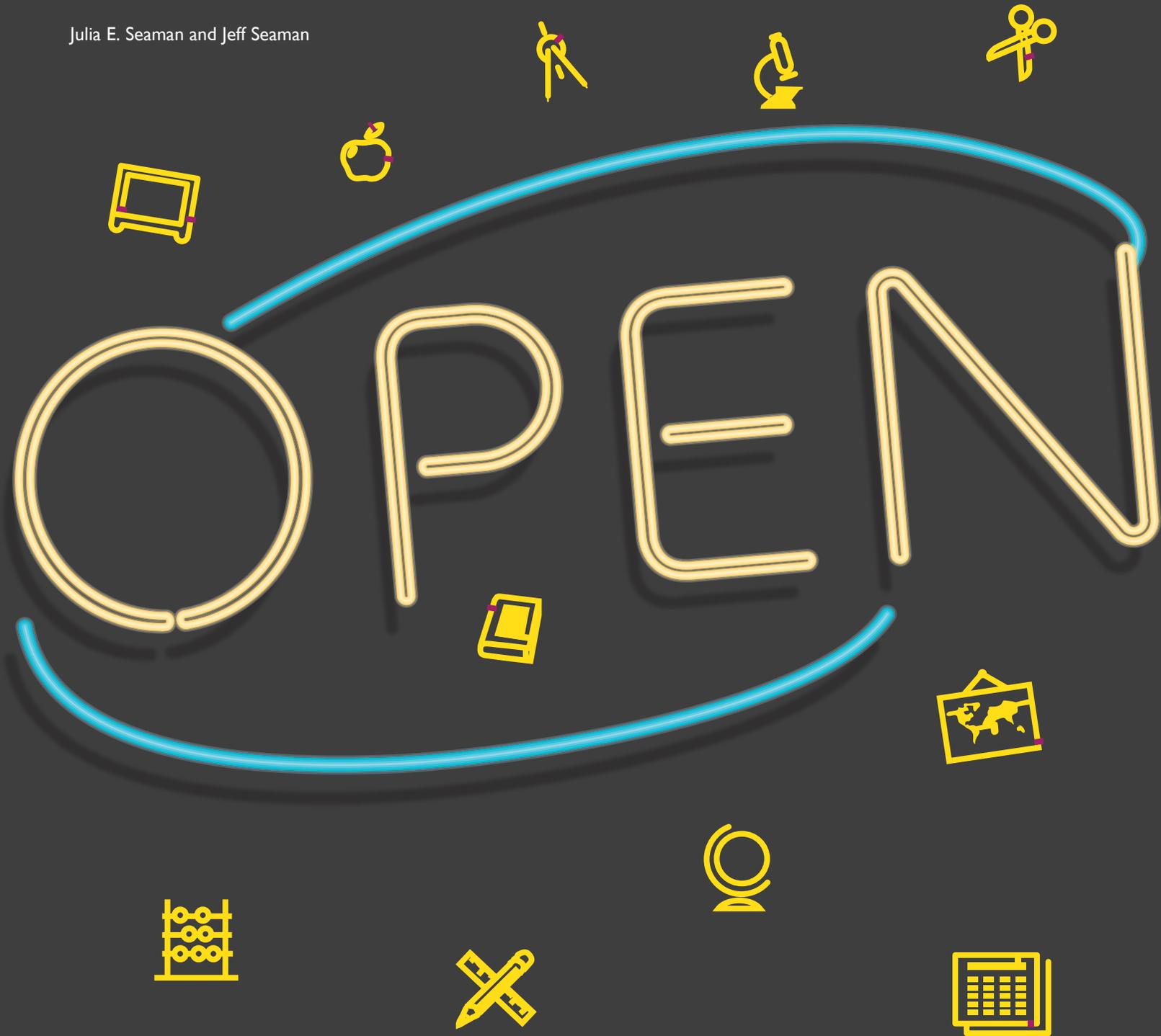


# Digital Texts in the Time of COVID:

Educational Resources in U.S. Higher Education, 2020

Julia E. Seaman and Jeff Seaman



Bay View Analytics

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Educational Resources in U.S. Higher Education, 2020

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2021



Bay View Analytics

# CONTENTS

ACKNOWLEDGMENTS.....	2
EXECUTIVE SUMMARY.....	3
DEFINITIONS.....	4
STUDY RESULTS.....	7
Background .....	7
The New COVID Teaching Reality .....	8
Fall 2020 Teaching Experience .....	10
Selecting Educational Resources .....	14
Teaching Materials in a Pandemic.....	19
Digital versus Print.....	25
Textbook Licensing .....	29
OER Awareness.....	30
Awareness of Licensing of Open Educational Resources.....	32
OER Use.....	35
OER Initiatives .....	39
Textbook Quality .....	43
SUMMARY .....	45
Minority-serving Institutions .....	46
Next Steps .....	46
METHODOLOGY .....	47
APPENDIX TABLES.....	50

The cover design is by Mark Favazza ([www.favazza.com](http://www.favazza.com)).



Digital Texts in the Time of COVID: Educational Resources in U.S. Higher Education, 2020  
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Report available at <http://www.bayviewanalytics.com/oer.html>

# ACKNOWLEDGMENTS

The William and Flora Hewlett Foundation has supported this entire series of reports; it has been a pleasure working with them.

No survey report is possible without the willing cooperation of the respondents. We are especially grateful that so many took the time during what has to be one of their most challenging academic terms. Faculty responded to our many questions, and provided very detailed responses to the open-ended portions of the survey. Many faculty provided permission for us to quote them, and their comments are included throughout this report. The quotes are as close to the original as possible; the only changes made are to remove personally-identifying information, or to correct obvious typos.

All of our reports are enhanced by the constructive feedback we have received from the open education community members. Likewise, both commercial and non-commercial publishers have improved their final products with the help of community members' reviews and comments on earlier report drafts.

Good research is a team effort, and our team continues to excel. We thank Nate Ralph for his extensive copy editing, I. Elaine Allen for her review and feedback, and Mark Favazza, whose graphics skills are evident on our report covers.

Finally, we want to thank our readers. Your comments and feedback have helped guide us, and this report is better for your input. Please continue to let us know how we can improve.

Julia E. Seaman  
Jeff Seaman  
Bay View Analytics  
2021

# EXECUTIVE SUMMARY

The Fall 2020 term served as a litmus test of how well the evolving course material distribution and selection process works for U.S. higher education. More faculty than ever before had to select and adapt their course materials, with less time than previous years to explore their options and make decisions.

- Faculty were overwhelmingly teaching the same course in Fall 2020 as previously, but the proportion teaching online jumped from 34% to 71%; those teaching face-to-face fell from 96% to only 14%.
  - Moving online forced faculty to modify their courses: one-quarter of faculty said the Fall 2020 version of their course was considerably different than the version taught before.
- The pattern of required course materials showed little change from last year's academic term. The primary change for textbooks was a move to digital as an alternative or sole delivery mechanism.
  - Seventy percent of faculty retained textbooks as a course requirement; 87% of faculty report using the same textbooks as previous terms.
- Despite increased reliance on digital materials, faculty satisfaction with their required textbooks remained high.
  - Faculty using commercial textbooks reported levels of satisfaction equal to those reported last year.
  - Faculty satisfaction with OER textbooks improved over last year, now slightly higher than for those using commercial textbooks.
- A majority of faculty now report some level of awareness of Open Educational Resource (OER), the fifth straight year of growth. A stricter measure requiring awareness of OER and licensing also showed the same pattern of continued growth.
- The level of adoption of OER as required course material did not increase, marking the first time that growth in awareness was not coupled with growth in adoption. Adoption of OER supplemental materials continued its year-over-year growth, however.
- Faculty who are aware of an OER initiative are far more likely to adopt OER.
  - Faculty teaching introductory-level courses were three times as likely to have adopted an OER textbook (47%, compared to 15%) if they were aware of an OER initiative. The ratio among all faculty was four to one (36%, compared to 9%).

# DEFINITIONS

This study explores how faculty members select and use the educational materials employed in their courses. The primary sample represents all teaching faculty across all types of degree-granting higher education institution in the United States. Two subgroups of faculty are called out for detailed examination: those teaching large-enrollment introductory level courses, and those teaching at minority serving institutions.<sup>1</sup>

The most common educational material employed in a course is the required textbook: faculty members typically choose one or more books that all students use throughout the course. Faculty also employ a wide range of other materials — some optional, others required for all students. This study focuses on the required materials, using the following definition:

*Items listed in the course syllabus as required for all students, either acquired on their own or provided to all students through a materials fee; examples include printed or digital textbooks, other course-complete printed (course pack) or digital materials, or materials such as laboratory supplies.*

In addition to examining the overall resource selection process, this study also explores the class of materials classified as Open Educational Resources (OER). The definition presented to the respondents in the study's questionnaire comes from the William and Flora Hewlett Foundation:

*OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.<sup>2</sup>*

An essential aspect of examining the use of educational resources is the licensing status of such materials: who owns the rights to use and distribute the material, and does the faculty member have the right to modify, reuse, or redistribute said content? The legal mechanism that faculty are most familiar with is that of copyright.

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<sup>1</sup> Additional details on both of these subgroups is provided in the Methods section of this paper.

<sup>2</sup> <http://www.hewlett.org/programs/education-program/open-educational-resources>.

The U.S. Copyright Office defines copyright as:

*A form of protection provided by the laws of the United States for "original works of authorship", including literary, dramatic, musical, architectural, cartographic, choreographic, pantomimic, pictorial, graphic, sculptural, and audiovisual creations. "Copyright" literally means the right to copy but has come to mean that body of exclusive rights granted by law to copyright owners for protection of their work. ... Copyright covers both published and unpublished works.<sup>3</sup>*

Of particular interest for this study is the copyright status of the textual material (including textbooks) that faculty select as required materials for their courses.

*Copyright owners have the right to control the reproduction of their work, including the right to receive payment for that reproduction. An author may grant or sell those rights to others, including publishers or recording companies.<sup>4</sup>*

Not all material is copyrighted. Some content may be ineligible for copyright, copyrights may have expired, or authors may have dedicated their content to the public domain (e.g., using Creative Commons public domain dedication<sup>5</sup>).

*Public domain is a designation for content that is not protected by any copyright law or other restriction and may be freely copied, shared, altered, and republished by anyone. The designation means, essentially, that the content belongs to the community at large.<sup>6</sup>*

Materials can also be released under a Creative Commons license, which is not an alternative to copyright, but rather a modification of the traditional copyright license that grants some rights to the public.

*The Creative Commons (CC) open licenses give everyone from individual authors to governments and institutions a simple, standardized way to grant copyright permissions to their creative work. CC licenses allow creators to retain copyright while allowing others to copy, distribute, and make some uses of their work per the terms of the license. CC licenses ensure authors get credit (attribution) for their work, work globally, and last as long as applicable copyright lasts. CC licenses do not affect freedoms (e.g., fair use rights) that the law grants to users of creative works otherwise protected by copyright.<sup>7</sup>*

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<sup>3</sup> <http://www.copyright.gov/help/faq/definitions.html>

<sup>4</sup> <http://legal-dictionary.thefreedictionary.com/copyright>

<sup>5</sup> <https://creativecommons.org/publicdomain/zero/1.0/>

<sup>6</sup> <http://whatis.techtarget.com/definition/public-domain>

<sup>7</sup> Personal communication from Cable Green, Ph.D., Director of Open Education, Creative Commons

The most common way to openly license copyrighted education materials — making them OER — is to add a Creative Commons (CC) license to the educational resource. CC licenses are standardized, free-to-use, open copyright licenses.<sup>8</sup>

This study also examines an emerging distribution model typically called "inclusive access," which often goes by various names and has no single clear definition. OpenStax defines inclusive access as follows:

*Inclusive access programs are an agreement among universities, textbook publishers, and campus bookstores. Students are automatically signed up to get digital course materials, the cost of which gets folded into their tuition and fees when they enroll in a class.*<sup>9</sup>

McGraw Hill, for their part, defines inclusive access as:

*Inclusive Access is a partnership between an institution, bookstore, and publisher to deliver digital course materials to students, below-market rates, on or before the first day of class.*<sup>10</sup>

The common elements across all the variants of inclusive access are:

- Digital distribution
- Lower cost to students
- Day one access
- All students included unless they opt-out

An additional aspect of technology employed in teaching addressed by this study are online homework or courseware systems. Because not all faculty have the same understanding of the term "online homework," the question used to measure awareness and use included the term as well as a listing of the most common brands of such systems:

*Are you familiar with online homework / courseware systems such as Cengage (Aplia, MindTap, WebAssign), Expert TA, Knewton Alta, Macmillan (Launchpad, Sapling Learning), McGraw (Aleks, Connect, SmartBook), MyOpenMath, Pearson (Mastering Series, MyLab), Top Hat, Wiley WileyPLUS, or XYZ Homework?*

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<sup>8</sup> State of the Commons report: <https://stateof.creativecommons.org>

<sup>9</sup> <https://openstax.org/blog/giving-inclusive-access-second-look>

<sup>10</sup> <https://www.mheducation.com/highered/inclusive-access.html>

# STUDY RESULTS

## Background

The changes to higher education induced by the COVID-19 pandemic came amidst a time of considerable evolution in how publishers distribute and market their content, and how faculty discover, evaluate, and select course materials.

For decades, the textbook publication and distribution process remain unchanged. Academic publishers produced print versions of textbooks, faculty evaluated and selected what they most preferred, and students shopped for them at the campus bookstore. A faculty member would decide how well a given textbook fit their teaching needs, and specify these as "required."

Textbooks were purchased by students, either as new or used. Some students decided to go without, or use a text passed down from another student. Not much changed for decades, beyond continued increases in the cost of textbooks. This process began to transform about five years ago:

- Faculty attitudes towards digital materials improved, and the range of digital options expanded substantially.
- Faculty increasingly factored the cost to the student into their textbook selection process. Awareness of the impact of cost on students rose substantially, reflecting the rising price of materials and the emergence of lower-cost alternatives.
- There was increased faculty resentment towards the marketing strategies of major academic publishers.
- Commercial publishers felt the pressure to address cost concerns, and rapidly changed their marketing strategies, embracing digital materials and new "inclusive access" approaches.
- These changes often required institutional-level arrangements, which altered decision-making processes, and reduced faculty control.

These new, digital-centric alternatives played a large part in supporting the massive teaching changes in Fall 2020.

## The New COVID Teaching Reality

*The Fall of 2020 was unlike any previous academic term. Many campuses were closed, with more instruction being conducted online than ever before.*

### Faculty Voices:

*“After a rough start last Spring that required an abrupt change from hybrid to online, it was possible to rewrite the course to be largely effective in an online format.”*

*“All of the things that we're learning how to do on the fly will pay dividends in the future. At a minimum, we'll learn what not to do.”*

*“At our institution — as at many others — the move to online teaching last March was somewhat rushed and haphazard. But over the course of the fall semester, I implemented many strategies that I plan on continuing, even after we return to face-to-face instruction.”*

This research series focuses on how faculty find, evaluate, select, and use teaching materials in their courses. This process underwent significant changes during the COVID-19 pandemic. Faculty moved an unprecedented number of courses online, and were forced to make decisions about what materials to use with limited time to evaluate all of the alternatives. Additionally, the constraints of teaching online often forced a switch from print to digital materials.

