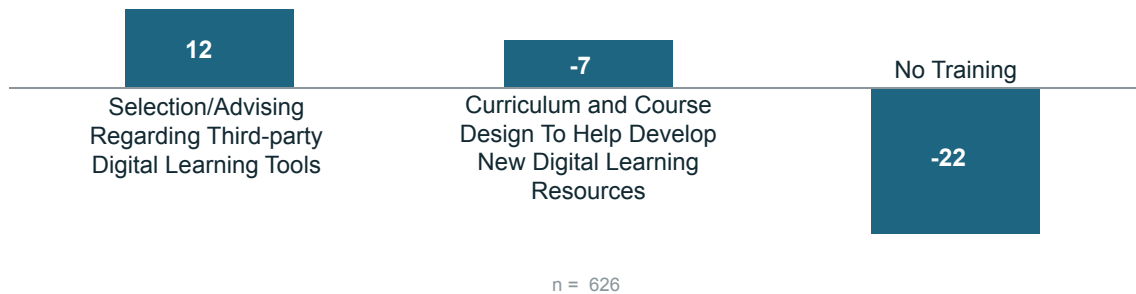
⁶Question: "How likely are you to recommend [this courseware product] to a colleague?" Respondents giving courseware product recommendation scores of 9 or 10 (out of 10) were labeled as "Promoters" and those giving the product scores of 1-6 were labeled as "Detractors." Promoters – Detractors = Net Promoter Score (NPS). ⁷Question: "Does your institution have a center for teaching and learning?"

⁸House, A., Means, B., Peters Hinton, V., Boyce, J., Wetzel, T., & Wang, S., Next Generation Courseware Challenge Evaluation. (Menlo Park, CA: SRI International, 2018) https://www.sri.com/sites/default/files/publications/next_generation_courseware_challenge_evaluation_final_report_dec_2018.pdf

Professional development activities relevant to planning and implementation stages are critical for faculty to have positive experiences using courseware.

Coaching on third-party digital learning tools and support to help faculty develop new digital learning resources is critical. Faculty who report participating in professional development in these areas are much more likely to be promoters of their courseware than those who do not participate in any professional development.

Figure 5: Net Promoter Score by Professional Development Experience



TOOL FOR ACTION

Resources to Support Professional Development

Based on survey results as well as an extensive body of literature about high-quality online learning experiences, it is clear that professional development and faculty support for teaching and learning with technology must be a critical priority and element of a high-quality digital learning experience. There are a few key steps to consider:

- √ Make an institutional commitment to developing a professional development plan that supports faculty in their exploration of tools and instructional practice.
- √ Make professional development a requirement for all faculty teaching in hybrid and online courses and wherever courseware is being used.
- √ Partner across systems and institutions to scale professional development offerings and create community for faculty.
- √ If your goal is to support faculty adoption of and positive experience with courseware, focus on the following specific training types:
 - Tool and resource selection
 - Pedagogy
 - Curriculum and course design

The following table lists organizations offering tools and resources that can accelerate and augment your professional development activities.

Resource	About	Professional Development
Faculty Guild	Organization developed based on the work of former CUNY President, Dr. Gail Mellow. Uses “situated learning” and facilitated reflection to improve faculty teaching performance.	<ul style="list-style-type: none"> • Fellowship model to promote reflection, collaboration and planning to achieve teaching goals. • Weekly small-group reflection and planning sessions are held virtually over 1-3 academic terms and supported by a facilitator and online platform.
Online Learning Consortium	Member-based non-profit organization “dedicated to establishing and ensuring quality standards in online and digital learning.”	<ul style="list-style-type: none"> • Online Teaching certificate programs for faculty and instructional designers at traditional and advanced levels • OLC “Mastery Series” emphasizes theory and application on key topics; badges awarded on completion • Stand-alone synchronous and asynchronous workshops • Institute for Emerging Leadership in Online Learning (IELOL)
Quality Matters	Non-profit organization focused on “promoting and improving the quality of online education and student learning”	<ul style="list-style-type: none"> • Teaching certificate aligned to the Online Instructor Skill Set • Workshops on online & blended course design and pedagogy • Online courses • Customized on-site or online training programs



every learner
←————→
everywhere

CREATING A POSITIVE COURSEWARE ADOPTION EXPERIENCE




Certain institutional, course-level, and faculty-level characteristics have a significant impact on the likelihood of a positive courseware adoption experience, while others have minimal effect. For the best chance of success, examine these factors as they present themselves at your institution.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

What are the institutional, course-level, and faculty-specific attributes that contribute to a positive courseware experience?