All that said, a critical research question emerges: how do we track an extraordinary set of circumstances, and fit it into the larger time-series narrative of the previous volumes in this series? The approach taken in this project is to:

- Document the unique teaching situations of Fall 2020<sup>11</sup> to understand the context of the responses.
- Report on how faculty selected and used teaching materials for this term, noting if this process was different from their usual approach.
- Ask faculty to reflect on how their experiences may impact their teaching in a post-pandemic world.

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<sup>11</sup> The convention in previous reports in this series has been to identify each time period by its academic year (e.g., 2017-2018). This report uses that same convention for results that refer to longer-term trends, but uses Fall 2020 as the designation for questions that address the unique aspects of this past Fall term.

This period marked a massive change in how faculty prepared for and taught their courses, and their level of experience using teaching tools and techniques that were new to them. This exposure resulted in substantial changes in awareness, and often, in their attitudes towards different teaching approaches.

Faculty responses for this study were very clear on what they did during the Fall 2020 term, and how their attitudes changed. Extrapolating those changes to the future will always be less exact. Faculty provided their best guesses about what their future teaching might look like, but ongoing research will be required to see how those assumptions play out.

**Faculty Voices:**

*“At the close of this semester, I am of the belief that I did as good a job as possible to teach my courses digitally, with engaging lessons, personally created interactive videos, class presentations, peer reviews, and small group discussions. Still, I lost a couple students while simultaneously discovering that they had to walk their dog or step away from the computer during class. This is the variable which will make or break online courses.”*

*“Based on my experience, having a synchronous component in an online course is important for learning, and students value this component. Finding ways for students to interact with each other is critical.”*

*“Online learning has made great strides in providing continuity of education in a time of a pandemic. Any educator who doesn't believe that online education made a beneficial difference in learning should either retire, learn to teach better, or give the tuition money back to the students. The future has arrived.”*

*“Online classes are not the "disruption in higher ed" or "wave of the future" that so-called experts for years have been telling us that they are. We need real, live faculty in real classrooms with real, live students in the same room, to be most effective.”*

*“Pandemic culture will alter college teaching in future, but there's no substitute for the dynamic of face-to-face learning interactions. They will always be at the heart of the best kind of teaching and learning.”*

## Fall 2020 Teaching Experience

*Twice as many faculty taught online during the Fall 2020 term as compared to previous years. Face-to-face courses, the previous mainstay of higher education, were taught by only one in seven faculty.*

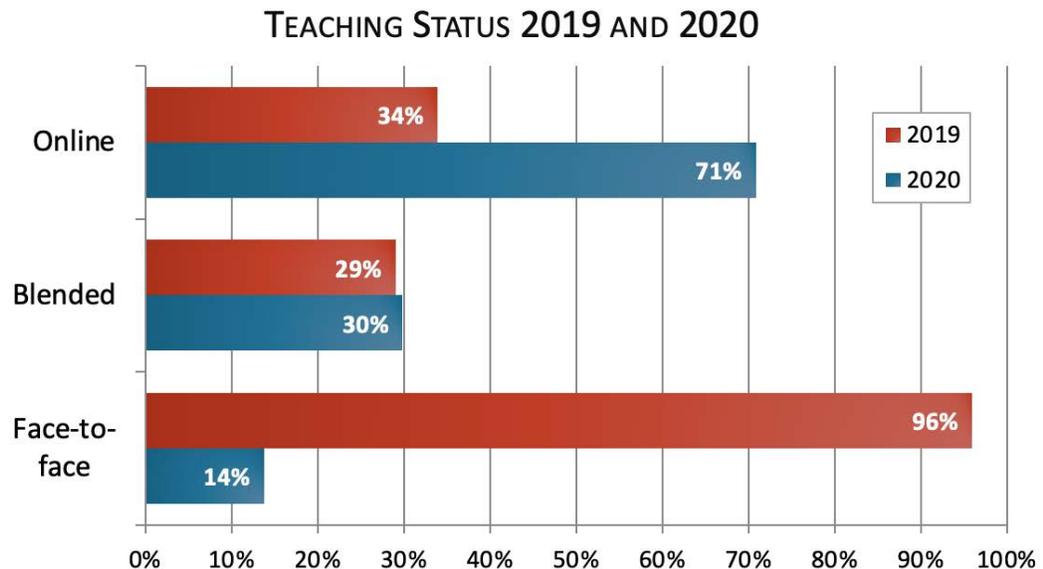
### Faculty Voices:

*"Done correctly, online learning can be more effective for many subjects than classroom presentations. However, it requires a great deal of work to create an effective online learning session. If not done well online learning is far less effective than in person teaching."*

*"I am surprised at how well this is going. I am proud of my students and my institution for the hard work and dedication to the online model. I REALLY like it."*

*"I find that teaching mathematics online is very challenging. It is more impersonal, and I do not get to know my students."*

Nearly three-quarters of all faculty taught an online course during the Fall 2020 term, and only 14% were teaching face-to-face. This represents a substantial change from the previous year, where only one-third (34%) of faculty reported teaching online. The shift in face-to-face instruction is even more dramatic, dropping from nearly all faculty (96%) teaching at least one face-to-face course in 2019, to only 14% doing so in Fall 2020. The proportion teaching blended courses remained much the same for the two time periods, at around 30%.



**Faculty Voices:**

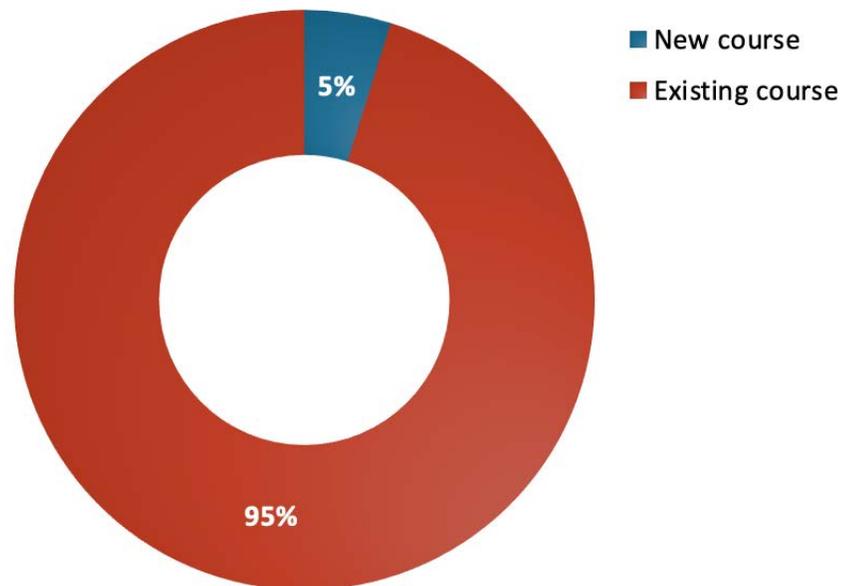
*"I think teaching during COVID has required me to be more creative and tactical, and I will definitely use some the new practices I've implemented (like online office hours) when we go back to face-to-face instruction."*

*"I think that while distance learning has advantages even in non-pandemic times, human interaction is just that and there is no real substitute for person-to-person learning. Much of communication is non-verbal, not to mention just good old-fashioned enthusiasm. It is much harder to "feel" the room in an online format."*

*"I was teaching online prior to the pandemic, so not much has changed. What has changed is students' ability to handle stressors that go along with online education."*

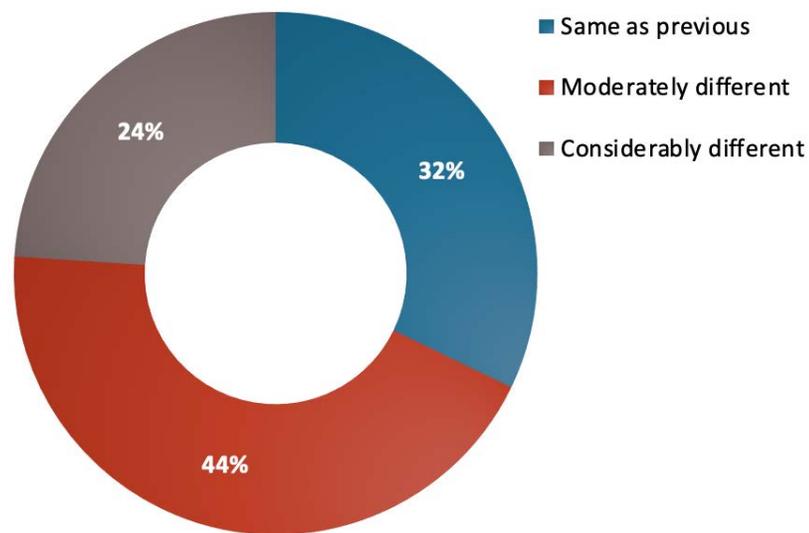
Faculty had to adjust to new course delivery modes during the Fall term, but the vast majority of these were not new courses, but rather existing courses with a change in delivery mode. Only 5% of the courses that faculty were teaching during the Fall 2020 term were new; the remaining 95% had been taught previously.

## HAS THIS COURSE BEEN TAUGHT BEFORE?



The change in delivery mode from face-to-face to online instruction often required a series of structural changes to the source design: while the course itself was not new, many other aspects of the course often changed. Only one-third of faculty (32%) said that the course they were currently teaching was the same as previous incarnations, while one-quarter (24%) reported that it was considerably different. The largest group of faculty thought that the current version of the courses they taught was moderately different from how they taught it previously (44%).

### HOW DOES THE VERSION OF THIS COURSE COMPARE PREVIOUS TERMS?



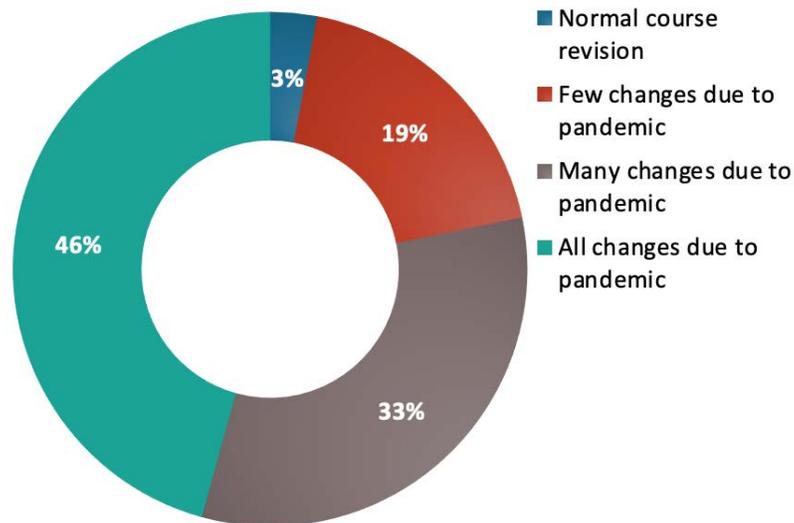
#### Faculty Voices:

*“It’s hard to even articulate my educational model for this fall, as it changed so much week-to-week and departed so sharply from what was planned. I was face-to-face with intermittent lockdowns and post-Thanksgiving and pre-semester online stints. However, as cases spread and many students endured multiple quarantines, attendance quickly plummeted to 50% and I was essentially hy-flexing (if it’s worthy of that name) with very little technological support or planning.”*

*“While COVID has made the general higher education practice more difficult, it has forced the acceleration of tools and methods of instruction, interaction, learning and working down the online/remote path that we have been on for quite some time. It has changed all these things permanently. It’s our job as educators to ensure that these changes net out for the better.”*

According to the vast majority of faculty, the need to convert the course for delivery during the pandemic drove the aforementioned changes. One-third (33%) said that many of the changes were due to the pandemic, while an additional 46% reported all the changes were pandemic-induced.

### WHAT IS THE REASON FOR THE CHANGES TO THE COURSE?



#### Faculty Voices:

*“Nobody likes change; most people only change when forced to, and that's what the pandemic has done. Some things (activities, assignments, interactions, etc.) were rendered difficult, impossible, or dangerous by the pandemic, but some new ways of teaching have arisen from necessity, some of which will be continued even after all-online teaching is no longer required. This is perhaps the one silver lining in this very dark cloud of pandemic disease.”*

*“Pandemic-related restrictions, and associated institutional requirements, require me to use technology to a greater degree including online exams, simulcasting classes (which students may attend remotely or in person), and offering online office hours alongside in-person office hours.”*

## Selecting Educational Resources

*Despite all of the changes in the Fall 2020 term, the mix of required course materials changed very little. The textbook remained the staple, with other types of items continuing in similar proportions as previous terms.*

### Faculty Voices:

*"I find that many students (at least 50%) do not have access to the textbook, in spite of it being listed as "required" in the syllabus. I believe this is by their choice, and is presumably at least partly due to the cost of the textbook (> \$200)."*

*"My students do anything they can NOT to purchase a textbook. Most of them either borrow the book, rent it, or just don't purchase it at all."*

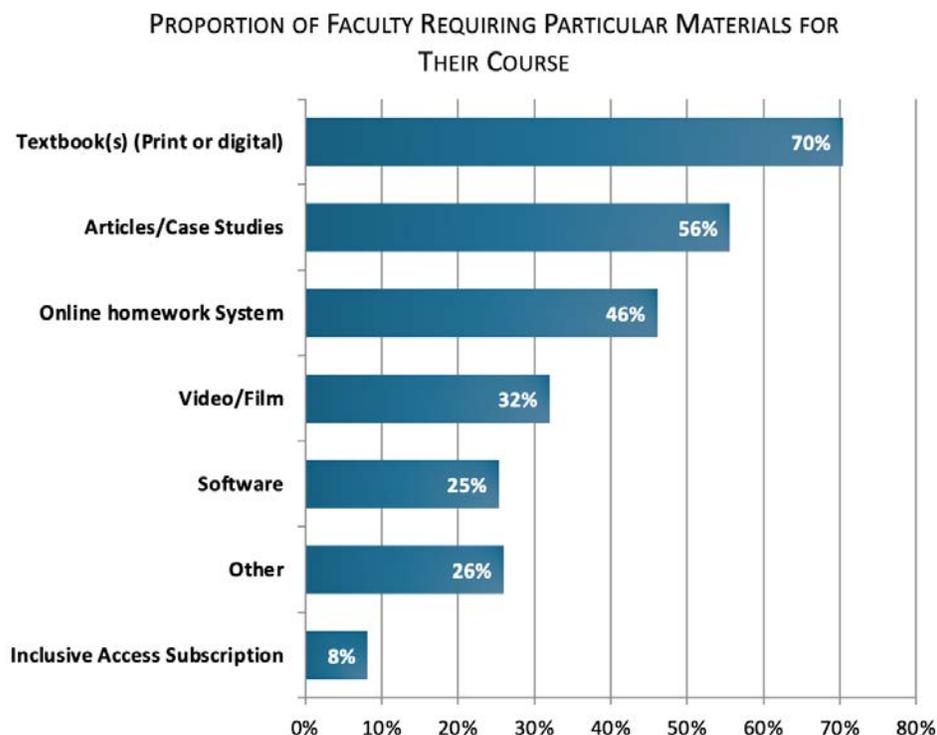
*"Our campus uses a rental program that covers most textbooks but not online educational platforms that accompany the texts. This means there is an extra cost (\$51+) to students for the online platform."*

*"Students are not interested in buying books. One issue is cost, and the other is the time to read. They said they'd rather learn by watching a YouTube video that's more interesting than by reading a book."*

*"For most of my students, the most significant factor in what kind of textbook they buy (or if they buy one at all) is expense. Most of my students come from backgrounds of modest to average economic means, so expense is a real concern. Because I believe that reading the textbook is vital to student success, I will choose the cheapest option even if I don't think it's the best one. If I could find open access material of good quality that was available in a discrete, downloadable format, I would be very interested in using it."*

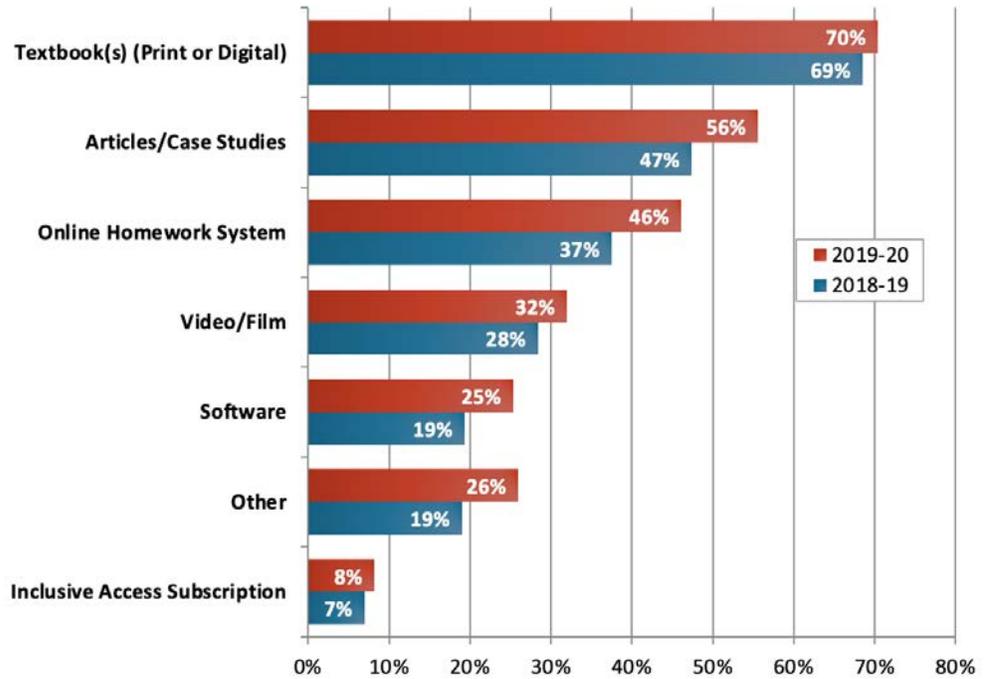
This report series' primary focus is to examine how faculty members select and use course materials in their teaching. While faculty may recommend or require multiple materials for the students, this study focuses on those listed in the course syllabus as required for all students, either acquired on their own or provided to all students through a materials fee.

The most common required materials are one or more textbooks, with 70% of all faculty reporting that they have a required textbook. Other materials (e.g., articles and case studies) are also required by more than half (56%) of faculty. The next most common faculty requirement is access to an online homework system (46%), followed by video and film (32%), and software (25%). About one in four faculty also require one or more of other types of materials (e.g., supplies, calculator, data sets, classroom clicker, etc.). A smaller proportion require students to have an inclusive access subscription.



The switch to online instruction for most faculty during the Fall 2020 term did not significantly impact the proportion of faculty that required a textbook for their course, increasing by only a single percentage point over the previous year. Larger changes were seen for most other types of materials. Changes are present in the requirements for "Articles and case studies" (up from 47% to 53%), "Online homework system" (increasing from 37% to 46%), "Videos and film" (rising from 22% to 28%), and Software (growing from 19% to 25%).

PROPORTION OF FACULTY REQUIRING PARTICULAR MATERIALS FOR THEIR COURSE: 2018-19 AND 2019-20



Inclusive access subscriptions and online homework systems are two items that might see increased use as faculty move to online instruction. Inclusive access subscriptions, where students have first-day access to all the course materials in digital formats, could be a way to assure faculty that all of their remote students have access to the required course materials. However, this does not seem to have been the case, as usage grew by only a single percentage point year-over-year.

**Faculty Voices:**

*“Bundling student course materials with their tuition and fees package is very helpful for having everybody ready for class on day one.”*

*“I feel the inclusive packages offer great supplemental resources for students. It allows the student to invest into self-directed opportunities to continue academic development beyond the classroom.”*

*“Inclusive Access is a great idea...for publishers, a lazy option for instructors and a terrible idea for students. It effectively removes choice from the students and puts them on the hook with their institution.”*

*“My institution is trying to figure out “inclusive access” (which is marketing speak, I think, in this era of diversity and inclusion), but I’m concerned that they will leave out the publishers of books I use. I worry about student pushback if their textbooks in my course are not available “for free” (i.e., for the mandatory fee).”*

Use of online homework systems increased, with 46% of all faculty making this a course requirement, up from 37% last year. Over one-half (53%) of faculty teaching large-enrollment, introductory-level courses use online homework systems.

**Faculty Voices:**

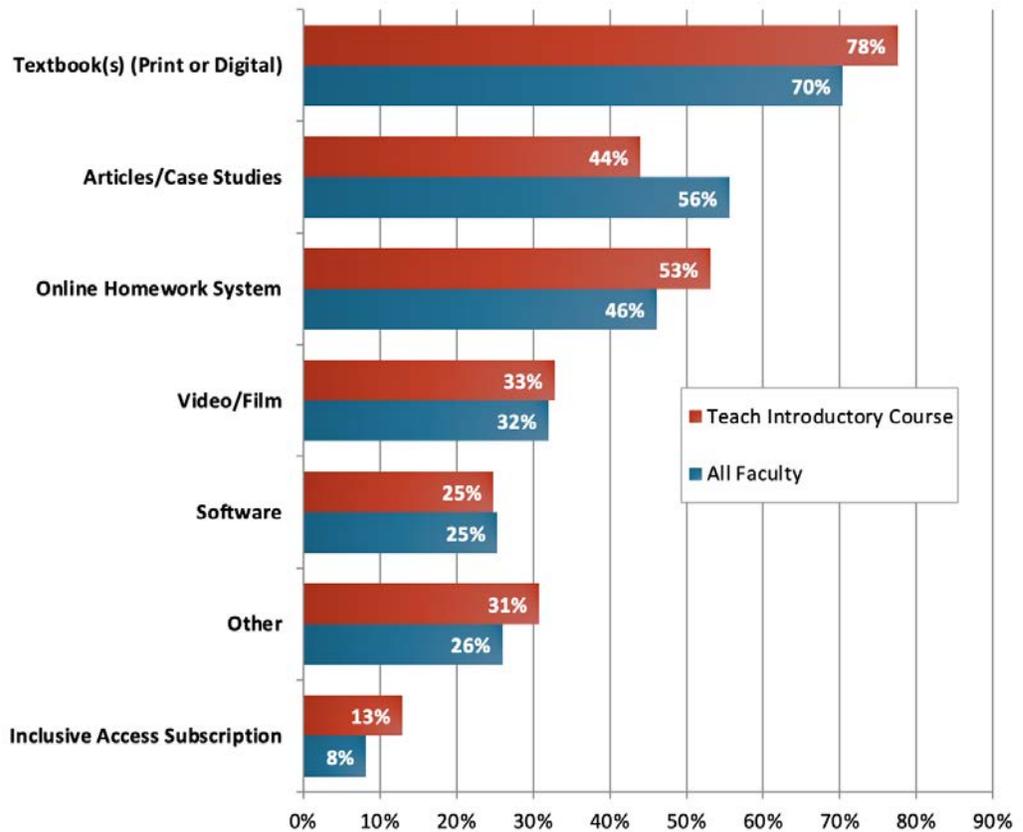
*“I am not a fan of online homework systems for grades but think they are valuable as a learning tool. Most OER do not have these systems. Most of our adjuncts use them extensively since they do not have to complete as much grading. I find the auto-grading extremely poor and use the homework as a completion grade (and allow access to all answers and problems) with my additional problems as group work.”*

*“My students are very skeptical of packaged online classes, particularly ones that have online homework systems. When I asked they told me that they were flawed and frustrating. When I asked if they thought these systems were designed to separate students from their professors, most said yes.”*

*“The greatest need in chemistry (and perhaps across disciplines) is for OER online homework systems and lab activities.”*

Faculty teaching introductory-level courses exhibited several differences in the patterns of their use of required materials from those of all other faculty. These faculty were more likely to require a textbook and an online homework system, but less likely to list articles or case studies among their required materials.

PROPORTION OF FACULTY REQUIRING PARTICULAR MATERIALS FOR THEIR COURSE



**Faculty Voices:**

*"I teach an introductory science course which requires hands-on learning techniques. Some of the modifications to online work have been useable and likely attractive to students, but the course content does not fit well into a total online format!"*

*"I began to experiment with OER material in 2016/2017. I received a grant from my institution's library to support my use of OER material. Since then, whenever I have taught one of our first-year student level intro classes I have supported it 100% with OER materials under CC copyright."*

## Teaching Materials in a Pandemic

*Moving online did not result in widespread changes in faculty textbook selections. Many faculty expanded their use of digital alternatives, while a smaller proportion adopted an Inclusive Access solution.*

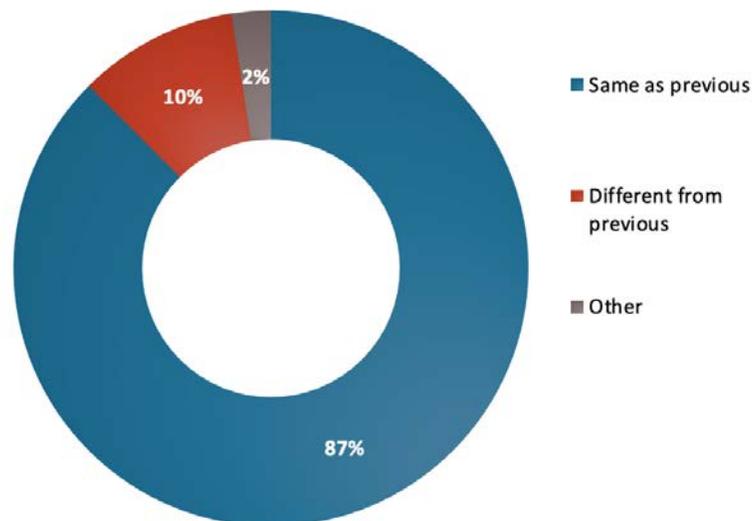
### Faculty Voices:

*"I have learned that students can benefit from online visual instructional video to supplement their face-to-face learning. Listening to students and getting feedback from them as to their skill development is critical, so as to relate to their individual learning experience."*

*"Teaching during the pandemic has required reassessing delivery methods and deliverables. However, I feel that this crisis has resulted in an improvement for both me and the students."*

The need for faculty to transition a face-to-face course to online delivery did not substantially change their selected course materials. The majority of faculty (87%) used the same primary textbook for Fall 2020 as they did in previous terms, albeit with format changes (e.g., print to digital). Only 10% reported that they used a different textbook in Fall 2020 than they had used previously. The full range of adjustments that faculty had to cope with in changing to online instruction may have fully occupied them, restricting the time available to consider any alternatives. Perhaps they did not want to risk adding another unknown into the mix, given all the semester's changes.

CHANGES TO THE PRIMARY TEXTBOOK FOR FALL 2020

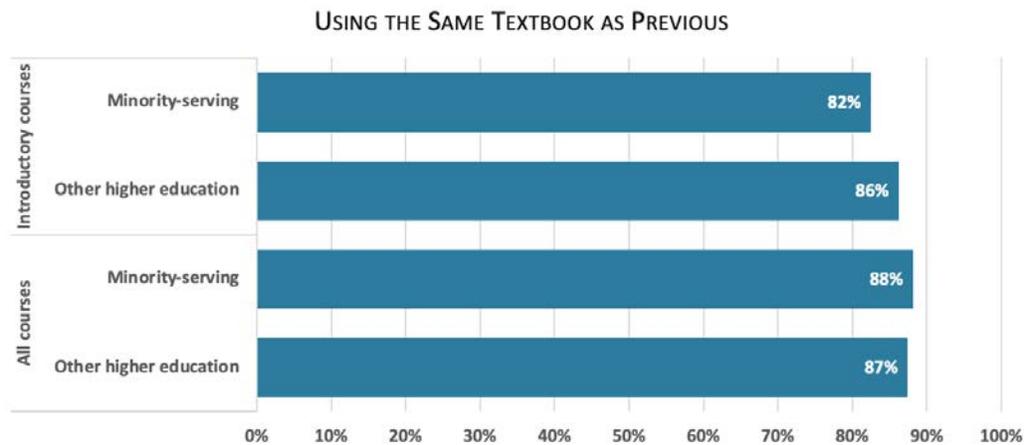


**Faculty Voices:**

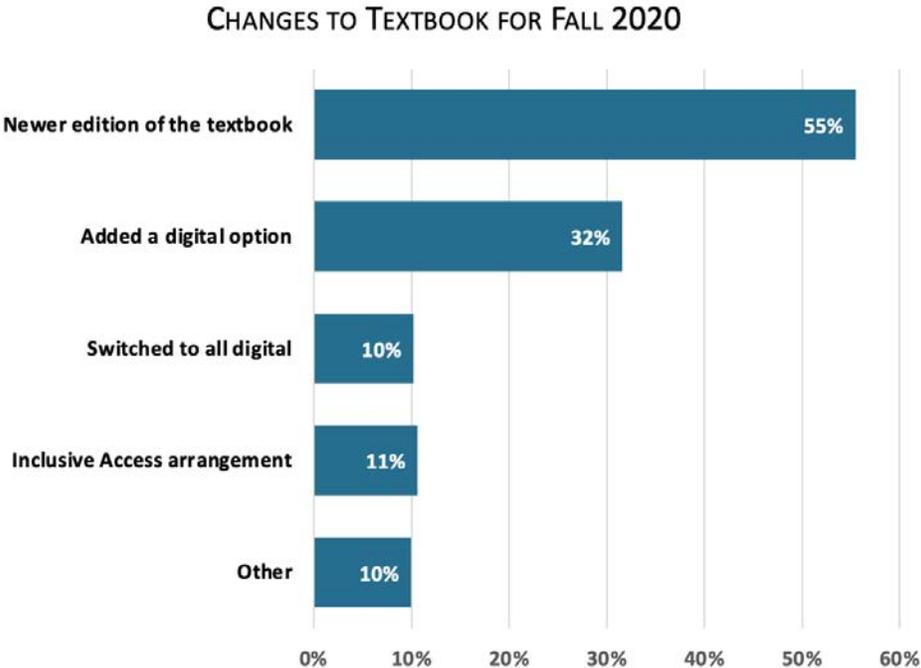
*“In my department (and probably many departments), the faculty are well aware of how much effort it can be to change books. In my introductory undergraduate course, there are several faculty that work from the same book. If any one person strongly opposes a change, it doesn't happen. I had wanted to change ours for a while. Now I've been teaching it for 12 years and I'm not sure I care as much anymore. I wouldn't fight it I guess but we currently have one person holding up any change.”*

*“While the pandemic has had major negative impacts on individuals, families, and companies, there are some lessons learned that will benefit faculty and students going forward. Those lessons involve the use of digital resources, the flipped classroom, use of technology to enhance learning, and virtual office hours.”*

There was very little difference in the proportion of faculty continuing with the same textbook by the level of the course being taught or by the type of institution. Faculty at minority-serving institutions teaching introductory-level courses were the least likely to continue with the same textbook, but their rate of 82% was barely lower than any of the other groups of faculty.