KEY INSIGHTS

Peer recommendations matter most in the courseware selection process, so understanding current users' likelihood to recommend courseware is an important consideration.


Institutions that require professional development for digital learning have a higher percentage of courseware promoters, underscoring the importance of professional development in achieving a positive adoption experience.

The way courseware is used impacts the likelihood that faculty will recommend it. Those faculty who employ courseware as core to their course tend to give it a higher Net Promoter Score than those who use it as a supplemental resource.

Faculty experience plays a role in driving a positive courseware experience.

The most experienced faculty – as measured by those with 20+ years of teaching experience – are most likely to recommend courseware.

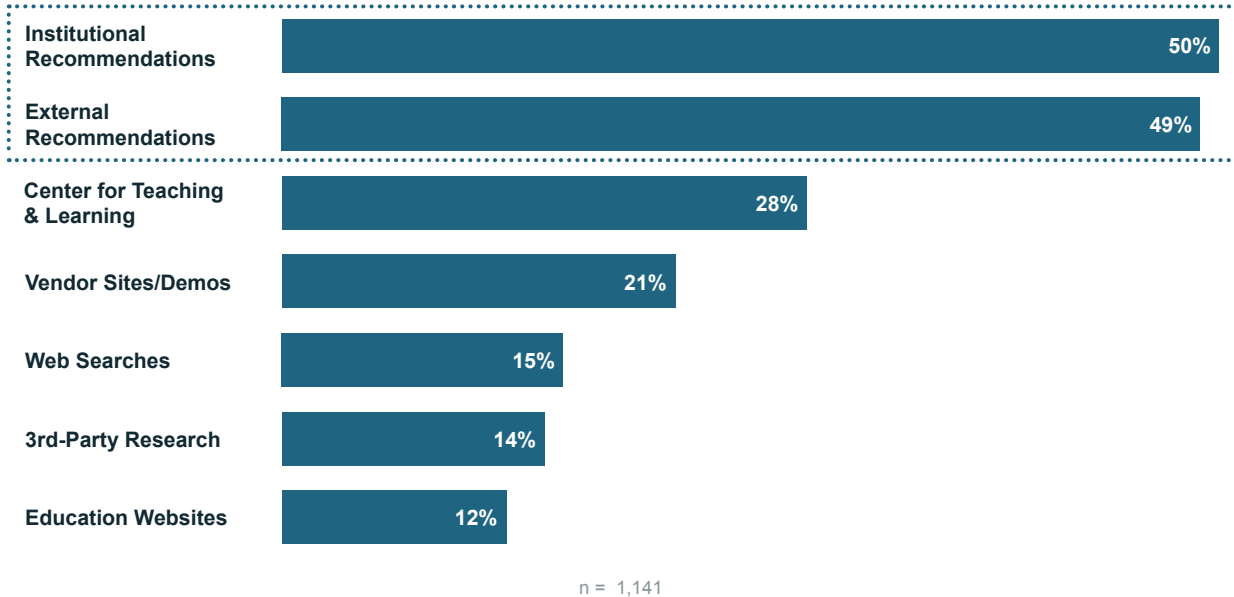
Differences in satisfaction with courseware are *not* driven by course modality, course level, or whether adoption is part of a course redesign.



Recommendations matter most in digital learning selection.

Although there are many digital learning information and product comparison resources available to inform courseware selection,¹ higher education administrators overwhelmingly rely on recommendations from professionals at their own institutions or others (Figure 1).

Figure 1: Factors Informing Courseware Selection²



Recognizing this preference for peer-endorsed resources, *Time for Class 2019* was structured to enable analysis of faculty recommendations across different tools. The following research uses faculty likelihood to recommend their primary³ courseware products on a scale of 1 to 10⁴ as a proxy for a positive adoption experience and satisfaction.



¹E.g., EdSurge Product Index, LearnPlatform product library ²Based on data from Time for Class 2016; the 2019 instrument did not include this question. ³Question: “Considering all the courses you use or have used courseware products in, for the following questions, please select the singular course with the largest enrollment. From the following list, please select the product you are using in this highest enrollment course.” ⁴Question: “How likely are you to recommend [this courseware product] to a colleague?” Respondents answering with scores of 9 or 10 (out of 10) were labeled as “Promoters” and those answering 1-6 were labeled as “Detractors.” Promoters – Detractors = Net Promoter Score (NPS).