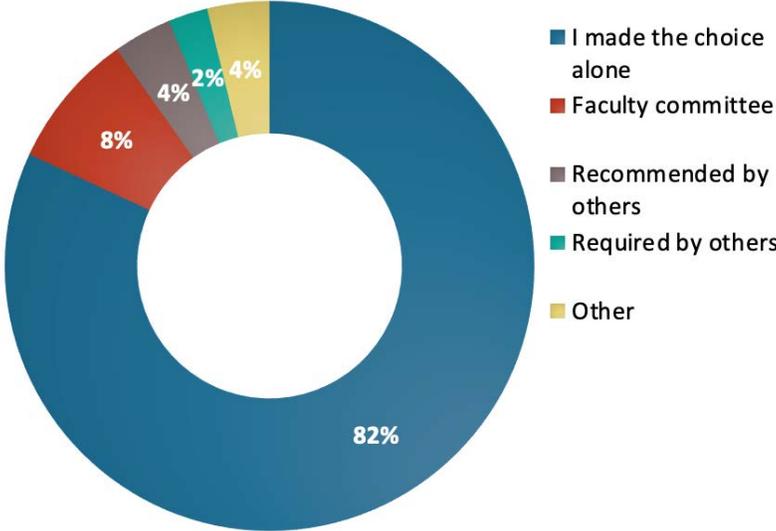


While faculty overwhelmingly continued using the same textbook as previous terms, they made many other changes to adjust for the Fall 2020 term. Some of these changes, such as adopting a newer edition of the same textbook, are common to every term. Other changes were most likely driven by the need to move online. Many faculty stated that they added a digital option, or moved entirely to a digital format for their textbook.



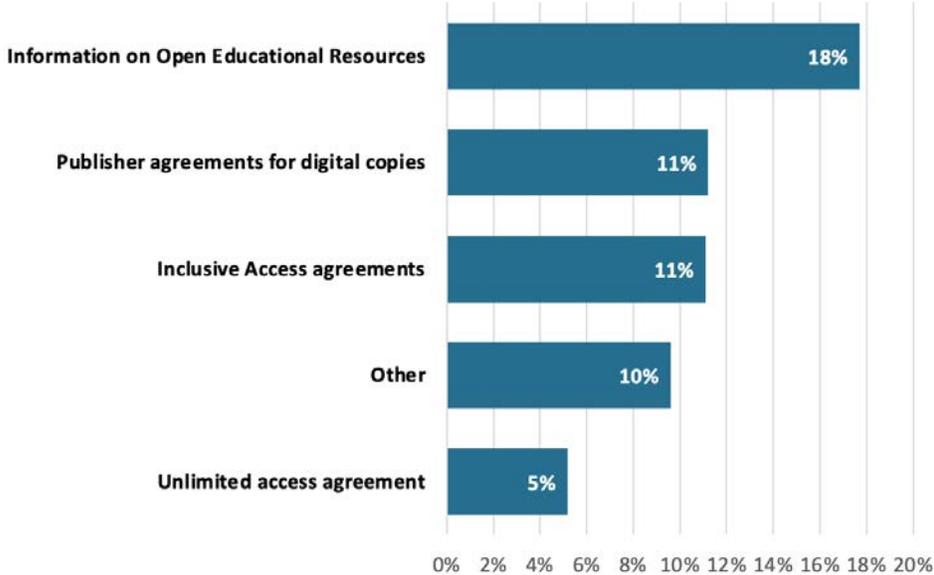
Faculty who selected a new textbook made nearly all decisions themselves, either acting alone (82%), or through a faculty committee (8%). Only a small percentage of textbook choices were required or suggested by others.

**PRIMARY DECISION MAKER FOR TEXTBOOK CHOICE FOR FALL 2020**

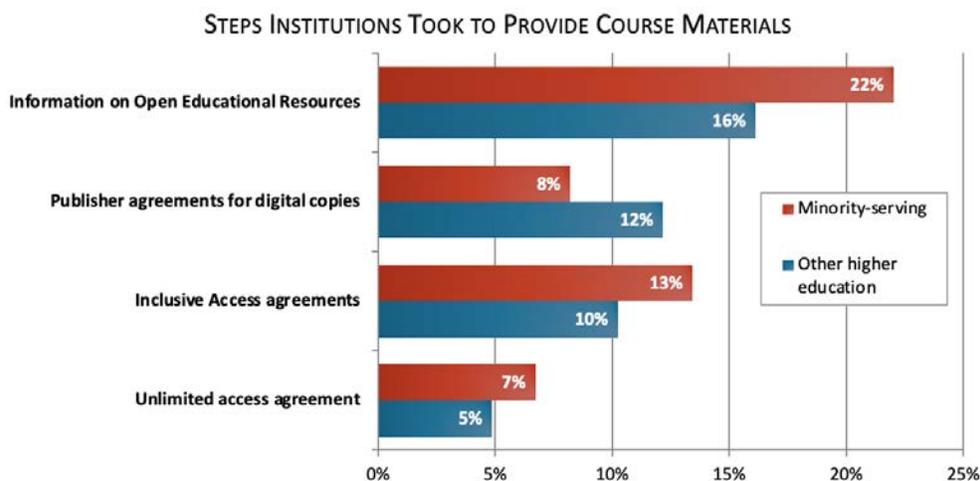


Results show that textbook changes for Fall 2020 were a highly faculty-centric process, with little assistance from their institutions; institutional assistance that was provided was indirect. Only a small proportion of faculty were aware of their institutions' actions to assist them in finding and selecting the most-appropriate textbook for their Fall 2020 term. The most common activity, providing information on Open Educational Resources, was noted by only 18% of faculty. Arrangement for digital copies or Inclusive Access arrangements were even less common.

**STEPS INSTITUTIONS TOOK TO PROVIDE COURSE MATERIALS**



Faculty at minority-serving institutions reported higher levels of institutional-level efforts to support Open Educational Resources, and somewhat higher levels of Inclusive Access arrangements. They were less likely to say that their institution arranged for digital copies of existing textbooks, perhaps because they already made greater use of digital materials.



It is not clear that faculty either wanted or expected institutional assistance in finding and adopting their textbooks. Previous reports in this series have noted a resistance among faculty to increased institutional involvement in selecting course materials. So while this might be an extraordinary period, with the need to make quick choices, faculty seem to be content with the responsibility being entirely (or primarily) on them.

The overall picture that emerges is one where faculty made few changes in their textbook choice while transitioning to online course delivery, except for a substantial conversion to a digital format for the same textbook. Institutions mostly took a hands-off approach, with some providing information on alternatives, but faculty — either acting alone, or as a committee — made the final decisions.

## Digital versus Print

*Previous reports in this series noted a growing acceptance (even preference) by faculty for digital materials. Fall 2020 marked large-scale digital materials adoption, driven by the need to better serve the remote learner during the pandemic.*

### Faculty Voices:

*"I think print textbooks, generally speaking, are slightly better/more useful than digital, but not enough to justify their cost, especially for the kind of underserved students we usually have at my institution."*

*"Content is more important than modality."*

*"I find online resources to be useful supplements, but when given the choice my students overwhelmingly opt for the hardcopy textbook over the online version offered through our bookstore."*

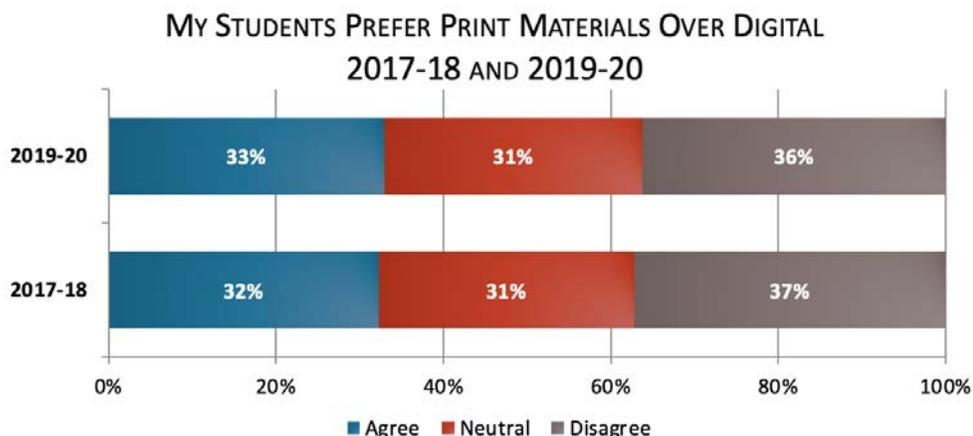
*"I really like the digital resources. The textbooks have features that a printed textbook would not have, such as embedded videos and notes taken by chapter through a highlighting feature. I also like the notecards that come with each chapter (and students can create their own, if needed)."*

*"I still think there is no substitute for the old-fashioned textbook, although I think these should be supplemented by digital material and lots of other things, such as videos."*

*"Interactive textbooks seem to be a better way to engage/force the students to read the material. I plan on using this when we go back to face-to-face."*

The long-term trend among faculty has been one of increasing acceptance and adoption of digital course materials. The Fall 2020 term results represent a rapid acceleration of that trend. It is unclear if this situational adjustment will lead to more permanent increased digital adoption, or if faculty will move back to print for their post-pandemic teaching.

Over the years, faculty have reported that they often did not move to digital materials because of their students' negative feedback. Given the massive shift to online materials for the Fall 2020 term, it is interesting to see if the greater exposure to digital course materials has changed faculty perceptions of their students' preferences. When asked if their students preferred print over digital, roughly one-third of faculty reported that they did, one-third that they did not, and the remaining third reported that their students were neutral.



The results for Fall 2020 show virtually no change from those of the year before. It appears that the massive switch to online instruction and the growing use of digital materials did not alter what faculty considered to be their student's preferences. It may be that they are still too early in the process, and faculty have not had sufficient feedback on digital materials. Alternatively, the generally negative reaction to online instruction may be flavoring these results.

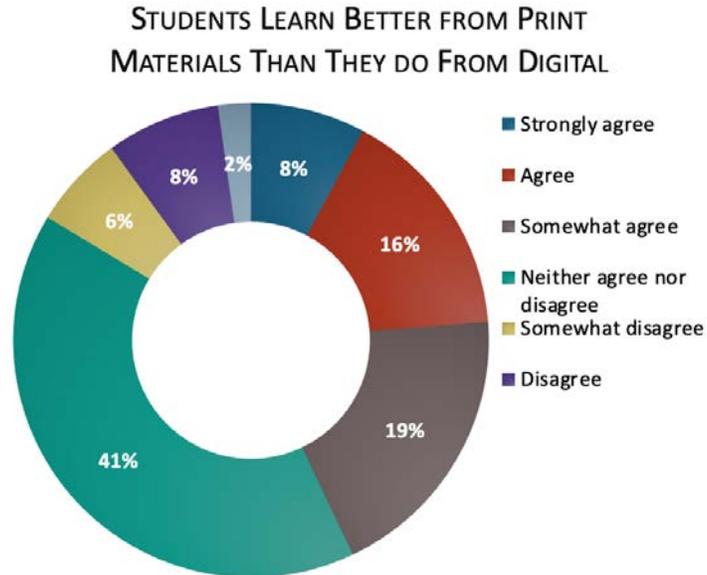
**Faculty Voices:**

*“While I personally prefer printed texts (less strain on my eyes, easy to mark up for notes, it's easier to see large diagrams, and the tangibility helps me remember better), many of our students prefer digital because of price and accessibility (on almost any digital device).”*

*“Students differ widely. Some prefer digital materials and an online courses, and some prefer print materials and seated classes.”*

*“Students learn differently and are influenced by different factors in terms of access to Wi-Fi, reliable computers, and finances which impact their success. As often as possible providing students a chance to choose their medium for materials has paid off by giving students more agency in their learning.”*

In addition to feedback from their students, many faculty also have reservations about digital materials' effectiveness for teaching and learning. While only 8% of faculty strongly agree with the statement that students learn better from print than from digital materials, a total of 43% express some level of agreement with that opinion. A group of about equal size (41%) are neutral, while only 16% disagree.