KEY FACTORS INFLUENCE COURSEWARE ADOPTION SATISFACTION.

Like most resources in higher education, faculty-reported satisfaction with courseware products depends on the quality and coordination of specific factors across the institution, course, and faculty

Institution



- √ % Distance Students
- √ Training

Course



- √ Discipline

Faculty

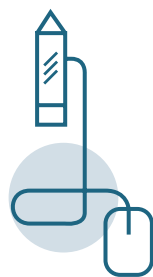


- √ Classroom Techniques

Courseware promoters are more likely to be found at institutions where students have relevant needs and faculty relevant training.

Faculty at high-distance institutions are slightly more likely to be courseware promoters than faculty at low-distance institutions.⁵ Given the greater degree of focus on digital learning, this finding aligns with expectations.

Engagement in relevant professional development has a stronger effect. At institutions that require faculty to participate in training on digital learning instructional practice, faculty are more likely to be promoters.⁶ This finding is reinforced by SRI's *Next Generation Courseware Challenge* (NGCC) study, which shows that training for instructors on how to integrate the courseware with their intended pedagogy is associated with more positive impacts for adaptive courseware implementation.⁷



16%

At institutions that require faculty to participate in training digital learning instructional practice, **faculty are 16% more likely to be promoters of their courseware product.**

⁵ Low-distance institutions are those where less than 25% of undergraduate students have taken at least one course online, based on 2018 IPEDS data. High-distance institutions are those where 25% or more of undergraduate students have taken at least one course online, based on 2018 IPEDS data. ⁶Question: "Does your institution require faculty to participate in professional development on their instructional practice for digital learning?" ⁷House, A., Means, B., Peters Hinton, V., Boyce, J., Wetzel, T., & Wang, S., Next Generation Courseware Challenge Evaluation (Menlo Park, CA: SRI International, 2018) https://www.sri.com/sites/default/files/publications/next_generation_courseware_challenge_evaluation_final_report_dec_2018.pdf

Adoption of courseware as part of a redesign brings benefits, but not necessarily more courseware promoters.

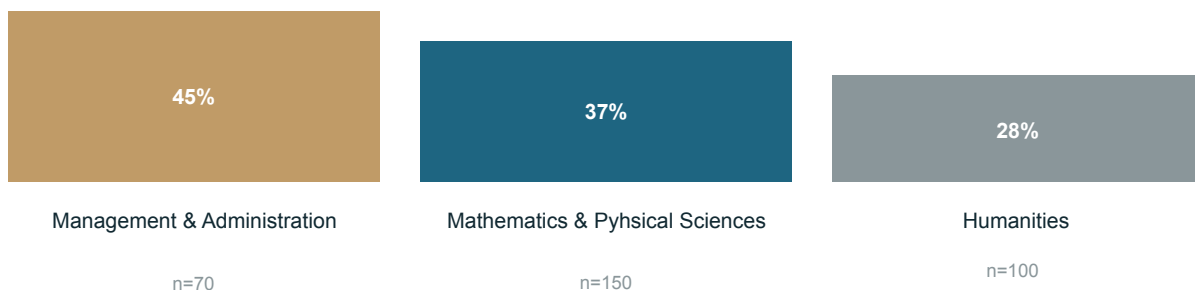
While 85% of courseware users are recent course redesigners, and while instances of courseware redesign certainly bring the potential to pair tool use with meaningful instructional change and added institutional support, the redesign process in isolation has little effect on courseware adoption satisfaction. Current faculty courseware users who have taken on a course redesign or substantial modification in the previous three years are no more likely than non-redesigners to identify as promoters. To learn more about the benefits of redesign, refer to *Time for Class Toolkit* brief *Adopting Courseware Through Course Redesign*.

Differences in satisfaction with courseware are not driven by course modality or level.

Satisfaction with courseware does not vary greatly based on course modality. Whether the class taught is face-to-face, in a blended setting, or fully online, faculty members are not significantly more or less likely to be courseware promoters. Across all modalities, 33% to 37% of users identified as courseware promoters.⁸ Similarly, there is little variation in the percentage of promoters across course levels, from developmental education (39%), across introductory and intermediate level courses, up to graduate level courses (41%).⁹

Although faculty report courseware use across a variety of academic disciplines, faculty in quantitative fields like management and administration, mathematics and physical science are slightly more likely to report that they are promoters of courseware than traditionally qualitative disciplines like the humanities (Figure 2).

Figure 2: Percent of Courseware Promoters by Discipline¹⁰



These findings reinforce those of the *NGCC* study, that implementations of courseware in biology, psychology, math, and statistics classes led to higher student course grades than those earned in other classes.

⁸Question: "Is [your primary courseware product] used in the following types of courses?" Answers: "Face-to-face" [and/or] "Blended/Hybrid" [and/or] "Fully Online" ⁹Question: "Is [your primary courseware product] used in the following types of courses?" Answers: "Undergraduate Level – Developmental Education (remedial education)" [and/or] "Undergraduate Level – Introductory Level Courses" [and/or] "Undergraduate Level – Upper Level Courses" [and/or] "Graduate Level Courses" ¹⁰Question: "What is your primary [academic] discipline?"

¹¹House, A., Means, B., Peters Hinton, V., Boyce, J., Wetzel, T., & Wang, S., Next Generation Courseware Challenge Evaluation (Menlo Park, CA: SRI International, 2018) https://www.sri.com/sites/default/files/publications/next_generation_courseware_challenge_evaluation_final_report_dec_2018.pdf

Courseware promoters are more common among experienced faculty.

Faculty with greater than 20 years of teaching experience are most likely to be courseware promoters and to have the highest NPS scores.¹² There are many reasons why this could be the case – including confidence in pedagogy and content, and understanding of student needs.

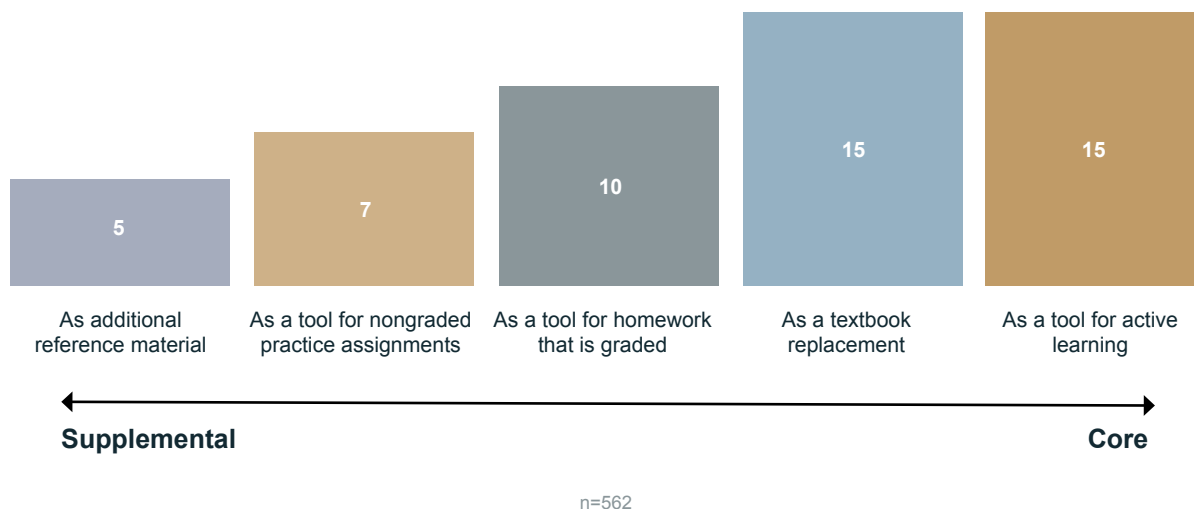
Faculty members' involvement in the selection of courseware is not a key driver that determines satisfaction.

Faculty members who say that they have influence over courseware product decision-making are just as likely to be courseware promoters (34%) as those who do not cite influence.¹³

Faculty who use courseware as core course material and to drive active learning are more satisfied.

Though courseware can be leveraged in a variety of ways, faculty adopting the most transformational teaching practices have more positive views of courseware. Net Promoter Scores¹⁴ suggest that the more integrated courseware is into the learning experience, the more likely faculty are to recommend it as a resource (Figure 3).