**Faculty Voices:**

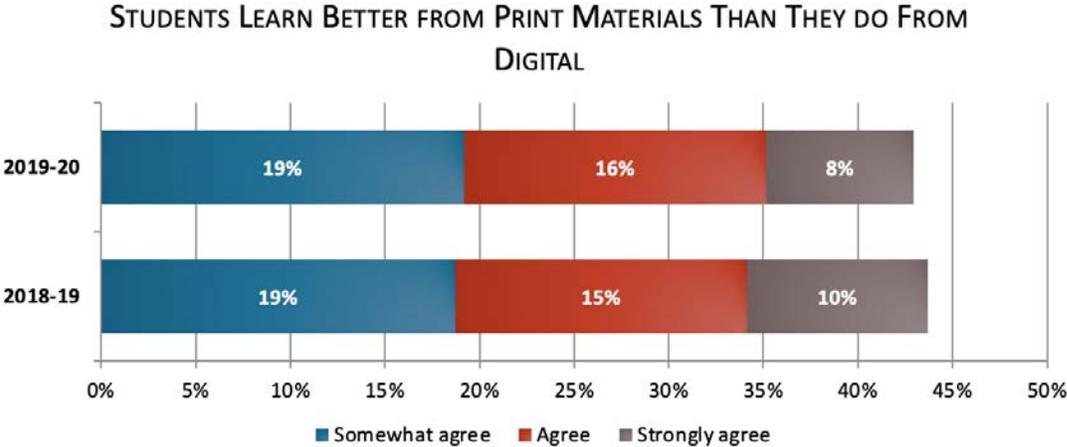
*“Although I ordered books for all my classes, many of my students used PDFs. I think this detracted from their performance. It's hard or impossible to put marginal notes in a PDF. So, reviewing the material means reading it again. When I said to the students, look at the argument on p. x, most of the students could not find the passage I was talking about. When they told me in their papers that they were talking about an argument on p. y, I couldn't find the passage.”*

*“I think digital textbook resources are a convenient way for publishers to make more money. At the same time the students are NOT winning since their cognitive abilities are better suited to the use of the print materials.”*

*“Math students learn math more successfully with paper textbooks and material that can be printed out. Hard copy helps students in math with problem solving.”*

*“Print books, literature in particular, remain a helpful tool/technology for a number of practical reasons having to do with how humans access, process, retain, and create information and ideas (we are multi-sensory creatures). Digital tools offer other kinds of access/interface that has particular uses and is helpful in some ways to work with ideas with others in real time, across distances, especially. Producing digital media is a great learning experience. Consuming it can be less so without specific structured interaction and reflection. Neither is going away as far as I can see!”*

The results for Fall 2020 are a mirror for those from the previous report, with only very slight changes. It appears that while there was considerable use of digital materials for the Fall 2020 term, this has not resulted in an improvement (or decline) in faculty opinions about their effectiveness.



## Textbook Licensing

*The slow, steady increase in awareness of licensing and OER continued during Fall 2020, but most faculty remain unaware.*

### Faculty Voices:

*"I'm not entirely clear as to how OER and Educational Fair Use overlap, and while I am well aware of both concepts, I suspect that most of my colleagues are quite unaware of them. It's fairly clear to me, given the ridiculous growth in the cost footprint of course materials, that institutions and their libraries need to focus more on the opportunities to use resources in the open domain or defining the usage of materials to aid access."*

*"I would like to know more about Creative Commons and Open Resource."*

The following definition for Open Educational Resources, provided by the William and Flora Hewlett Foundation, has been used in the questionnaires for the past six years:

*OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.<sup>12</sup>*

Reports in this series use a consistent question, which has proven to have the best balance in differentiating among the varying levels of awareness, without leading those with no previous knowledge of the concept. There remains considerable confusion among many faculty members on precisely what OER is, so any awareness question needs to provide enough of the dimensions of OER to avoid confusion, without being so detailed as to overeducate respondents and cause them to claim to be "Aware" of OER.

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<sup>12</sup> <http://www.hewlett.org/programs/education-program/open-educational-resources>.

## OER Awareness

### Faculty Voices:

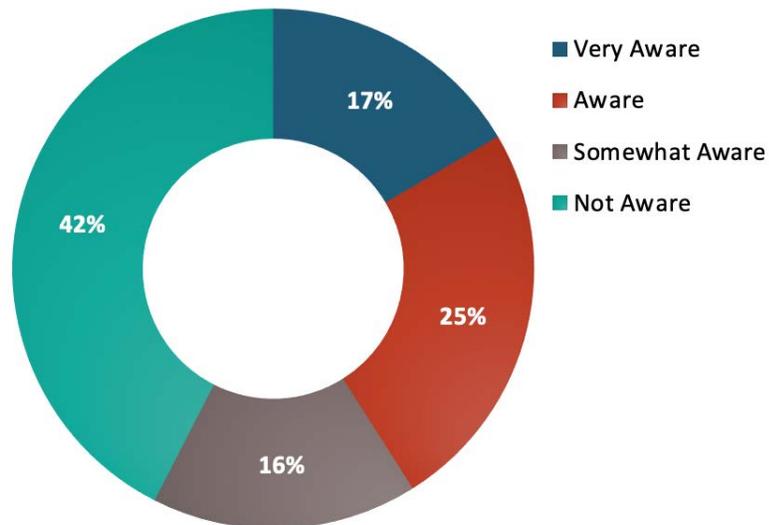
*"I am not aware of how to find the specific resources I need that are licensed as an OER."*

*"I am aware of OERs and first of all need to take the time to explore what's really out there beyond Project Gutenberg."*

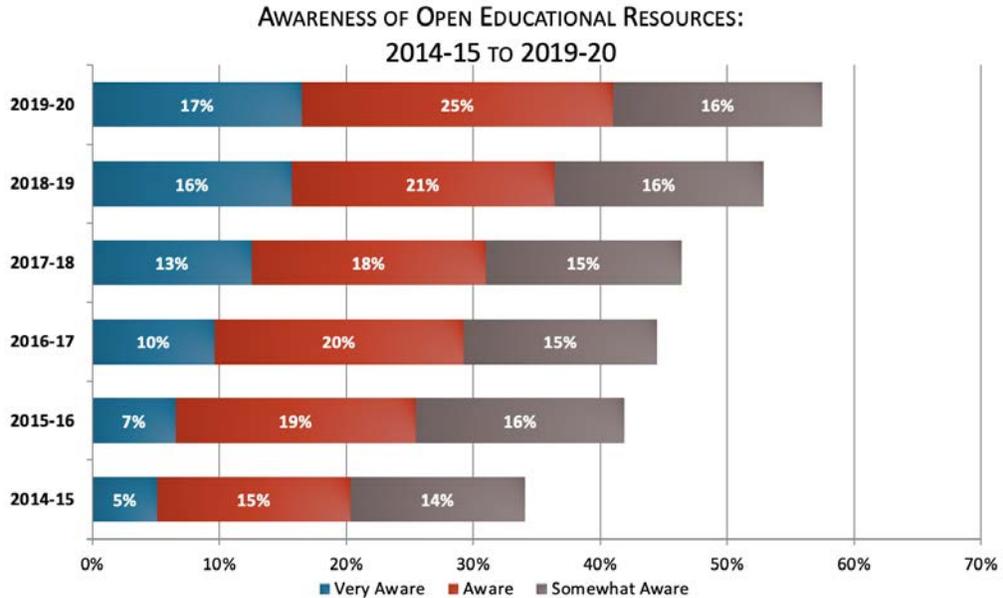
*"OERs should be publicized more. I do not think many faculty are aware of what is offered in their area of teaching."*

When faculty members self-reported their level of awareness of Open Educational Resources, the largest proportion (42%) said that they were generally unaware of OER ("I am not aware of OER" or "I have heard of OER, but don't know much about them"). Only 17% reported that they were "Very Aware" ("I am very aware of OER and know how they can be used in the classroom"), while a higher number (25%) said that they were "Aware" ("I am aware of OER and some of their use cases"). An additional 16% of faculty reported that they were only "Somewhat Aware" ("I am somewhat aware of OER, but I am not sure how they can be used").

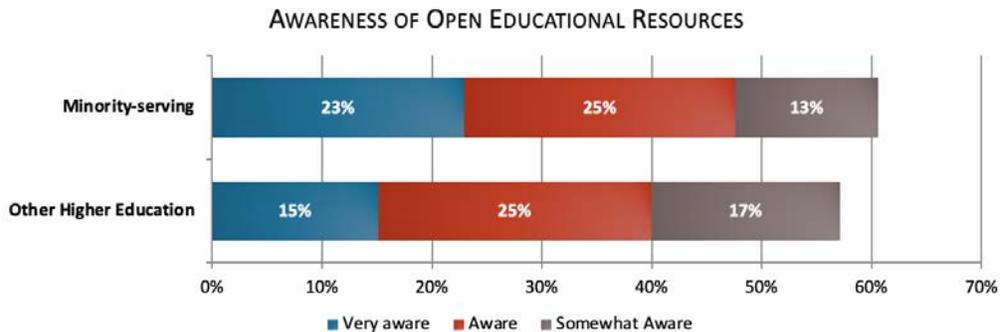
**AWARENESS OF OPEN EDUCATIONAL RESOURCES: 2019-20**



The 2019-20 results continue a trend of increasing awareness observed over the previous five surveys. This is the second year that a majority of faculty claim at least some level of awareness of the term OER. The number of faculty claiming to be "Very Aware" continues to grow each year, from 5% in 2014-15 to 17% in 2019-20. Similarly, those saying that they were "Aware" increased from 15% to 25%, and those "Somewhat Aware" from 14% to 16%. The proportion that reported no awareness dropped from two-thirds (66%) in 2014-15, to 42% in 2019-20.

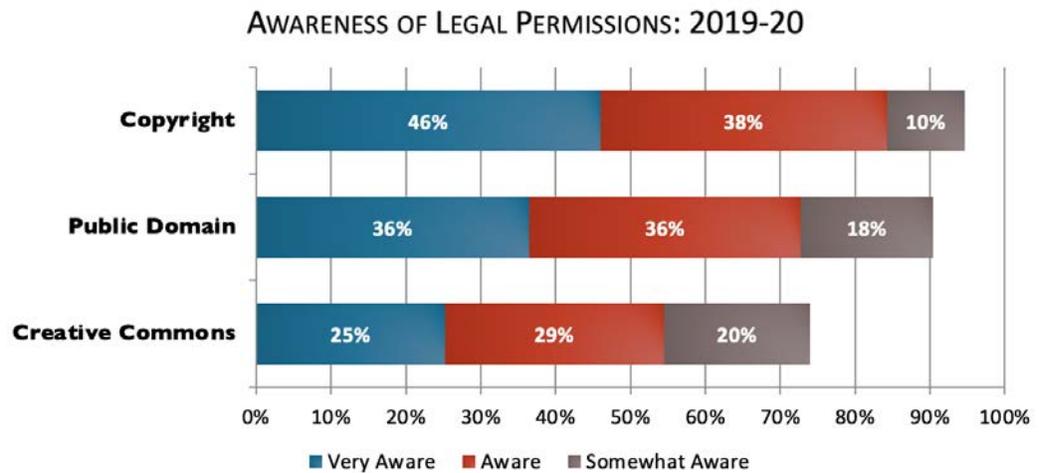


Faculty at minority-serving institutions have higher levels of OER awareness than the general population of teaching faculty. While the overall proportion reporting any level of awareness is only slightly greater, a larger percentage say that they are very aware (23%, as compared to 15% for all other faculty).



## Awareness of Licensing of Open Educational Resources

License terms that support the reuse and remixing of content are central to the concept of Open Educational Resources.<sup>13</sup> Not all license terms allow this, and faculty were asked about their level of awareness of common licensing mechanisms. Most faculty report a high degree of awareness of their classroom content's copyright status: 95% express some degree of awareness, with 84% responding "Very Aware" or "Aware." Awareness of public domain licensing is also very high, with 90% of respondents reporting some degree of awareness. The level of knowledge of Creative Commons licensing, on the other hand, is somewhat lower. Far fewer faculty say that they are "Very Aware" (25%) or "Aware" (27%), as compared to rates for copyright and public domain.

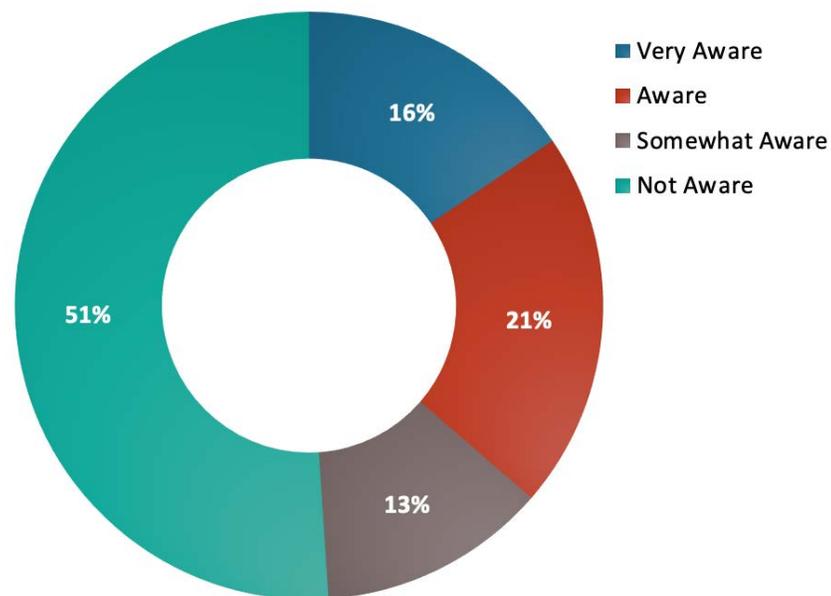


<sup>13</sup> David Wiley, The Access Compromise and the 5<sup>th</sup> R, Iterating Toward Openness, <http://opencontent.org/blog/archives/3221>

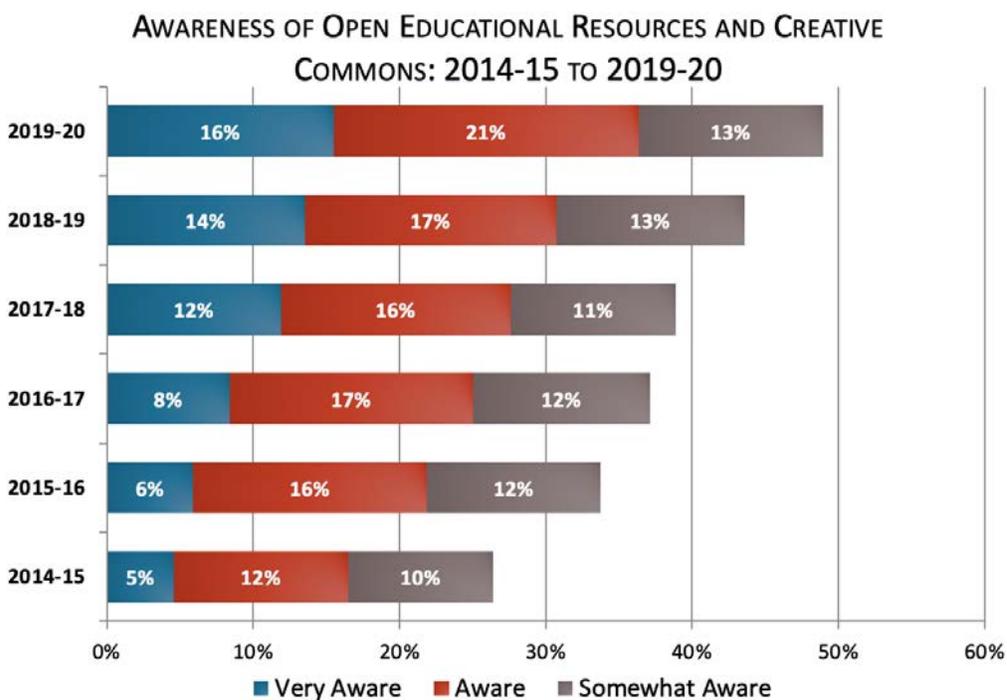
This series' reports have used two measures of OER awareness: the direct measure reported above, and a stricter index that combines the responses to two questions. Because much of the value of OER is derived from its less restrictive licensing (as compared to traditional copyrighted publications), this stricter index combines awareness of OER with awareness of licensing. Combining awareness of OER with the awareness of its legal permissions, specifically Creative Commons, provides a better estimate of the level of understanding of the concepts of OER. In this measure, faculty are considered "Aware" only if they report that they are aware of OER, and aware of Creative Commons licensing.

This stricter definition of "Aware" will always have lower reported levels of awareness than one that does not require any licensing knowledge. Using the more stringent definition, the level of OER awareness classified as "Very Aware" falls from 17% to 16%, "Aware" from 23% to 21%, and "Somewhat Aware" from 16% to 13%. The proportion classified in any of the "Aware" categories changes from 58% when awareness of Creative Commons is not required, to 49% when it is.

### AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS 2019-20



The combined measure of the level of awareness of OER with awareness of Creative Commons has grown every year. Faculty reporting that they were "Very Aware" has tripled, from 5% in 2014-15 to 16% in 2019-20. Those saying they were "Aware" grew from 12% to 21% over the same period. The percentage of faculty claiming some degree of awareness using this stricter definition stood at 26% in 2014-15, rose to 34% in 2015-16, 37% in 2016-17, 39% in 2017-18, 44% in 2018-19, and now stands at 49% for 2019-20.



Both OER awareness measures — with and without correcting for awareness of licensing — show steady year-over-year growth for the past six years. A growing proportion of faculty report higher levels of awareness every year. The news is not all positive, however, as most faculty members are classified as unaware using the stricter definition: 42% classified as unaware using the more generous classification.

## OER Use

*While adoption of OER for required materials plateaued, adoption of OER as supplemental materials continued the pattern of steady, slow growth seen in previous years.*

### Faculty Voices:

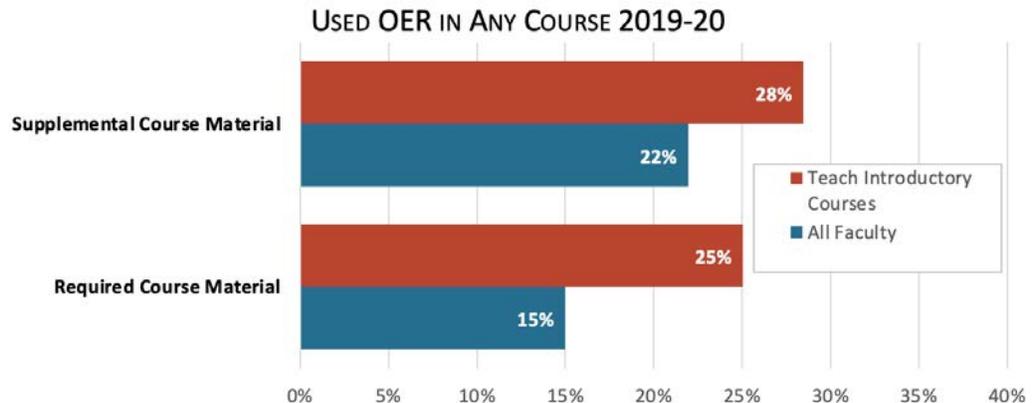
*"I have moved toward OER resources in some of my classes. Replacing the ancillary materials is more of an obstacle than the text, though most of the OER upper level text options are inadequate, too."*

*"I have started using OER materials because the cost of publishers' materials has become prohibitive for my students. However, I would very much like to see OER materials for teaching mathematics that are more contextualized, more function-based, not equation based, and in general those that incorporate the latest research in teaching and learning, as opposed to those that we have all been used to for many years."*

*"I lean towards OER textbooks as I work with a low income population and they simply cannot afford the textbooks or by the time they receive their financial aid we are 4 weeks into the semester, and they are just getting their books. OER gives them a huge advantage. The downside of course is that the supplemental materials are not as good."*

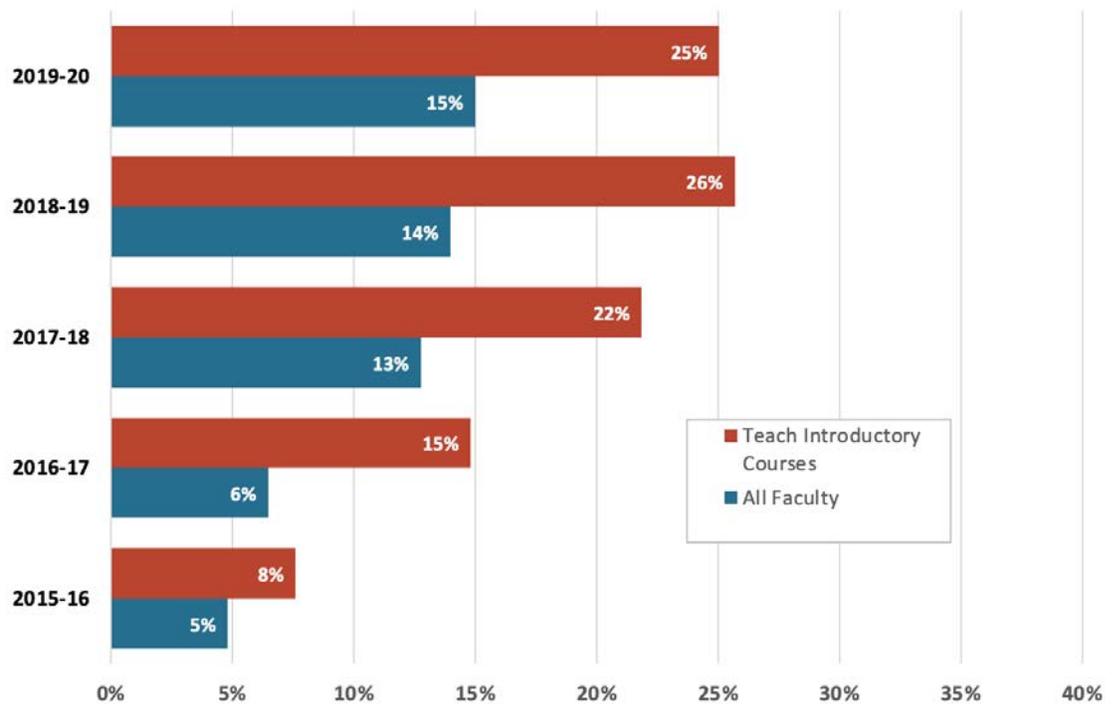
*"I previously authored an OER for an upper-level course, but it largely was used to supplement in-person teaching. Due to the pandemic, I have switched to a publisher-provided textbook at low cost."*

Twenty-five percent of faculty that teach large-enrollment introductory courses report that they require OER in some fashion in at least one of their courses. The rates are lower across all faculty, with 15% reporting using OER as required course materials in at least one of their courses. The number using OER as supplemental materials is somewhat higher, at 28% among those teaching at the introductory level, and 22% for all faculty.



After several years of substantial growth in OER use, the most recent numbers indicate a plateau for the use OER as required course materials. Among all faculty, the rate for 2019-20 is up by a single percentage point as compared to the previous year. It is down by a similar amount among those teaching introductory-level courses. These recent results contrast to the pattern of the last four years, where the proportion of all faculty using OER as required materials nearly tripled, rising from 5% in 2015-16 to 14% in 2018-19. The growth among faculty teaching introductory courses was equally impressive, growing from 8% to 26% in the same period.

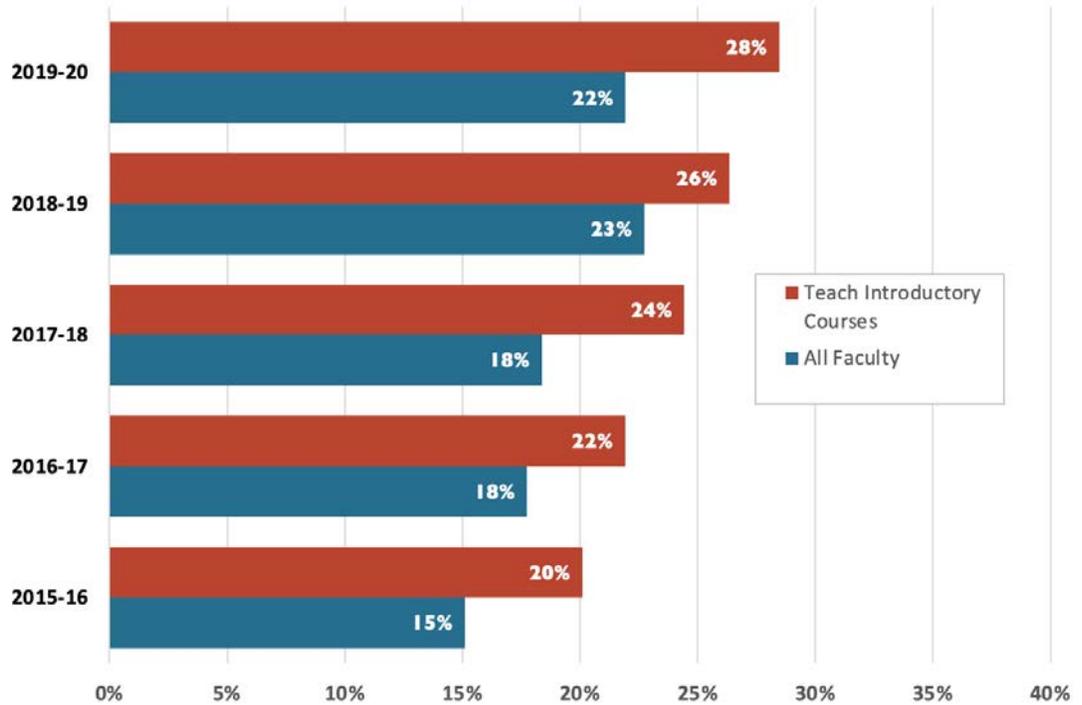
USED OER IN ANY COURSE AS REQUIRED MATERIAL:  
2015-16 TO 2019-20



This question's scope is purposefully broader than the previous questions in this report about textbook selection and use that focus on a single course. This question asks about *any* course that the faculty member has taught, so that a *per-course* OER use measure will be much lower than this *per-faculty member* metric. Measuring OER adoption across all faculty, as this measure does, still shows that over three-quarters of faculty do not make any use of OER for their required materials in any of their courses.

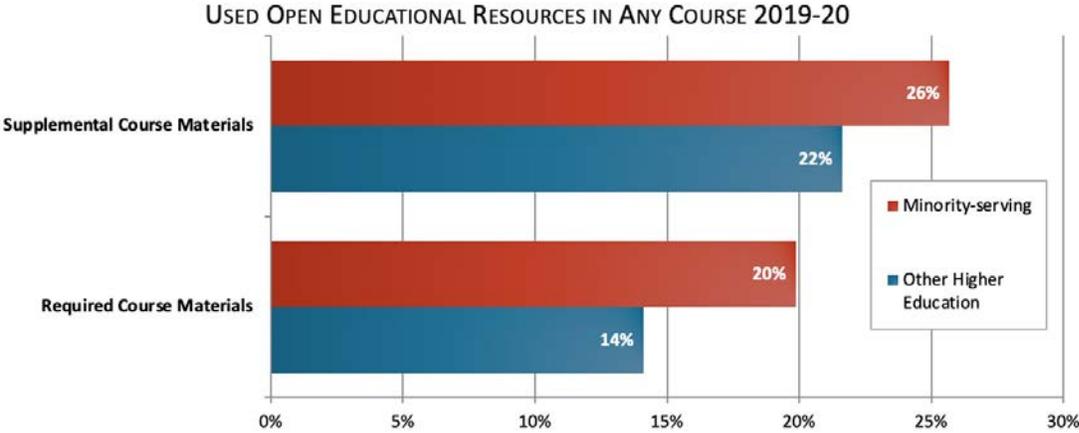
The pattern of growth in the use of OER as supplemental materials differs from that for required materials. The adoption rate among all faculty dropped slightly over the most recent period, while it increased for those faculty teaching introductory-level courses.

**USED OER IN ANY COURSE AS SUPPLEMENTAL MATERIAL:  
2015-16 TO 2019-20**



The supplemental OER use among all faculty stood at 15% in 2015-16, rising to 23% in 2018-19 before dropping back to 22% in 2019-20. Among faculty teaching introductory-level courses, the increase has held steady every year, rising from 20% in 2015-16 to 28% in 2019-20.

OER adoption rates are higher among faculty at minority-serving institutions than among other faculty. Like other faculty, adoption rates are greater for use as supplemental materials than for those that are required, but in both cases minority-serving faculty have a clear lead in the rate of OER adoption.



## OER Initiatives

*Faculty who know of an institutional or system OER initiative are more aware of OER, and more likely to adopt OER. The large move to online education and digital resources for Fall 2020 was not accompanied by any additional awareness of OER initiatives.*

### Faculty Voices:

*"I worked on a university system-wide initiative for OER and piloted a course this fall. Problem was the supplemental assignment and test materials were too limited in my field. Publishers' test bank and website materials weren't free, which defeats purpose of OER. I hope we can get there — I believe OER is a major part of reducing higher ed costs."*

*"There is a broad, vague system-wide statement in favor of OERs, but there does not seem to be actual teeth or real support for it."*

*"We are trying to move towards more OER, especially for students from marginalized backgrounds."*

*"I took a workshop on OER and was excited by the possibilities. I will examine their use more in the future."*

*"Our university has an initiative to use OER, but full time faculty have found difficulty finding quality and complete resources for the mathematics courses they teach (e.g., it needs to be all inclusive with homework problems and online teaching aids)."*

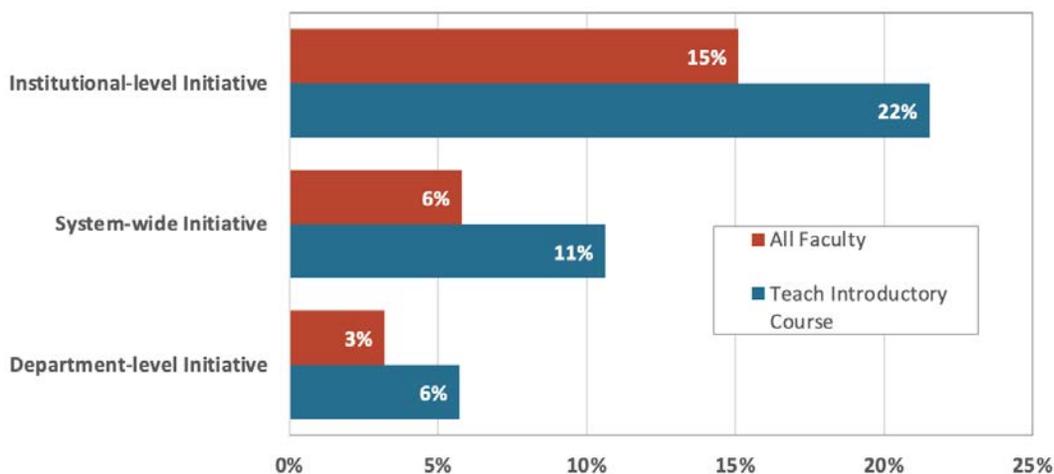
Awareness of Open Educational Resources is on the rise, but the results also show that faculty remain unfamiliar with what OER are, or how to use them. The previous report in this series, *Inflection Point: Educational Resources in U.S. Higher Education, 2019*, and a special report with more extensive analysis, *The Impact of OER Initiatives on Faculty Selection of Classroom Materials*, show a strong relationship between faculty awareness of an OER initiative, and their overall awareness and adoption of OER materials.