Figure 3. Faculty Net Promoter Score by Use of Courseware

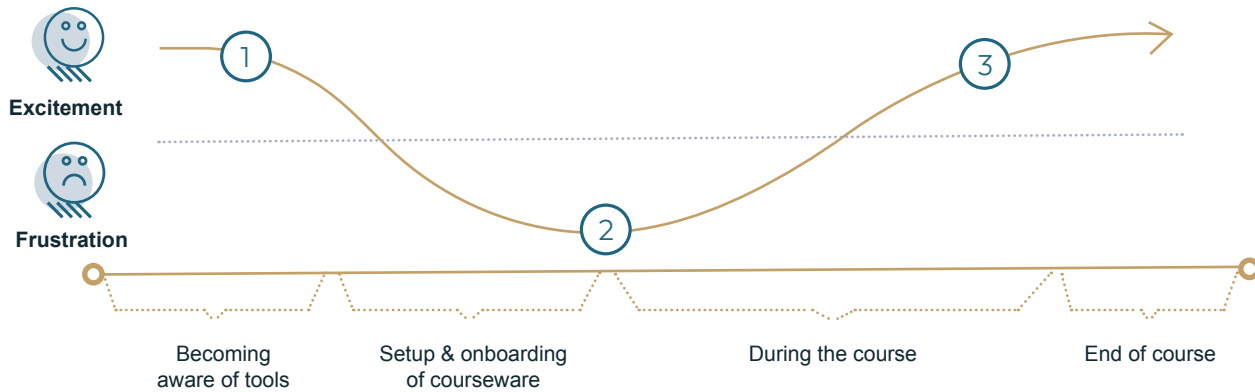


¹²Question: "Please indicate the number of years you have been teaching." ¹³Question: "Who influences the selection of the following at your institution? Please select all that apply." ¹⁴Percentage of Promoters (scores of 9–10) minus percentage of Detractors (scores of 1–6)

TOOL FOR ACTION

Navigating the Courseware Implementation Journey¹⁶

The faculty and student experience along the courseware implementation journey has its ups and downs.



1	<p>Instructor – Optimistic about potential of a new tool</p> <p>Student – Enthusiastic about an affordable and easily accessible resource</p>
2	<p>Instructor – Concerned about how much work is required, how it fits into lesson plans, and how to provide technical support to students</p> <p>Student – Worried about grades, and discouraged by unclear expectations</p>
3	<p>Instructor and Student – Becoming more comfortable with the tool and starting to see the value it offers</p>

There are key actions that administrators and faculty can take to increase the chances of courseware implementation success.

- ✓ Consider the intensity of redesign relative to the goals of adopting courseware. Review the *Adopting Courseware through Course Redesign* action brief if exploring adoption in this context.
- ✓ Courseware promoters can be drawn from a range of experience levels; consider approaching experienced faculty to rally support.
- ✓ Explore trialing courseware across levels and modalities:
 - Identify faculty members who plan on using courseware as a core tool.
 - Propose adoption in quantitative disciplines that align to courseware capabilities.
- ✓ Ensure faculty have access to digital-specific professional development opportunities.

Consider using Intentional Futures' *Key Design Lessons Workbook* for developing effective courseware as a tool to build courseware support, assess current and future products, and assist implementation success. Based on student and instructor interviews, user experience design principles, learning science, and instructional design best practices, these worksheets and activities can be an aid to developing effective courseware within an institution.

¹⁶Intentional Futures, *Designing Effective Courseware: 10 Lessons Learned for Mapping the Experiences of Instructors and Students* (Seattle, WA: Intentional Futures, 2017.) https://intentionalfutures.com/wp-content/uploads/2017/11/designing_effective_courseware_workbook.pdf



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UNDERSTANDING ADAPTIVE COURSEWARE

Adaptive courseware offers the potential for personalized learning at scale. Understanding the range of adaptive products available and the different degrees of customization are good first steps.

TIME FOR CLASS TOOLKIT

QUESTIONS ADDRESSED

How can adaptive courseware be used to benefit students?

To what extent is adaptive courseware being used today?

How important is adaptivity relative to other courseware features?

What factors should be considered when selecting an adaptive courseware product?

KEY INSIGHTS

Adaptive courseware has the potential to provide students with personalized learning experiences that increase student mastery of content and improve learning outcomes.

Faculty are primarily using adaptive courseware products, with an even split between platform-led and content-led products.

Although the majority of faculty do not seek adaptivity as a top feature during the product selection process, those who use adaptive courseware products are more likely to recommend them than those who use non-adaptive products.