Specifically:

- Faculty who are aware of one or more OER initiatives are much more likely to be OER adopters.
- When implemented at the institutional level, OER initiatives result in a measurable increase in the number of faculty who are aware of OER.
- Faculty who are aware of OER are much more likely to adopt OER as required course materials; those who have yet to adopt OER are much more likely to do so in the future.

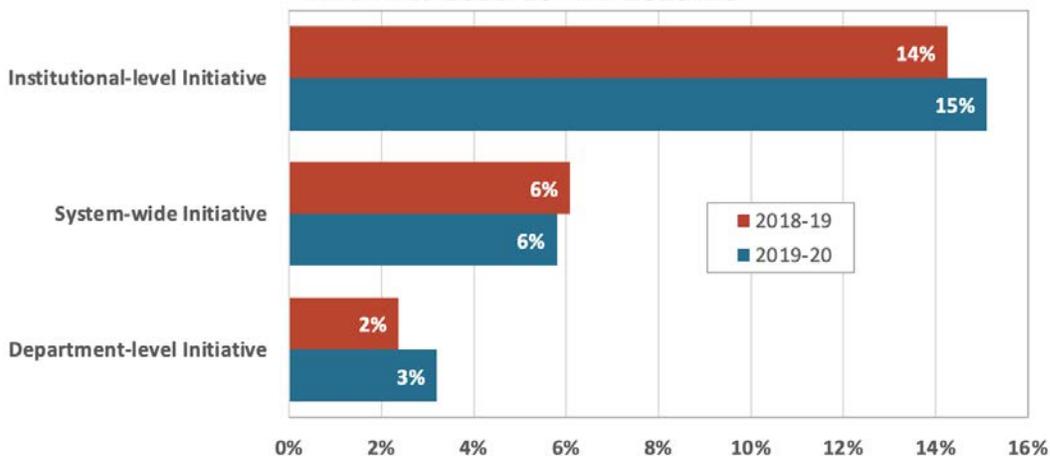
Faculty teaching introductory courses report a higher level of awareness of an OER initiative at their institution than the institution's overall faculty. The reasons for this are unclear; perhaps institutions target their initiatives at faculty teaching introductory level courses, or there are more OER options available for introductory courses. Faculty are more likely to report knowing of an institutional initiative than a system-wide one, and least likely to say they are aware of a departmental initiative.

**AWARENESS OF OPEN EDUCATIONAL RESOURCE INITIATIVES 2019-20**

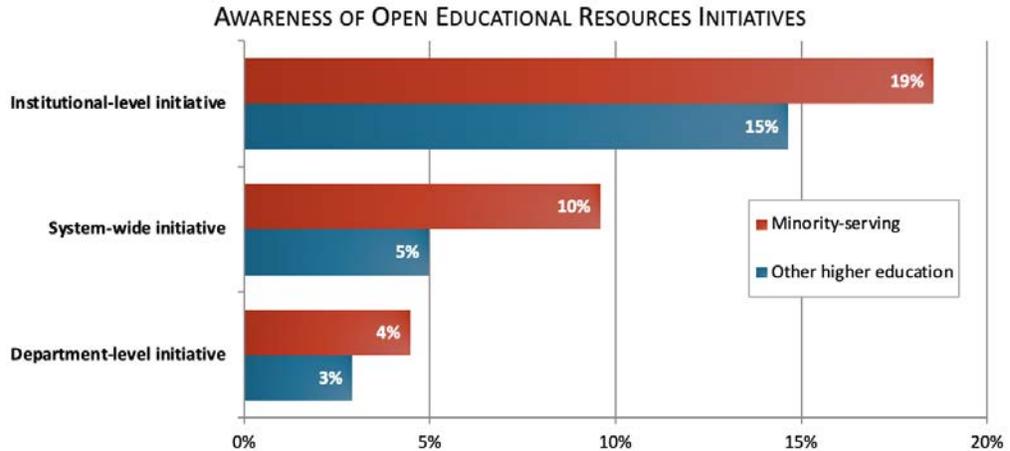


With the large shift to digital materials for Fall 2020 (a switch that could favor OER), one might think that OER initiatives would have been expanded over those offered last year. This is not the case: the proportion of faculty aware of OER initiatives has barely changed for Fall 2020, compared to the previous year's rates.

**OVERALL FACULTY AWARENESS OF OPEN EDUCATIONAL RESOURCE INITIATIVES 2018-19 AND 2019-20**

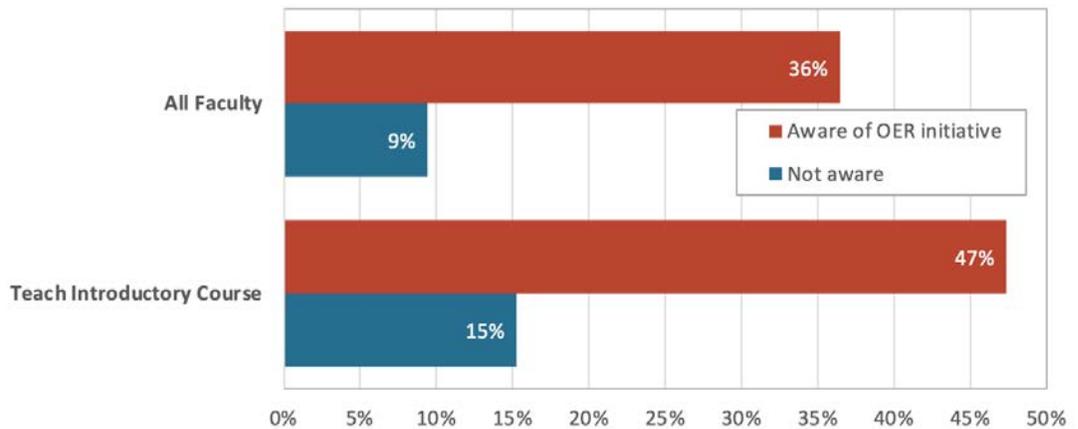


Minority-serving institutions appear to either have more OER initiatives or are more successful in getting the word out, as faculty at these institutions report much higher rates of awareness of such initiatives. The biggest difference is for system-level initiatives, where minority-serving faculty are nearly twice as likely to be aware of an initiative.



The Fall 2020 results show the same pattern of increased OER adoption among faculty aware of an OER initiative for both those teaching introductory-level courses and the general population of faculty. Faculty teaching introductory-level courses were three times as likely to have adopted an OER textbook (47%, compared to 15%) if they are aware of an OER initiative. The ratio among all faculty was four to one (36%, compared to 9%).

**OER ADOPTION BY AWARENESS OF OER INITIATIVES 2019-20**



While these results show a strong relationship between faculty awareness of OER initiatives, an increased awareness of OER, and an increased reported likelihood of OER adoption by faculty, questions still remain. Is it the initiative alone that makes the difference, or does this just serve as an indicator of a larger institutional effort to support and inform faculty? The magnitude of these results is such that institutional initiatives appear to have a sizeable impact on OER awareness and adoption, and as such can be an effective tool to grow OER adoption.

## Textbook Quality

*Some faculty are concerned about the quality of OER resources for their particular field. That said, those who have adopted OER rate that the quality of the materials somewhat higher than those using commercial alternatives.*

### Faculty Voices:

*"OER just makes sense; I look to OER to fulfill my course-related needs when possible and supplement with library resources when I can't. I turn to proprietary resources as a last resort (the texts I use in my course are not old enough to be in the public domain). OER must be downloaded only once to be retained and is free forever."*

*"I have considered OER resources, but I am concerned about having quality textbooks that still have all the instructor resources I am used to. Also, it is not very easy to identify open access materials."*

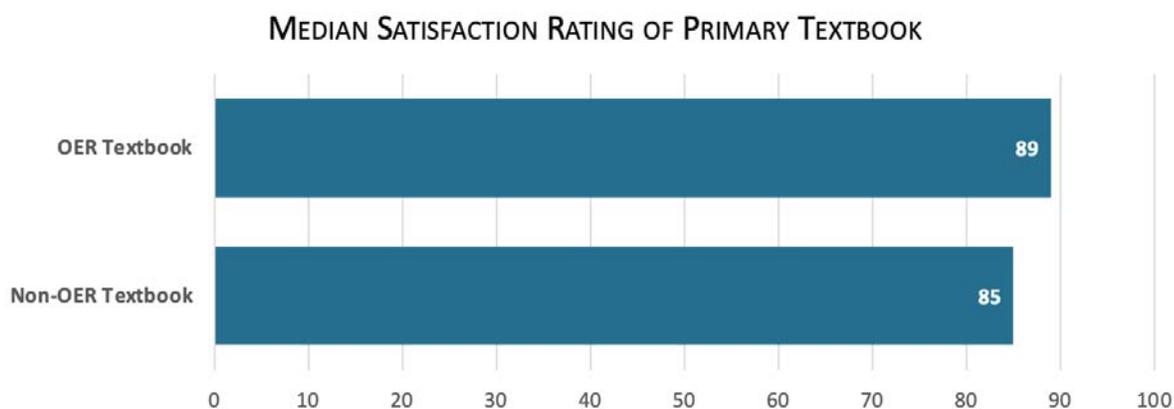
*"I have looked at OER for various classes I teach, but I have not found anything of sufficient quality to use with my graduate courses in education leadership."*

*"I think in my limited encounters that the open resources are not as rich or as colorful as the textbooks available for cost. I am concerned that such open resources are less extensive (lower page count, less content) and that student education likely suffers from using free, but lower quality materials for teaching. The tradeoff seems a poor one. Fewer examples are provided and generally the material is presented in a less than full manner. "You get what you pay for" seems to be the case in my experience."*

*"Many of the OER I've reviewed in the past few years have been inferior to copyrighted products. They seem to "dumb down" much of the material. Some of these resources, however, are outstanding."*

Last year's study, *Inflection Point: Educational Resources in U.S. Higher Education, 2019*, reported that faculty using an OER textbook and those using a non-OER textbook gave the same high rating for their choice. This directly addressed concerns expressed among some faculty about the unproven quality of OER materials. The faculty ratings are based on how well the faculty member thought that the primary text they were using met their teaching requirements. As such, these are *faculty* ratings, not a rating by *students*, and represent faculty perceptions of how well the adopted materials serve a particular course's needs.

This question was repeated for 2019-20, using the same zero to 100 scale, to answer the following question: "Considering all aspects how satisfied are you with the primary textbook for this course?" The 2019-20 results continue the high median ratings (one-half rated above this point, and one-half is rated below) among users of commercial textbooks and OER materials. This year, the difference is that rather than the same rating, OER users now give a higher rating for their level of satisfaction than do users of commercial textbooks.



**Faculty Voices:**

*"The OER material I have adopted via OpenStax is good and allows students to save money. There are drawbacks for the instructor. Not a lot of ancillary or support materials."*

*"I feel that the OpenStax text I am using is a good, basic text. It does require me to supplement a good deal, but that is my job and I enjoy putting the meat on the bones."*

*"The textbook isn't very good and there are very good OER materials for my subject, so I use the OER materials instead. I offer optional readings from the "required" textbook but emphasize to my students that there will be no required assignments from it, and we won't discuss it in class. It's the best approach for my students. My state has an OER initiative and my university supports it, but my department doesn't. It's very frustrating."*

*"Having compared the OpenStax equivalent to the introductory biology textbook from Pearson that we use, I do not feel that the OpenStax version is of comparable quality in the text, figures, or emphasis on inquiry-based approaches."*

*"The OERs are very good supplements and go well with the course, but students learn more when they share a common text and have a common frame of reference. The quality of OER texts still do not meet the academic excellence of works done by publishers."*

*"My issue is not a resistance to open source material, but a lack of time to research and implement it. I'm also concerned about the open-source information being held to the same standard of accuracy and research as most copyrighted textbooks."*

## SUMMARY

The expectation last year, before the pandemic, was that this year's report would show a continued move to digital materials, perhaps less suspicion that they are not as good for learning, and continued increases in awareness and adoption of Open Educational Resources. The continuing transition of the publication distribution market to all-digital was also a good bet.

If you looked at the Fall 2020 results in isolation and did not know that there was a pandemic with a massive shift from face-to-face to online instruction, large portions of the results are in line with these expectations. Awareness of OER increased for the sixth year in a row, growing at much the same rate as we witnessed previously. Faculty aware of an OER initiative are far more likely to be aware of OER in general and three to four times as likely to have adopted OER as a required course material, a pattern that matched the one seen last year.

However, contrary to previous trends, the level of OER awareness increased, but the level of OER adoption for required course materials did not. This is the first time that levels of OER adoption did not move up in step with levels of OER awareness. This may have been the result of the considerable amounts of time faculty had to put into converting their courses, leaving them no time to invest in the exploration and evaluation of new materials.

The change in modes of teaching for Fall 2020 was massive. While virtually all faculty (96%) had been teaching at least one face-to-face course, this dropped to only 14% for Fall 2020. The move from face-to-face was very labor intensive, with faculty learning how to convert a course from one modality to another. For many, this required considerable changes to their lesson plans and course development.

## Minority-serving Institutions

Open Educational Resources play a larger role at minority-serving institutions than they do at other types of higher education institutions. Faculty at these institutions report greater awareness of OER initiatives, and a greater likelihood that their institution provided OER information as support for their transition to teaching online during the Fall 2020 term. They are more likely to have adopted OER materials for their courses, both for required and supplemental materials, than are faculty at other types of institutions.

## Next Steps

How will this unique experience impact the future directions of teaching and learning? The number of faculty with experience teaching online has doubled. Faculty with experience in using digital materials is now much greater than previously. Many faculty report that they have learned new ways of teaching: how many of them intend to continue using these techniques post-pandemic? These are just some of the questions we'll need to ask as we look ahead to future academic terms.

# METHODOLOGY

The data for this report comes from survey results using a national sample of teaching faculty. The sample is representative of the broad range of teaching faculty in U.S. higher education. The sample selection process was multi-stage. The process began by obtaining data from a commercial source, Market Data Retrieval,<sup>14</sup> which has over one and a half million faculty records, and claims that its records represent 93% of all teaching faculty. The first step selected all faculty who taught at least one course. Individuals were then randomly selected from the master list in proportion to the number contained in each Carnegie Classification, to produce a second-stage selection of teaching faculty and department chairpersons. The resulting list was checked against opt-out lists, as well as for non-functioning email addresses.