Not all products adapt in the same way, so clearly setting goals for adaptive courseware adoption is critical. The *Courseware in Context* (CWIC) Framework can be used to assess courseware along different dimensions of adaptivity.

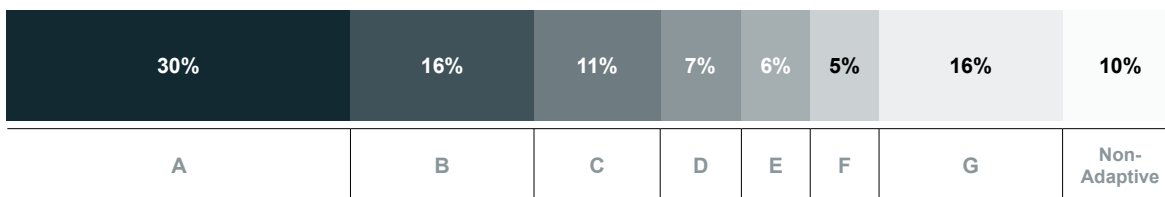
Adaptive courseware can provide students with personalized learning experiences that increase mastery of content and improve student learning.

Adaptive courseware combines purpose-built software, content, and assessments. Adaptive courseware dynamically adjusts based on student interaction and performance levels, delivering content in an appropriate sequence for individual learners at specific points in time. With the right implementation, it can help provide personalized learning experiences for all students,¹ delivering new learning material to students who have achieved mastery and remediation to those who have not.² For more information about the potential benefits of courseware, refer to the *Making the Case for Courseware* brief in this series.

The majority of courseware being adopted today in highest-enrollment classes is adaptive.

Nearly thirty percent of faculty today are courseware users. Ninety percent of those report that the courseware they use in their highest-enrollment courses is adaptive (Figure 1). However, the extent to which faculty are using the full range of adaptive features and functionality within these products varies.

Figure 1: Faculty Courseware Product in Use in Courses with Highest Enrollment³



A = Pearson MyLab
 B = McGraw-Hill Connect
 C = Cengage Mindtap
 D = Wiley PLUS

E = Cengage Learning Objects
 F = Macmillan LaunchPad
 G = Adaptive Other

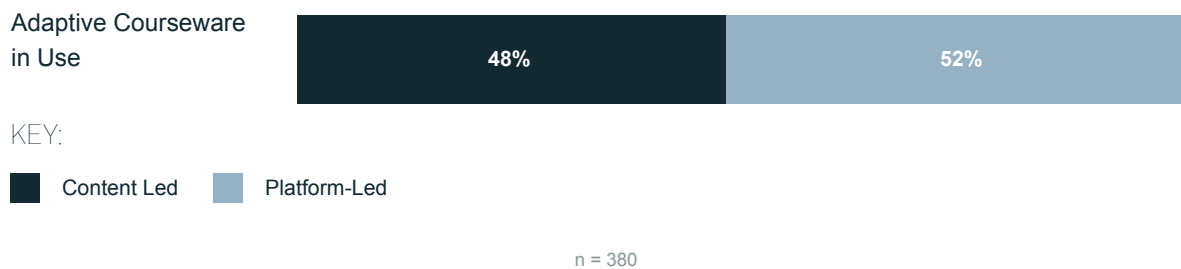
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¹A Guide for Implementing Adaptive Courseware: From Planning Through Scaling, Association of Public and Land-grant Universities (APLU) and Every Learner Everywhere, October 2018. <https://www.aplu.org/library/a-guide-for-implementing-adaptive-courseware-from-planning-through-scaling/file> ²7 Things You Should Know About Adaptive Learning,” Educause Learning Initiative, January 2017. <https://library.educause.edu/~media/files/library/2017/1/eli7140.pdf> ³Question: “Which courseware product do you use in the highest-enrollment course you teach?” The category “Adaptive Other” includes Acrobatiq, Aplia, Café Learn, Cerego, Knewton, LoudCloud, ALEKS, LearnSmart, SmartBook, MindEdge, Learning, Realizeit, Sapling, Smart Sparrow, and zyBooks. “Non-Adaptive Other” includes Candela, Chegg Math Solver, Intellus Learning, and WayMaker.

Adaptive courseware adoption is split across platform-led and content-led products.

Some adaptive courseware products are content-led, offering either prepackaged courses or libraries of individual videos and assessments to give faculty a head start and ease implementation. Others are platform-led, dedicating resources towards advanced functionality and increased opportunities for customization. Given the customization that needs to occur, the time needed to build and implement courses using platform-led products is generally longer. Platform-led courseware vendors therefore typically offer more customer support and service options. Overall, faculty report use that is evenly distributed between platform-led and content-led products (Figure 2).

Figure 2: Content-Led vs. Platform-Led Adaptive Courseware Product Use⁴



Faculty teaching in quantitative academic disciplines use adaptive courseware at higher rates than those in other disciplines.

Whereas 91% of faculty teaching quantitative disciplines like mathematics and physical sciences report using adaptive courseware products, 79% of faculty teaching in the humanities report using adaptive courseware products.⁵

⁴ Question: "From the following list, please select the product you are using in this highest-enrollment course." ⁵ Question: "What is your primary [academic] discipline?"

Although the majority of faculty do not seek adaptivity as a top feature during the product selection process, faculty who use adaptive courseware products are more likely to recommend them than faculty who use non-adaptive products.

As of 2019, usability (features of software and user-centered design that support sustained engagement), customization (the ability for educators or course designers to alter learning or assessment content), and depth of interaction (the presence of variety and higher-order learning skills in instruction) are faculty members’ most desired courseware features (Figure 3). However, once adopted, adaptive courseware does receive a slightly higher Net Promoter Score (NPS)⁶ from faculty (Figure 4).

Figure 3: Top ranked capabilities when selecting courseware⁷

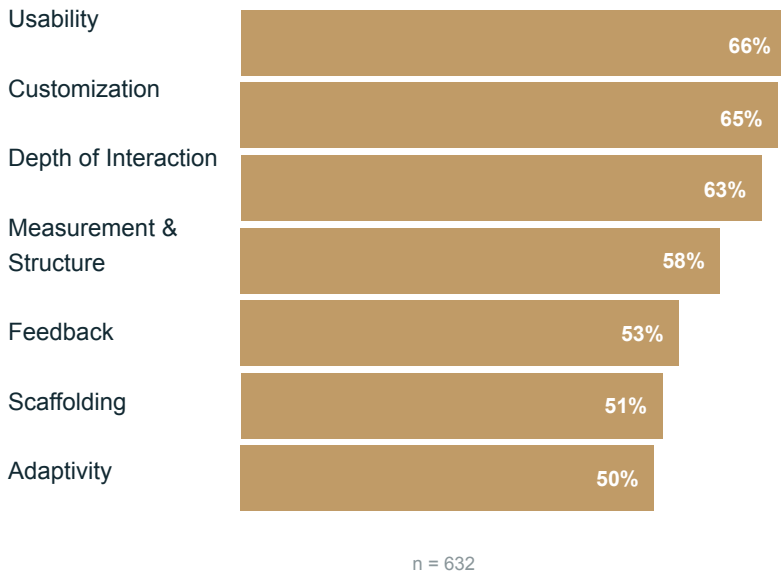
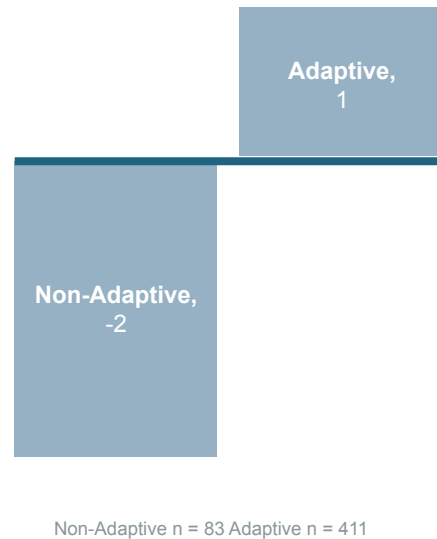


Figure 4: Courseware NPS⁸



Faculty who are experts in their respective disciplines are not necessarily experts in digital learning tools and techniques. As shared by one Vice President of Online Learning from a 4-year institution, “Faculty come to us not necessarily looking for adaptive products at first, but they later come to appreciate the functionality.”

⁶ Question: “How likely are you to recommend [this courseware product] to a colleague?” % Promoters (scores of 9–10) – % Detractors (scores of 1–6). Net Promoter Score = Promoters – Detractors. The sample size for the non-adaptive product category here is small. Care should be taken to not overestimate the effect of adaptivity alone on the faculty experience. ⁷ Question: “Please indicate which of the following capabilities are important to you in selecting courseware. Please select all that apply.” ⁸ Question: “How likely are you to recommend [this courseware product] to a colleague?” % Promoters (scores of 9–10) – % Detractors (scores of 1–6)

Not all products adapt in the same way; courseware should be assessed along different dimensions of adaptivity that vary in importance depending on instructional goals.