A total of 3,232 faculty responded to a sufficient number of questions to be included in the analysis. The respondents represent the full range of higher education institutions (two-year, four-year, all Carnegie classifications, and public, private nonprofit, and for-profit) and the complete range of faculty (full- and part-time, tenured or not, and all disciplines).

More than 73% of faculty respondents report that they are full-time faculty members. Over 70% taught at least one online course, and 30% taught at least one blended course. Respondents represent 1,316 different institutions from all fifty states and the District of Columbia and Puerto Rico.

Institutional descriptive data come from the National Center for Educational Statistics' IPEDS database.<sup>15</sup> After the data were compiled and merged with the IPEDS database, respondents and nonrespondents were compared to ensure that the survey results reflected the characteristics of the entire population of faculty. The responses were compared for 35 unique categories based on the 2015 Carnegie Classification of Institutions of Higher Education.

Unless otherwise noted, the analysis results presented in this report apply to all teaching faculty. Some results focus on a specific subgroup of these faculty, those teaching large enrollment introductory-level courses, because their course material selection and use can impact far more students than that of the typical faculty member.

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14 <http://schooldata.com/wordpress/wp-content/uploads/2014/06/MDR-Education-Catalog.pdf>

15 <http://nces.ed.gov/ipeds/datacenter/>

Some analysis in this report examines the trends among minority-serving institutions which are defined as being a member of one or more of the following groups<sup>16</sup>:

- Historically Black Colleges and Universities (HBCU) – institutions founded prior to the enactment of the Civil Rights Act of 1964 that were created primarily to educate African Americans
- Predominantly Black Institutions (PBI) – institutions that do not meet the legal definition of HBCUs, but primarily serve African Americans. Eligibility is based on serving an undergraduate population that is both low income (at least 50% receiving Title IV needs-based assistance) and in which African American students constitute at least 40%
- Hispanic-Serving Institutions (HSI) – institutions that serve an undergraduate population that is both low income (at least 50% receiving Title IV needs-based assistance) and in which Hispanic students constitute at least 25%
- Tribal Colleges or Universities (TCU) - institutions of higher education which are formally controlled, or have been formally sanctioned, or chartered, by the governing body of a Native American tribe
- Native American Non-Tribal Institutions (NANTl) - institutions other than TCUs that serve an undergraduate population that is both low income (at least 50% receiving Title IV needs-based assistance) and in which American Indian students constitute at least 10%
- Alaskan Native- or Native Hawaiian-Serving Institutions (ANNHI) - institutions that serve an undergraduate population that is both low income (at least 50% receiving Title IV needs-based assistance) and in which Alaska Native students constitute at least 20% or Hawaiian Native students constitute at least 10%
- Asian American- and Native American Pacific Islander-Serving Institutions (AANAPISI) - institutions that serve an undergraduate population that is both low income (at least 50% receiving Title IV needs-based assistance) and in which Asian American or Native American Pacific Islander students constitute at least 10%

There are 793 U.S. higher education institutions that are members of at least one of the above seven groups, representing 18.7% of all higher education institutions. Together, these 793 institutions teach just over 6 million total students (or 30% of all higher education enrollments). One-quarter (25.4%) of the faculty respondents for this study were at an institution classified as minority-serving.

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<sup>16</sup> <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>

As noted in our previous reports, the specific wording of questions is critical in measuring the level of OER awareness. The language for this report (provided below) matches that used in previous reports in this series. It was found to have the best balance in differentiating amongst different levels of awareness, while avoiding leading those with no prior knowledge of the concept.

*How aware are you of Open Educational Resources (OER)? OER is defined as "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others." Unlike traditionally copyrighted material, these resources are available for "open" use, which means users can edit, modify, customize, and share them.*

*I am not aware of OER*

*I have heard of OER, but don't know much about them*

*I am somewhat aware of OER but I am not sure how they can be used*

*I am aware of OER and some of their use cases*

*I am very aware of OER and know how they can be used in the classroom*

This question may still slightly overstate the level of OER awareness, so we also ask a series of additional questions. Because licensing for remixing and reuse is central to the concept of OER, a question about the respondent's awareness of different legal permissions was asked of all respondents *before* any questions about OER awareness itself:

*How aware are you of each of the following licensing mechanisms?*

	<i>Unaware</i>	<i>Somewhat Aware</i>	<i>Aware</i>	<i>Very Aware</i>
<i>Public Domain</i>				
<i>Copyright</i>				
<i>Creative Commons</i>				

By combining the responses from the OER awareness question with those of the licensing questions, a combined index of awareness is constructed. An identical process was used in previous reports in this series, to permit year-over-year comparisons and trend analysis.

# APPENDIX TABLES

## TEACHING STATUS 2019 AND 2020

	2020	2019
<b>Face-to-face</b>	14%	96%
<b>Blended</b>	30%	29%
<b>Online</b>	71%	34%

## TEACHING STATUS 2020

<b>New course</b>	5%
<b>Existing course</b>	95%

## HOW DOES THE VERSION OF THIS COURSE COMPARE TO PREVIOUS TERMS?

<b>Same as previous</b>	32%
<b>Moderately different</b>	44%
<b>Considerably different</b>	24%

## WHAT IS THE REASON FOR THE CHANGES TO THE COURSE?

<b>All changes due to pandemic</b>	46%
<b>Many changes due to pandemic</b>	33%
<b>Few changes due to pandemic</b>	19%
<b>Normal course revision</b>	3%

**PROPORTION OF FACULTY REQUIRING PARTICULAR MATERIAL FOR THEIR COURSE**

<b>Textbook(s) (Print or digital)</b>	70%
<b>Articles/Case Studies</b>	56%
<b>Online homework System</b>	46%
<b>Video/Film</b>	32%
<b>Software</b>	25%
<b>Other</b>	26%
<b>Inclusive Access Subscription</b>	8%

**PROPORTION OF FACULTY REQUIRING PARTICULAR MATERIAL FOR THEIR COURSE:  
2018-19 AND 2019-20**

	2018-19	2019-20
<b>Textbook(s) (Print or Digital)</b>	69%	70%
<b>Articles/Case Studies</b>	47%	56%
<b>Online Homework System</b>	37%	46%
<b>Video/Film</b>	28%	32%
<b>Software</b>	19%	25%
<b>Other</b>	19%	26%
<b>Inclusive Access Subscription</b>	7%	8%

**PROPORTION OF FACULTY REQUIRING PARTICULAR MATERIAL FOR THEIR COURSE**

	All Faculty	Teach Introductory Course
<b>Textbook(s) (Print or Digital)</b>	70%	78%
<b>Articles/Case Studies</b>	56%	44%
<b>Online Homework System</b>	46%	53%
<b>Video/Film</b>	32%	33%
<b>Other</b>	26%	31%
<b>Software</b>	25%	25%
<b>Inclusive Access Subscription</b>	8%	13%

**IS THE PRIMARY TEXTBOOK FOR THIS COURSE THE SAME AS WAS USED PREVIOUSLY, OR IS IT NEW?**

Same as previous	87%
Different from previous	10%
Other	2%

**CHANGES TO TEXTBOOK FOR FALL 2020**

Newer edition of the textbook	55%
Added a digital option in addition to print	32%
Switched to all digital	10%
Inclusive Access arrangement	11%
Other	10%

**THE TEXTBOOK IS THE SAME WHAT WE USED PREVIOUSLY**

All Faculty		Teach Introductory Course	
Other Higher Education	Minority-serving	Other Higher Education	Minority-serving
87.4%	88.1%	86.2%	82.4%

**WHO WAS THE PRIMARY DECISION MAKER FOR SELECTING THE NEW TEXTBOOK?**

I made the choice alone	82%
Faculty committee	8%
Recommended by others	4%
Required by others	2%
Other	4%

**STEPS INSTITUTIONS TOOK TO PROVIDE COURSE MATERIALS**

Information on Open Educational Resources	18%
Publisher agreements for digital copies	11%
Inclusive Access agreements	11%
Other	10%
Unlimited access agreement	5%

**STEPS INSTITUTIONS TOOK TO PROVIDE COURSE MATERIALS**

	Other Higher Education	Minority-serving
Unlimited access to all materials from one or more publishers	5%	7%
Inclusive Access agreements with publishers	10%	13%
Existing publisher to provide digital copies	12%	8%
Information and access to Open Educational Resources	16%	22%

**MY STUDENTS PREFER PRINT MATERIALS OVER DIGITAL**

	2017-18	2019-20
Agree	32%	33%
Neutral	31%	31%
Disagree	37%	36%

**STUDENTS LEARN BETTER FROM PRINT MATERIALS THAN THEY DO FROM DIGITAL**

Strongly agree	8%
Agree	16%
Somewhat agree	19%
Neither agree nor disagree	41%
Somewhat disagree	6%
Disagree	8%
Strongly disagree	2%

**STUDENTS LEARN BETTER FROM PRINT MATERIALS THAN THEY DO FROM DIGITAL**

	Somewhat agree	Agree	Strongly Agree
2018-19	19%	15%	10%
2019-20	19%	16%	8%

### **AWARENESS OF OPEN EDUCATIONAL RESOURCES: 2018-19**

<b>Very Aware</b>	17%
<b>Aware</b>	25%
<b>Somewhat Aware</b>	16%
<b>Not Aware</b>	42%

### **]AWARENESS OF OPEN EDUCATIONAL RESOURCES: 2014-15 TO 2018-19**

	Very Aware	Aware	Somewhat Aware
<b>2014-15</b>	5%	15%	14%
<b>2015-16</b>	7%	19%	16%
<b>2016-17</b>	10%	20%	15%
<b>2017-18</b>	13%	18%	15%
<b>2018-19</b>	16%	21%	16%
<b>2019-20</b>	17%	25%	16%

### **AWARENESS OF OPEN EDUCATIONAL RESOURCES**

	Very aware	Aware	Somewhat Aware
<b>Other higher education</b>	15%	25%	17%
<b>Minority-serving</b>	23%	25%	13%

### **AWARENESS OF LEGAL PERMISSIONS: 2019-20**

	Very Aware	Aware	Somewhat Aware
<b>Creative Commons</b>	25%	29%	20%
<b>Public Domain</b>	36%	36%	18%
<b>Copyright</b>	46%	38%	10%

### **AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS: 2018-19**

<b>Very Aware</b>	16%
<b>Aware</b>	21%
<b>Somewhat Aware</b>	13%
<b>Not Aware</b>	51%

**AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS : 2014-15 TO 2018-19**

	Very Aware	Aware	Somewhat Aware
<b>2014-15</b>	5%	12%	10%
<b>2015-16</b>	6%	16%	12%
<b>2016-17</b>	8%	17%	12%
<b>2017-18</b>	12%	16%	11%
<b>2018-19</b>	14%	17%	13%
<b>2019-20</b>	16%	21%	13%

**USED OPEN EDUCATIONAL RESOURCES IN ANY COURSE 2019-20**

	All Faculty	Teach Introductory Courses
<b>Required Course Material</b>	15%	25%
<b>Supplemental Course Material</b>	22%	28%

**USED OPEN EDUCATIONAL RESOURCES IN ANY COURSE AS REQUIRED MATERIAL: 2015-16 TO 2017-18**

	All Faculty	Teach Introductory Courses
<b>2015-16</b>	5%	8%
<b>2016-17</b>	6%	15%
<b>2017-18</b>	13%	22%
<b>2018-19</b>	14%	26%
<b>2019-20</b>	15%	25%

**USED OPEN EDUCATIONAL RESOURCES IN ANY COURSE AS SUPPLEMENTAL MATERIAL: 2015-16 TO 2017-18**

	All Faculty	Teach Introductory Courses
<b>2015-16</b>	15%	20%
<b>2016-17</b>	18%	22%
<b>2017-18</b>	18%	24%
<b>2018-19</b>	23%	26%
<b>2019-20</b>	22%	28%

### USE OPEN EDUCATIONAL RESOURCES AS COURSE MATERIALS

	Other Higher Education	Minority-serving
Required course materials	14%	20%
Supplemental course materials	22%	26%

### AWARENESS OF OPEN EDUCATIONAL RESOURCE INITIATIVES 2019-20

	All Faculty	Teach Introductory Course
Department-level initiative	3%	6%
System-wide initiative	6%	11%
Institutional-level initiative	15%	22%

### AWARENESS OF OER INITIATIVES

	Other Higher Education	Minority-serving
Department-level initiative	3%	4%
System-wide initiative	5%	10%
Institutional-level initiative	15%	19%

### OER ADOPTION BY AWARENESS OF OER INITIATIVES 2019-20

	All Faculty	Teach Introductory Course
Not aware	9%	15%
Aware of OER initiative	36%	47%

### MEDIAN SATISFACTION RATING OF PRIMARY TEXTBOOK

Non-OER Textbook	85
OER Textbook	89

# OPEN

The Fall 2020 term served as a litmus test of how well the evolving course material distribution and selection process works for U.S. higher education. More faculty than ever before had to select and adapt their course materials, with less time than previous years to explore their options and make decisions.

- Faculty were overwhelmingly teaching the same course in Fall 2020 as previously, but the proportion teaching online jumped from 34% to 71%; those teaching face-to-face fell from 96% to only 14%.

- o Moving online forced faculty to modify their courses: one-quarter of faculty said the Fall 2020 version of their course was considerably different than the version taught before.

- The pattern of required course materials showed little change from last year's academic term. The primary change for textbooks was a move to digital as an alternative or sole delivery mechanism.

- o Seventy percent of faculty retained textbooks as a course requirement; 87% of faculty report using the same textbooks as previous terms.

- Despite increased reliance on digital materials, faculty satisfaction with their required textbooks remained high.

- o Faculty using commercial textbooks reported levels of satisfaction equal to those reported last year.

- o Faculty satisfaction with OER textbooks improved over last year, now slightly higher than for those using commercial textbooks.

- A majority of faculty now report some level of awareness of Open Educational Resource (OER), the fifth straight year of growth. A stricter measure requiring awareness of OER and licensing also showed the same pattern of continued growth.

- The level of adoption of OER as required course material did not increase, marking the first time that growth in awareness was not coupled with growth in adoption. Adoption of OER supplemental materials continued its year-over-year growth, however.

- Faculty who are aware of an OER initiative are far more likely to adopt OER.

- o Faculty teaching introductory-level courses were three times as likely to have adopted an OER textbook (47%, compared to 15%) if they were aware of an OER initiative. The ratio among all faculty was four to one (36%, compared to 9%).



Digital Texts in the Time of COVID: Educational Resources in U.S. Higher Education, 2020 is licensed under a Creative Commons Attribution 4.0 International License. Report available at: <http://www.onlinelearningsurvey.com/oer.html>