EdSurge's *Higher Ed Courseware Product Index*,⁹ inspired by the Courseware in Context (CWIC) Product Taxonomy,¹⁰ is designed to inform faculty and administrators as they evaluate and select courseware products.

The following types of adaptivity, which differ in complexity, are highlighted:

1. Adapts the **complexity or presentation of content** based on a pretest
2. Adapts the **goals or standards** for learner completion based on more inputs than a single correct response to the previous item or activity
3. Adapts the presentation of content based on **learner-declared goals**
4. Adapts the **scope of instruction** (breadth and depth of content) based on more inputs than a single correct response to the previous item or activity

In thinking about what type of adaptivity will be best for your institution, department, or course, consider your students' needs and your own instructional goals.



⁹ <https://www.edsurge.com/product-reviews/higher-ed/courseware?search> ¹⁰ <https://coursewareincontext.org>

¹¹ A Guide for Implementing Adaptive Courseware: From Planning Through Scaling, Association of Public and Land-grant Universities (APLU) and Every Learner Everywhere, October 2018. <https://www.aplu.org/library/a-guide-for-implementing-adaptive-courseware-from-planning-through-scaling/file>

TOOL FOR ACTION

Courseware in Context (CWIC) Framework (www.coursewareincontext.org)

The implementation of adaptive courseware holds promise, but also needs to be thoughtfully planned for and implemented based on learning goals and faculty and staff capacity.

- √ Think about whether a content- or platform-led product makes the most sense for your needs. While platform-led tools enable significant customization, they also require significantly more up-front work.
- √ Even the most advanced technical resources are more effective when partnered with best-practice pedagogy; consider investing not just in tools but in training on teaching and learning strategies.
- √ To navigate the adaptive implementation process from initial plan through scaling initiatives, leverage APLU's established techniques in their *Guide for Implementing Adaptive Courseware*.¹¹

Use Case	Suggested User	Product Primer	CWIC Framework Component				Access
		Product Primer	Product Taxonomy	Research Collection	Course-Level Quality Indicators	Program-Level Quality Indicators	
Explore courseware products	Educators, instructional designers, and administrators	X					Coursewareincontext.org, LearnPlatform
Select and evaluate a courseware product	Instructional designers and tech-savvy instructors		X	X			Coursewareincontext.org, LearnPlatform, EdSurge Product Index
Better understand the learning science behind courseware	Educators, instructional designers, and administrators			X			Coursewareincontext.org
Perform a course or program review	Administrators		X	X	X	X	Coursewareincontext.org, LearnPlatform



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RESOURCES, ABOUT, & ACKNOWLEDGMENTS



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ADDITIONAL RESOURCES

For more information, visit [Every Learner Everywhere Resources](#) or the [Tyton Partners Library](#).

ABOUT

Time for Class is a comprehensive longitudinal survey of 4,000+ higher education faculty and administrators, fielded since 2014 by [Tyton Partners](#) and the [Babson Survey Research Group](#) and underwritten by the [Bill & Melinda Gates Foundation](#). Results inform a comprehensive fact base focused particularly on the postsecondary digital courseware landscape, in the service of making this diverse and complex market easier to navigate for institutions and education professionals.



Tyton Partners is the leading provider of investment banking and strategy consulting services to the education sector and leverages its deep transactional and advisory experience to support a range of clients, including companies, foundations, institutions, and investors.

For more information, visit www.tytonpartners.com.



The Babson Survey Research Group is a survey design, implementation, and analysis organization. Founded in 2005, the organization has worked on a number of large surveys including an annual survey of online education that includes all colleges and universities in the United States.

For more information, visit www.onlinelearningsurvey.com.



Every Learner Everywhere is a network of 12 partner organizations focused on providing a comprehensive, coordinated approach to help colleges and universities take advantage of the rapidly evolving digital learning landscape.

For more information, visit www.everylearnereverywhere.com.

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We also would like to thank the 4,000+ survey respondents across 1,300+ institutions for their input and their daily work to advance the field's knowledge of digital tools and courseware in higher education.

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